Functional Devices, Inc.™

2016

Relays | Current Sensors
Power Supplies | Transformers
Power Control | Enclosures | Accessories
Wireless Devices | Energy Saving Devices

TABLE OF CONTENTS

2016 RIB® Catalog

Functional Devices, Inc.™

2016 NEW PRODUCTS

EXPAND YOUR **NETWORK**
EXPAND YOUR **CONTROL**

RIB™

Wi-Fi RIB™

PAGES **80 & 81**

Prepackaged Enclosure, Power Supply, and Sub-Panel

Great for mounting a controller along with peripheral devices.

Designed to provide everything you need to mount controllers in one package. Convenience and time savings are essential when you're in the field, and Functional Devices is known for providing both!

PAGES **114 & 115**

THE EN STRUCK FEAR INTO WIRES EVERYWHERE.
THE EN2 STARTED TO TEAR THESE WIRES OUT.

EN3

THE END OF WIRES HAS COME
WIRELESS RELAYS ARE HERE

enocean

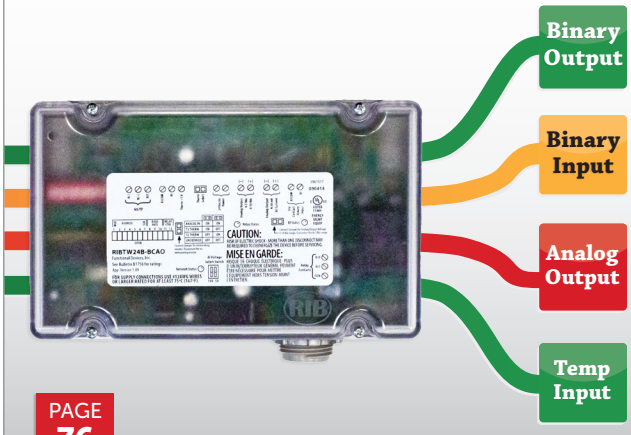
PAGE **155**

ASHRAE BACnet™

Analog Output Network Device

Designed for I/O Applications

Valve • Actuator • Damper • VFD • Pump Fan



PAGE **76**

PILOT RELAYS: 10–15 AMPS

Enclosed | T Style | Track Mount

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Prepackaged For Convenience – Great Time Saver

- LED indicator
- Multi-voltage coil input
- Several different contact ratings
- True override switch on load side of relay
- High/low voltage separation
- 10-15 Amp models
- Pre-wired
- Track mount panel style
- Time delay models

ENCLOSED PILOT RELAYS

MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBU1C	•	10-30	120	1	SPDT			4
RIBH1C	•	10-30	208-277	1	SPDT			4
RIBU2C	•	10-30	120	2	2 SPDT			5
RIBH2C	•	10-30	208-277	2	2 SPDT			5
RIBL3C	•	10-30		3	3 SPST			5
RIBL4C	•	10-30		4	3 SPST, 1 SPDT			5
RIBU1S	•	10-30	120	1	SPST	1		6
RIBH1S	•	10-30	208-277	1	SPST	1		6
RIBU1SM-250	•	10-30	120	1	SPST	1+monitor		6
RIBH1SM-250	•	10-30	208-277	1	SPST	1+monitor		6
RIB2401D	•	24	120	1	DPDT			7
RIB2402D	•	24	208-277	1	DPDT			7
RIBU1SC	•	10-30	120	1	SPDT	2 [3]		7
RIBH1SC	•	10-30	208-277	1	SPDT	2 [3]		7
RIBL1C-DC	•	10-30 [1]		1	SPDT			8
RIB2421C	•	24	120-277	1	SPDT			8
RIBD2421C	•	24	120-277	1	SPDT		2	9
RIBU2SC	•	10-30	120	2	1 SPST, 1 SPDT	1		10
RIBU2S2	•	10-30	120	2	2 SPST	2		10

T STYLE PILOT RELAYS

MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTU1C	•	10-30	120	1	SPDT			11
RIBTH1C	•	10-30	208-277	1	SPDT			11
RIBTU2C	•	10-30	120	2	2 SPDT			11
RIBTH2C	•	10-30	208-277	2	2 SPDT			11
RIBU1CW	•	10-30	120	1	SPDT			12
RIBH1CW	•	10-30	208-277	1	SPDT			12
RIBTU1S	•	10-30	120	1	SPST	1		12
RIBTH1S	•	10-30	208-277	1	SPST	1		12
RIBTU1SC	•	10-30	120	1	SPDT	2 [3]		13
RIBTH1SC	•	10-30	208-277	1	SPDT	2 [3]		13
RIBT2401D	•	24	120	1	DPDT			13

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

1 = DC Only **2** = Time Delay **3** = SPDT with override requires 2 switches

TRACK MOUNT PILOT RELAYS

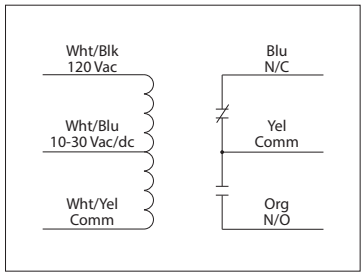
MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBAN12C	• 1	12		1	SPDT			14
RIBAN24C	• 1	24		1	SPDT			14
RIBM12C	•	12		1	SPDT			15
RIBM12S	•	12		1	SPST	1		15
RIBM24C	•	24		1	SPDT			15
RIBM24S	•	24		1	SPST	1		15
RIBM2401D	•	24	120	1	DPDT			16
RIBM2402D	•	24	208-277	1	DPDT			16
RIBMU1C	•	10-30	120	1	SPDT			16
RIBMU1S	•	10-30	120	1	SPST	1		17
RIBMH1C	•	10-30	208-277	1	SPDT			16
RIBMH1S	•	10-30	208-277	1	SPST	1		17
RIBMU2C	•	10-30	120	2	2 SPDT			17
RIBMH2C	•	10-30	208-277	2	2 SPDT			17
RIBMU1SM-250	•	10-30	120	1	SPST	1+monitor		18
RIBMH1SM-250	•	10-30	208-277	1	SPST	1+monitor		18
RIBMU1SC	•	10-30	120	1	SPDT	2 2		18
RIBMH1SC	•	10-30	208-277	1	SPDT	2 2		18
RIBMN12C	•	12		1	SPDT			19
RIBMN12S	•	12		1	SPST	1		19
RIBMN24C	•	24		1	SPDT			19
RIBMN24S	•	24		1	SPST	1		19
RIBMN24S-J	•	24		1	SPST	1		20
RIBMN24C-4T	•	24		4	4 SPDT			20
RIBMN24S-4T	•	24		4	4 SPST	4		20
RIBMN2401D	•	24	120	1	DPDT			21
RIBMNU1C	•	10-30	120	1	SPDT			21
RIBMNU1S	•	10-30	120	1	SPST	1		22
RIBMNH1C	•	10-30	208-277	1	SPDT			21
RIBMNH1S	•	10-30	208-277	1	SPST	1		22
RIBMNU1SM-250	•	10-30	120	1	SPST	1+monitor		18
RIBMNH1SM-250	•	10-30	208-277	1	SPST	1+monitor		18

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada **1** = UL Listed : UL508 only ; USA & Canada **2** = SPDT with override requires 2 switches

10 AMP PILOT CONTROL RELAYS

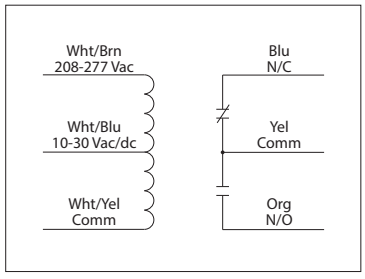
RIBU1C

Enclosed Relay 10 Amp SPDT with 10-30 Vac/dc/120 Vac Coil



RIBH1C

Enclosed Relay 10 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil



c UL us LISTED

CE

RoHS

Made in USA
Meets
"Buy American"
of ARRA 2009

RIBU1C-RD
RIBH1C-RD
• Red housing

RIBU1C-N4
RIBH1C-N4
• NEMA 4X housing, UL508 only

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.70˝ x 2.80˝ x 1.50˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

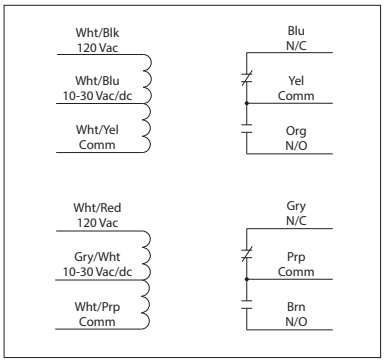
28 mA @ 120 Vac (RIBU1C)
39 mA @ 208-277 Vac (RIBH1C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAYS

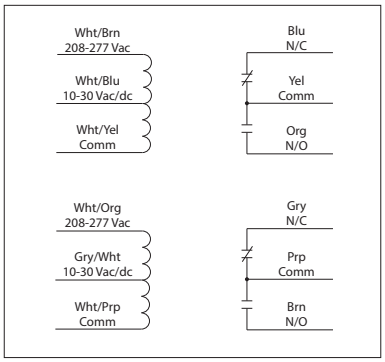
RIBU2C

Enclosed Relays 10 Amp 2 SPDT with 10-30 Vac/dc/120 Vac Coil



RIBH2C

Enclosed Relays 10 Amp 2 SPDT with 10-30 Vac/dc/208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .75˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

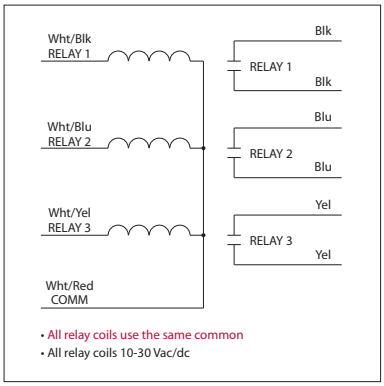
28 mA @ 120 Vac (RIBU2C)
39 mA @ 208-277 Vac (RIBH2C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU2C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH2C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAYS

RIBL3C

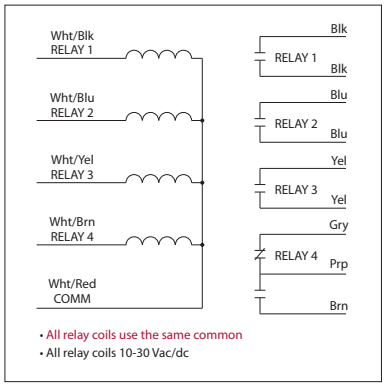
Enclosed Relays 10 Amp 3 SPST-N/O with 10-30 Vac/dc Coil



- All relay coils use the same common
- All relay coils 10-30 Vac/dc

RIBL4C

Enclosed Relays 10 Amp 3 SPST-N/O + 1 SPDT with 10-30 Vac/dc Coil



- All relay coils use the same common
- All relay coils 10-30 Vac/dc

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SPECIFICATIONS

 # Relays & Contact Type: Three (3) SPST Continuous Duty Coil (RIBL3C)
Three (3) SPST + One (1) SPDT Continuous Duty Coil (RIBL4C)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

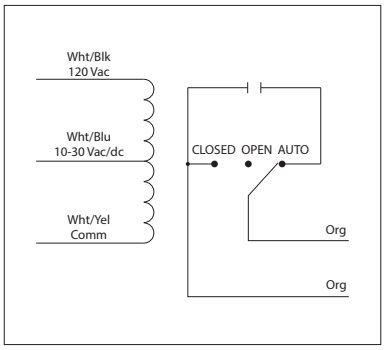
Coil Voltage Input:
10-30 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Notes:
- Order Normally Closed by adding "-NC" to end of model number

10 AMP PILOT CONTROL RELAYS

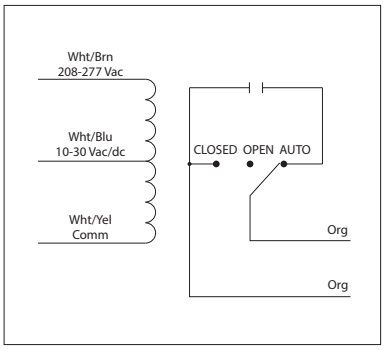
RIBU1S

Enclosed Relay 10 Amp SPST-N/O + Override with 10-30 Vac/dc/120 Vac Coil



RIBH1S

Enclosed Relay 10 Amp SPST-N/O + Override with 10-30 Vac/dc/208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes

Contact Ratings:
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1S)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1S)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

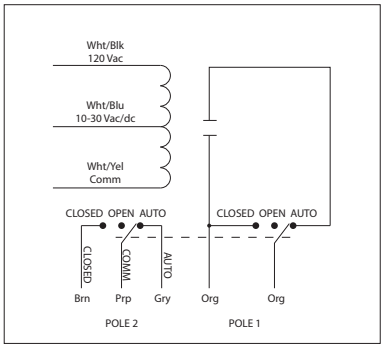
28 mA @ 120 Vac (RIBU1S)
39 mA @ 208-277 Vac (RIBH1S)

Notes:
- Order Normally Closed by adding "-NC" to end of model number

10 AMP PILOT CONTROL RELAYS

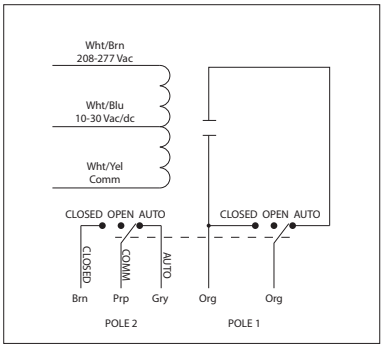
RIBU1SM-250

Enclosed Relay 10 Amp SPST-N/O + Override + Monitor with 10-30 Vac/dc/120 Vac Coil



RIBH1SM-250

Enclosed Relay 10 Amp SPST-N/O + Override + Monitor with 10-30 Vac/dc/208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes + Monitor

Contact Ratings:
10 Amp Resistive @ 120/250 Vac
345 VA Pilot Duty @ 120/240 Vac
211 VA Pilot Duty @ 120/240 Vac
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)

Coil Current:
55 mA @ 30 Vac
28 mA @ 120 Vac (RIBU1SM-250)
39 mA @ 208-277 Vac (RIBH1SM-250)
20 mA @ 30 Vdc

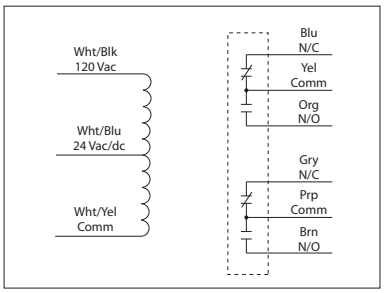
Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1SM-250)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1SM-250)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Notes:
- Second pole of override switch can be connected to digital-in of controller to report position of override switch
- Rating of second pole is 250 Vac max and 5 Amp max
- Order Normally Closed by adding "-NC" to end of model number

10 AMP PILOT CONTROL RELAYS

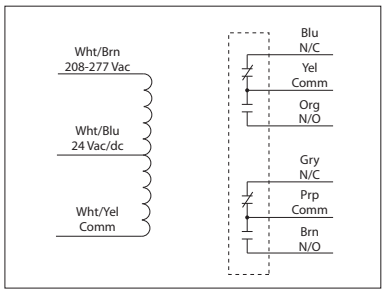
RIB2401D

Enclosed Relay 10 Amp DPDT with
24 Vac/dc/120 Vac Coil



RIB2402D

Enclosed Relay 10 Amp DPDT with
24 Vac/dc/208-277 Vac Coil



RIB2401D-RD
RIB2402D-RD
• Red housing

RIB2401D-N4
RIB2402D-N4
• NEMA 4X housing, UL508 only

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Relay Status: LED On = Activated
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 30 Vdc
10 Amp General Use @ 277 Vac
1/2 HP @ 120/240 Vac (N/O)
1/3 HP @ 120/240 Vac (N/C)
B300 Pilot Duty
120 Vac 30A Make 3A Break (360 VA)
240 Vac 15 A Make 1.5A Break (360 VA)
208 Vac 17.3A Make 1.73A Break (360 VA)
277 Vac 13A Make 1.3A Break (360 VA)
24 Vac 30A Make 5A Break (120VA) 5A Max

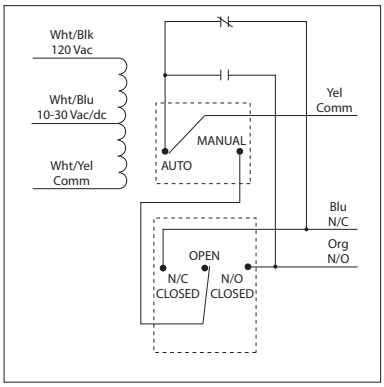
Coil Current:
24 mA @ 18 Vac 20 mA @ 20 Vdc
32 mA @ 24 Vac 24 mA @ 24 Vdc
40 mA @ 30 Vac 36 mA @ 30 Vdc
31 mA @ 120 Vac (RIB2401D)
36 mA @ 208-277 Vac (RIB2402D)

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIB2401D)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIB2402D)
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 18 Vac / 20 Vdc

10 AMP PILOT CONTROL RELAYS

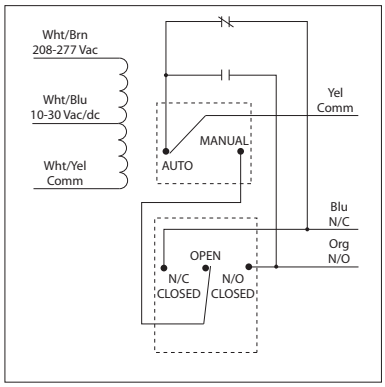
RIBU1SC

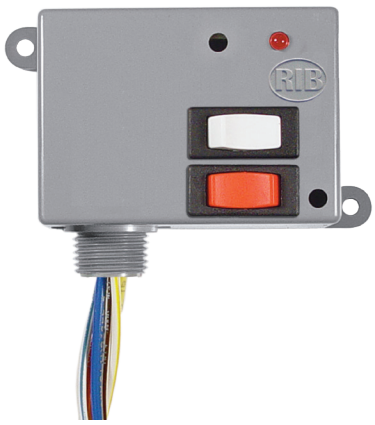
Enclosed Relay 10 Amp SPDT + Override with
10-30 Vac/dc/120 Vac Coil



RIBH1SC

Enclosed Relay 10 Amp SPDT + Override with
10-30 Vac/dc/208-277 Vac Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes (2)

Contact Ratings:
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

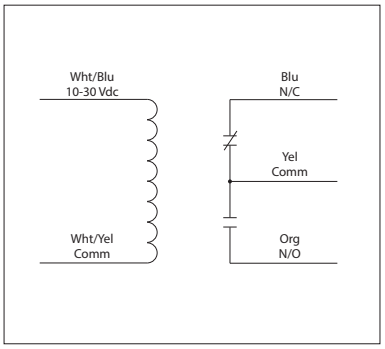
Coil Current:
33 mA @ 10 Vac 13 mA @ 10 Vdc
35 mA @ 12 Vac 15 mA @ 12 Vdc
46 mA @ 24 Vac 18 mA @ 24 Vdc
55 mA @ 30 Vac 20 mA @ 30 Vdc
28 mA @ 120 Vac (RIBU1SC)
39 mA @ 208-277 Vac (RIBH1SC)

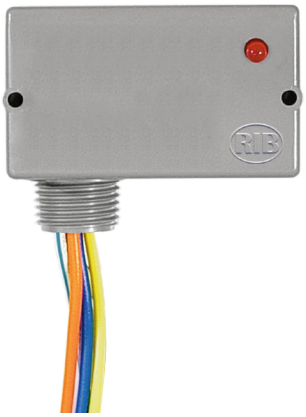
Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1SC)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1SC)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAYS

RIBL1C-DC

Enclosed Relay 10 Amp SPDT with 10-30 Vdc Limited Inrush Coil





RIBL1C-DC-RD
- Red housing

RIBL1C-DC-N4
- NEMA 4X housing, UL508 only

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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

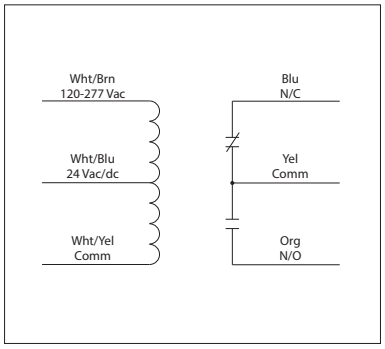
Coil Current:
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

Coil Voltage Input:
10-30 Vdc
Drop Out = 2.8 Vdc
Pull In = 10 Vdc

10 AMP PILOT CONTROL RELAYS

RIB2421C

Enclosed Relay 10 Amp SPDT with 24 Vac/dc/120-277 Vac Coil



RIB2421C-RD
- Red housing

RIB2421C-N4
- NEMA 4X housing, UL508 only

GREAT SERVICE TRUCK RELAY
ONE RELAY COVERS MOST APPLICATIONS

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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

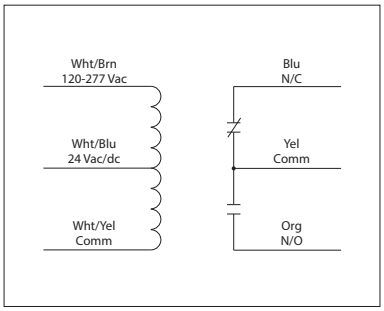
Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

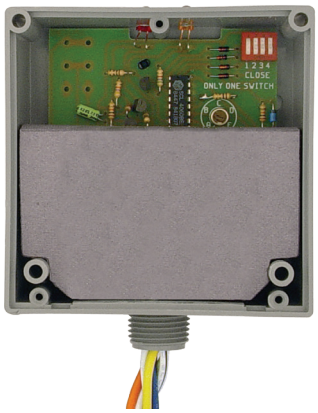
Coil Current:
66 mA @ 24 Vac
38 mA @ 24 Vdc
40 mA @ 120-277 Vac

Coil Voltage Input:
24 Vac/dc ; 120-277 Vac ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

RIBD2421C

Enclosed Time Delay Relay 10 Amp SPDT with
24 Vac/dc/120-277 Vac Coil





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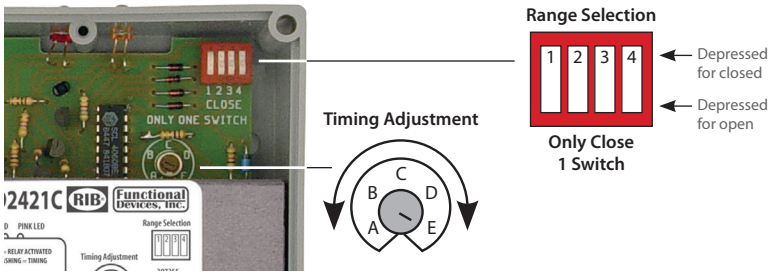
SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms after time delay
Relay Status: RED LED On = Activated
Time Delay Status: PINK LED FLASHING = Timing
Timing Mode: Delay On Make (N/O)
Delay On Break (N/C)
Timing Range: 6 seconds - 20 minutes
Timing Adjustment: 4 position DIP switch for range selection and single turn potentiometer for timing adjustment within range
Timing Tolerance: Switches 1& 2 = ±10%
Switches 3 & 4 = ±5%
Timing Repeatability: ±1%
Temperature Timing Variance: ±1%
Voltage Timing Variance: ±1%
Recycle Time: 750ms Maximum
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Input Current:
66 mA @ 24 Vac
38 mA @ 24 Vdc
40 mA @ 120-277 Vac

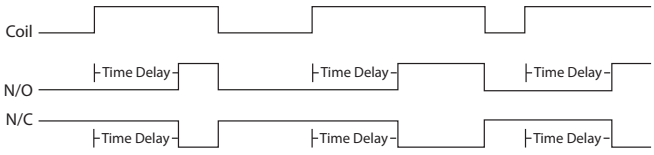
Coil Voltage Input:
24 Vac/dc ; 120-277 Vac ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc



TIMING TABLE

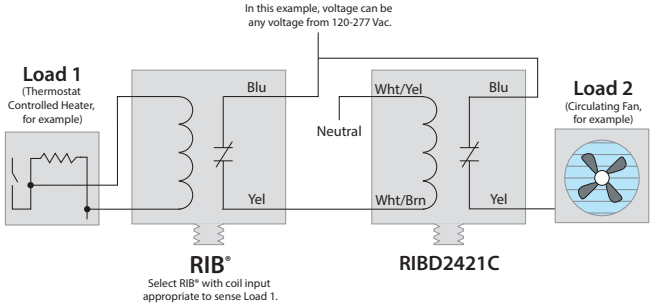
Switch Ranges	Close Dip Switch	Potentiometer Setting A ⟷ B	B ⟷ C	C ⟷ D	D ⟷ E
6s-20s	1	6s	9s	13s	16s	20s
22s-1min15s	2	22s	36s	50s	1min4s	1min15s
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min
6min-20min	4	6min	9min	13min20s	17min20s	20min

Timing Diagram



Time Delay Application

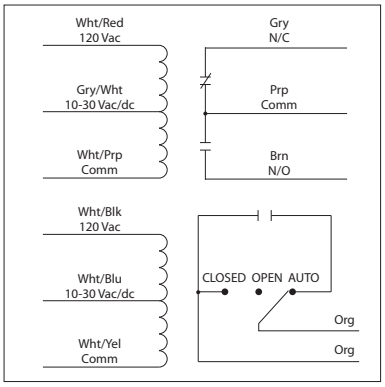
Load 2 stays on selected amount of time after Load 1 goes off.

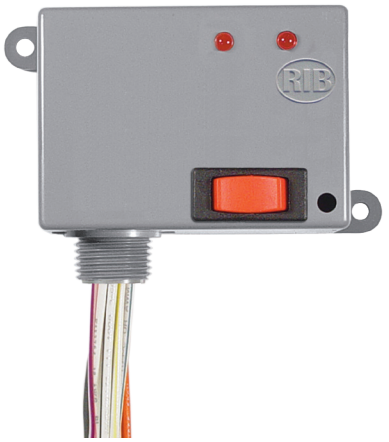


10 AMP PILOT CONTROL RELAY

RIBU2SC

Enclosed Relays 10 Amp SPST-N/O + Override
+ 1 SPDT with 10-30 Vac/dc/120 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST + One (1) SPDT
Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .75˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes

Contact Ratings:
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
28 mA @ 120 Vac
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

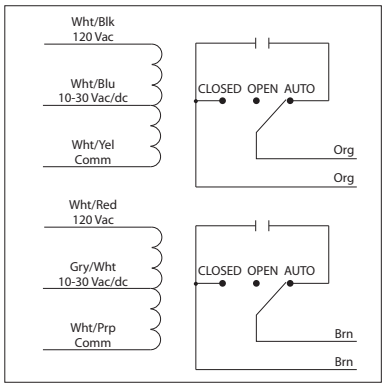
Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Notes:
• Order Normally Closed by adding "-NC" to end of model number

10 AMP PILOT CONTROL RELAY

RIBU2S2

Enclosed Relays 10 Amp 2 SPST-N/O + 2
Overrides with 10-30 Vac/dc/120 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes (2)

Contact Ratings:
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
28 mA @ 120 Vac
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

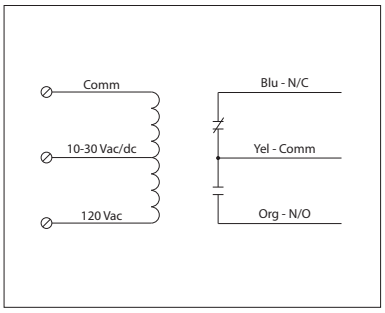
Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Notes:
• Order Normally Closed by adding "-NC" to end of model number

10 AMP PILOT CONTROL RELAYS

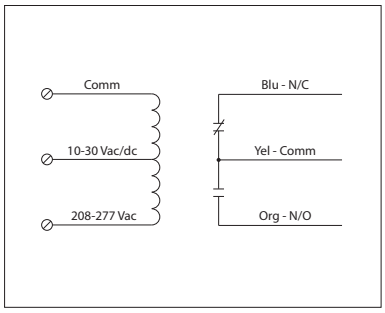
RIBTU1C

Enclosed Relay Hi/Low Separation 10 Amp
SPDT with 10-30 Vac/dc/120 Vac Coil



RIBTH1C

Enclosed Relay Hi/Low Separation 10 Amp
SPDT with 10-30 Vac/dc/208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

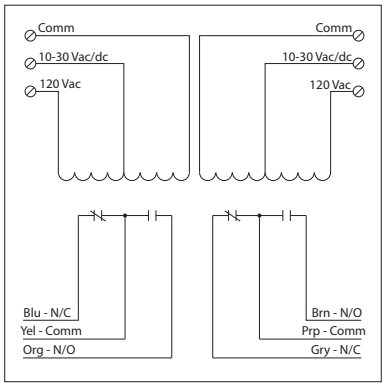
Coil Current:
33 mA @ 10 Vac 13 mA @ 10 Vdc
35 mA @ 12 Vac 15 mA @ 12 Vdc
46 mA @ 24 Vac 18 mA @ 24 Vdc
55 mA @ 30 Vac 20 mA @ 30 Vdc
28 mA @ 120 Vac (RIBTU1C)
39 mA @ 208-277 Vac (RIBTH1C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU1C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH1C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAYS

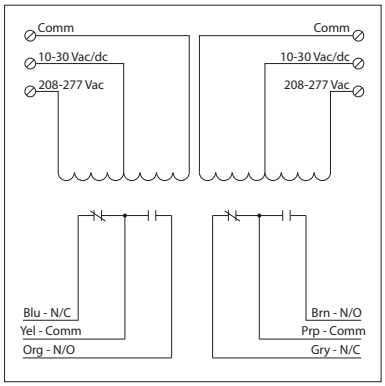
RIBTU2C

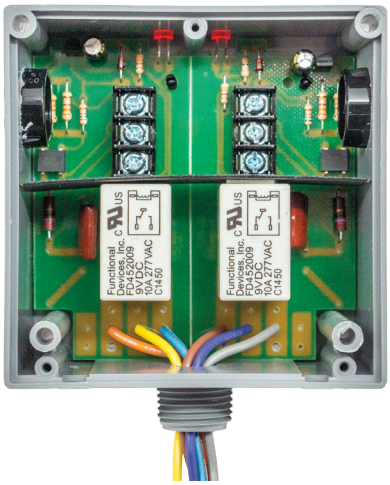
Enclosed Relays Hi/Low Separation 10 Amp
2 SPDT with 10-30 Vac/dc/120 Vac Coil



RIBTH2C

Enclosed Relays Hi/Low Separation 10 Amp
2 SPDT with 10-30 Vac/dc/208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

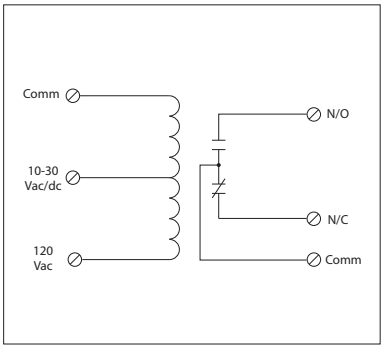
Coil Current:
33 mA @ 10 Vac 13 mA @ 10 Vdc
35 mA @ 12 Vac 15 mA @ 12 Vdc
46 mA @ 24 Vac 18 mA @ 24 Vdc
55 mA @ 30 Vac 20 mA @ 30 Vdc
28 mA @ 120 Vac (RIBTU2C)
39 mA @ 208-277 Vac (RIBTH2C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU2C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH2C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

15 AMP PILOT CONTROL RELAYS

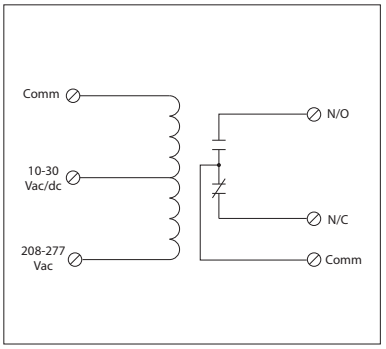
RIBU1CW

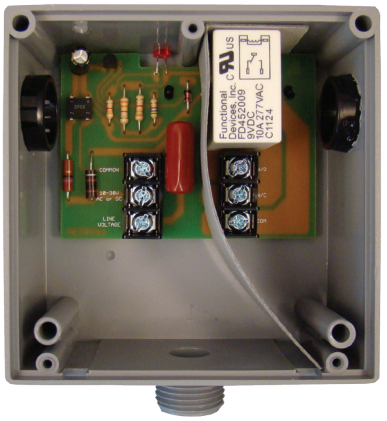
Enclosed Relay Hi/Low Separation 15 Amp SPDT with 10-30 Vac/dc/120 Vac Coil



RIBH1CW

Enclosed Relay Hi/Low Separation 15 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT nipple
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
15 Amp Resistive @ 150 Vac, 28Vdc
15 Amp Inductive @ 150 Vac
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

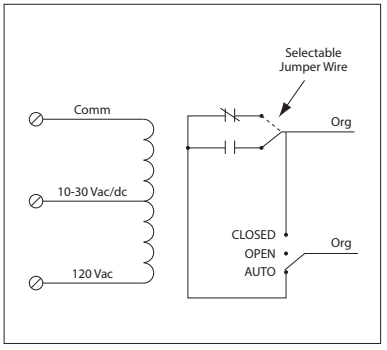
28 mA @ 120 Vac (RIBU1CW)
39 mA @ 208-277 Vac (RIBH1CW)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBU1CW)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBH1CW)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAYS

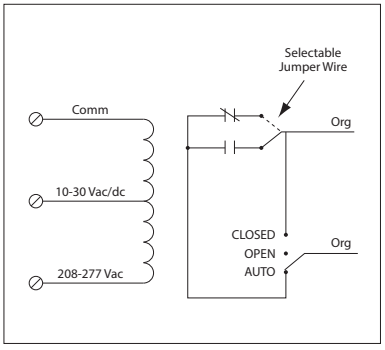
RIBTU1S

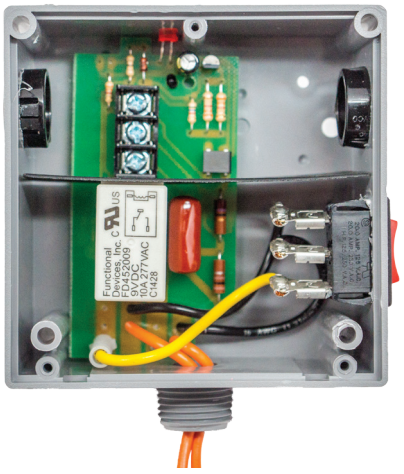
Enclosed Relay Hi/Low Separation 10 Amp SPST + Override with 10-30 Vac/dc/ 120 Vac Coil



RIBTH1S

Enclosed Relay Hi/Low Separation 10 Amp SPST + Override with 10-30 Vac/dc/ 208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes

Contact Ratings:
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

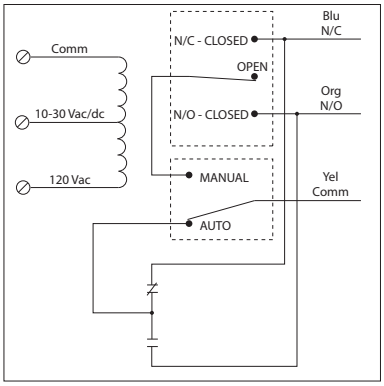
28 mA @ 120 Vac (RIBTU1S)
39 mA @ 208-277 Vac (RIBTH1S)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU1S)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH1S)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAYS

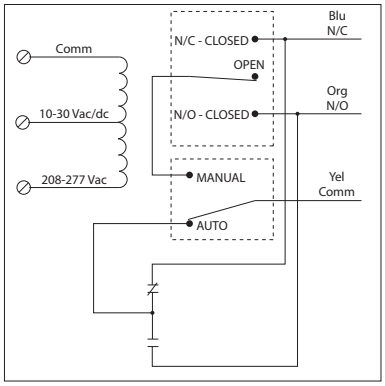
RIBTU1SC

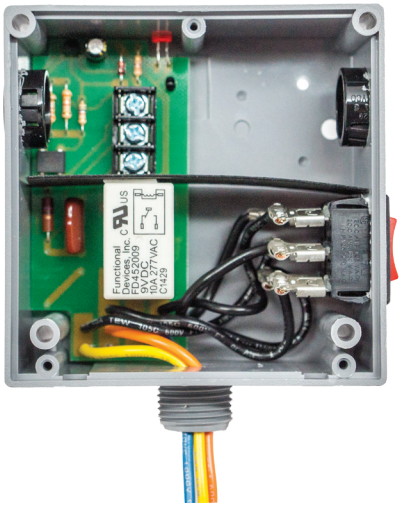
Enclosed Relay Hi/Low Separation 10 Amp
SPDT + Override with 10-30 Vac/dc/
120 Vac Coil



RIBTH1SC

Enclosed Relay Hi/Low Separation 10 Amp
SPDT + Override with 10-30 Vac/dc/
208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes (2)

Contact Ratings:
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

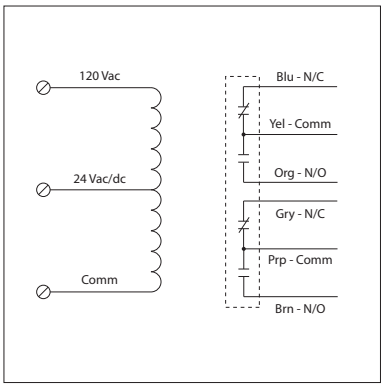
Coil Current:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
28 mA @ 120 Vac (RIBTU1SC)
39 mA @ 208-277 Vac (RIBTH1SC)
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTU1SC)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTH1SC)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

10 AMP PILOT CONTROL RELAY

RIBT2401D

Enclosed Relay Hi/Low Separation 10 Amp
DPDT with 24 Vac/dc/120 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

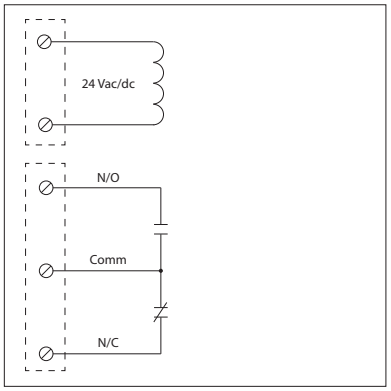
Contact Ratings:
10 Amp Resistive @ 30 Vdc
10 Amp General Use @ 277 Vac
1/2 HP @ 120/240 Vac (N/O)
1/3 HP @ 120/240 Vac (N/C)
B300 Pilot Duty
120 Vac 30A Make 3A Break (360 VA)
240 Vac 15 A Make 1.5A Break (360 VA)
208 Vac 17.3A Make 1.73A Break (360 VA)
277 Vac 13A Make 1.3A Break (360 VA)
24 Vac 30A Make 5A Break (120VA) 5A Max

Coil Current:
24 mA @ 18 Vac
32 mA @ 24 Vac
40 mA @ 30 Vac
31 mA @ 120 Vac
20 mA @ 20 Vdc
24 mA @ 24 Vdc
36 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 18 Vac / 20 Vdc

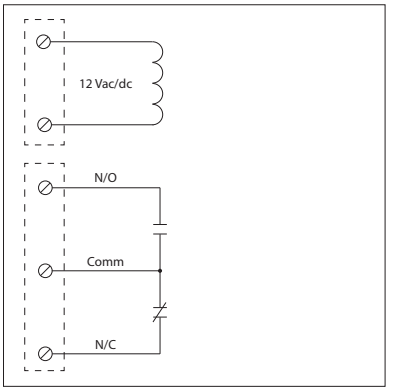
RIBAN24C

Track Mount Relay 10 Amp SPDT with
24 Vac/dc Coil



RIBAN12C

Track Mount Relay 10 Amp SPDT with
12 Vac/dc Coil



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CE

RoHS

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REMOVABLE TERMINALS

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.025˝ x 2.750˝ x 2.850˝
Terminals: Removable, Accepts 22-16 AWG copper wires

Mounting:
A: 2.750˝ Track Mount, See MT212 Series on page 152. MT212 Mounting Track Sold Separately.
B: 35mm x 7.5mm symmetrical DIN rail EN50022
C: Screw Mount, See DS80625 on page 153. DS80625 Self-Tapping Drill Screws Sold Separately.
D: Current Sensor Mount, See RIBXG Series on page 94 or RIBXK Series on page 93. Current Sensors Sold Separately.

Approvals: UL Listed, UL508, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Voltage Input (RIBAN24C):
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

Coil Voltage Input (RIBAN12C):
12 Vac/dc ; 50-60 Hz
Drop Out = 2 Vac / 2.5 Vdc
Pull In = 9 Vac / 11 Vdc

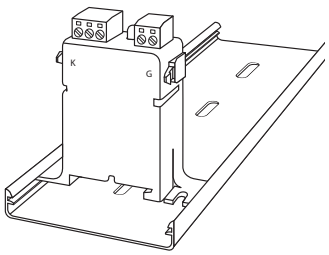
Coil Current (RIBAN24C):
26 mA @ 20 Vac
31 mA @ 24 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

Coil Current (RIBAN12C):
53 mA @ 10 Vac
62 mA @ 12 Vac
29 mA @ 11 Vdc
35 mA @ 12 Vdc

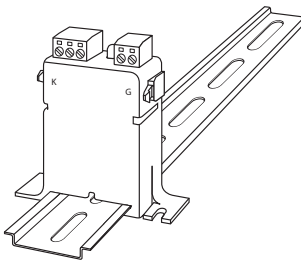
Notes:
• Set of replacement terminals available. Order model number: TS-AN

RELAY MOUNTING OPTIONS A & B

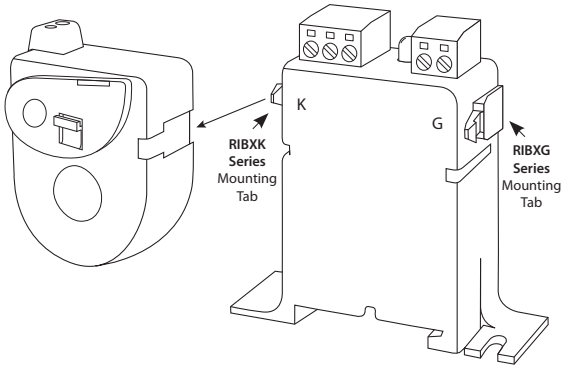
Mounting Option A:
2.75"Track Mount
MT212 Series



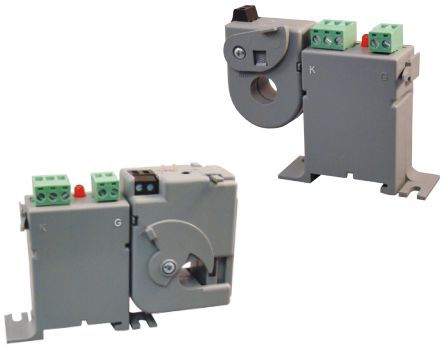
Mounting Option B:
35mm x 7.5mm symmetrical
DIN rail EN50022



CURRENT SENSOR MOUNTING OPTION D



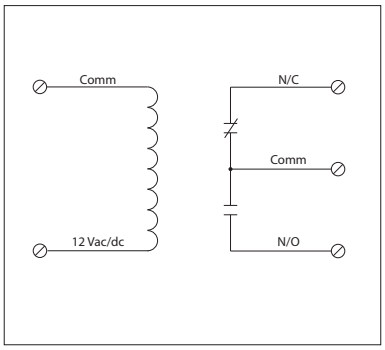
1. Slide current sensor onto corresponding mounting tab.
2. Snap into place.
3. Depress tab to remove current sensor.



15 AMP TRACK MOUNT CONTROL RELAYS

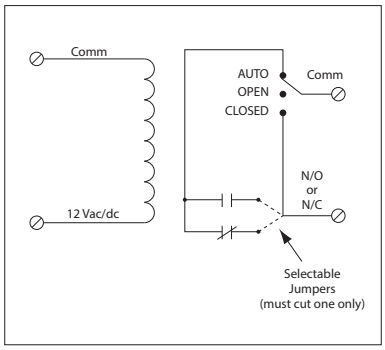
RIBM12C

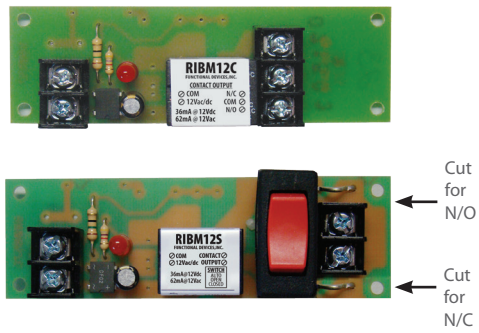
4.00″ Track Mount Relay 15 Amp SPDT with 12 Vac/dc Coil



RIBM12S

4.00″ Track Mount Relay 15 Amp SPST + Override with 12 Vac/dc Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBM12C)
One (1) SPST Continuous Duty Coil (RIBM12S)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.250″ x 4.000″ x 1.750″
Track Mount: 4.000″, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBM12C)
Yes (RIBM12S)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Current:
53 mA @ 10 Vac
62 mA @ 12 Vac
29 mA @ 11 Vdc
36 mA @ 12 Vdc

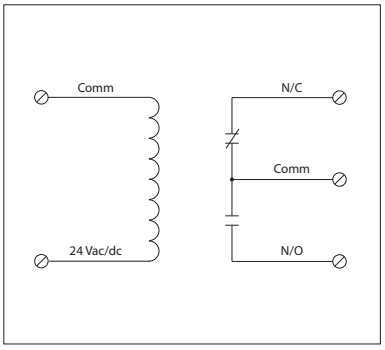
Coil Voltage Input:
12 Vac/dc ; 50-60 Hz
Drop Out = 2 Vac / 2.5 Vdc
Pull In = 9 Vac / 11 Vdc

Notes:
- Must cut appropriate jumper to select Normally Open or Normally Closed (RIBM12S)

15 AMP TRACK MOUNT CONTROL RELAYS

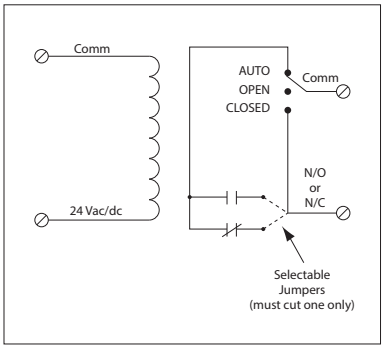
RIBM24C

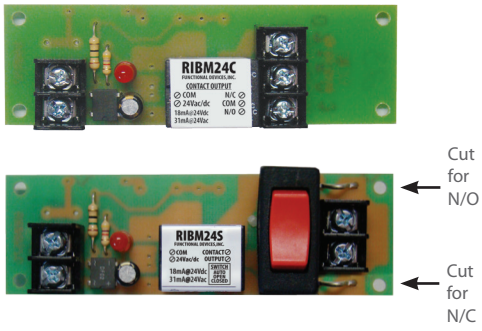
4.00″ Track Mount Relay 15 Amp SPDT with 24 Vac/dc Coil



RIBM24S

4.00″ Track Mount Relay 15 Amp SPST + Override with 24 Vac/dc Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBM24C)
One (1) SPST Continuous Duty Coil (RIBM24S)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.250″ x 4.000″ x 1.750″
Track Mount: 4.000″, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBM24C)
Yes (RIBM24S)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Current:
26 mA @ 20 Vac
31 mA @ 24 Vac
48 mA @ 35 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

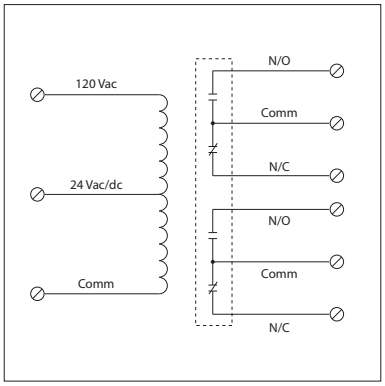
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

Notes:
- Must cut appropriate jumper to select Normally Open or Normally Closed (RIBM24S)

10 AMP TRACK MOUNT CONTROL RELAYS

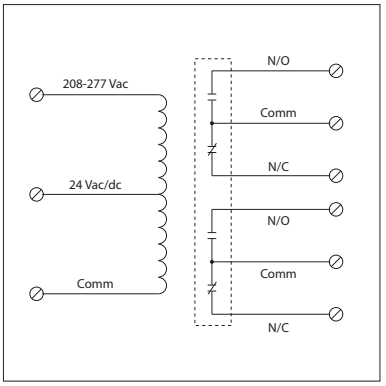
RIBM2401D

4.00˝ Track Mount Relay 10 Amp DPDT with 24 Vac/dc/120 Vac Coil



RIBM2402D

4.00˝ Track Mount Relay 10 Amp DPDT with 24 Vac/dc/208-277 Vac Coil



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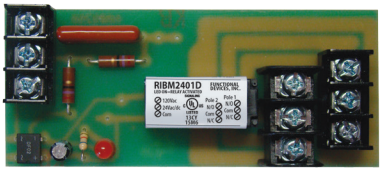
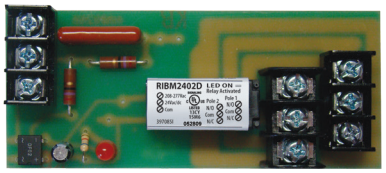




SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Relay Status: LED On = Activated
Dimensions: 1.700˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 30 Vdc
10 Amp General Use @ 277 Vac
1/2 HP @ 120/240 Vac (N/O)
1/3 HP @ 120/240 Vac (N/C)
B300 Pilot Duty
120 Vac 30A Make 3A Break (360 VA)
240 Vac 15 A Make 1.5A Break (360 VA)
208 Vac 17.3A Make 1.73A Break (360 VA)
277 Vac 13A Make 1.3A Break (360 VA)
24 Vac 30A Make 5A Break (120VA) 5A Max

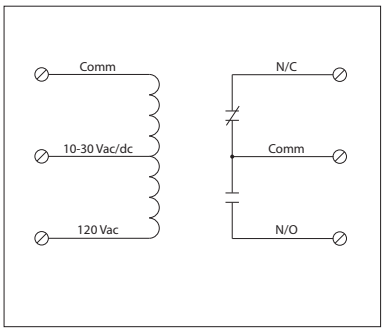
Coil Current:
24 mA @ 18 Vac 20 mA @ 20 Vdc
32 mA @ 24 Vac 24 mA @ 24 Vdc
40 mA @ 30 Vac 36 mA @ 30 Vdc
31 mA @ 120 Vac (RIBM2401D)
36 mA @ 208-277 Vac (RIBM2402D)

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBM2401D)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBM2402D)
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 18 Vac / 20 Vdc

15 AMP TRACK MOUNT CONTROL RELAYS

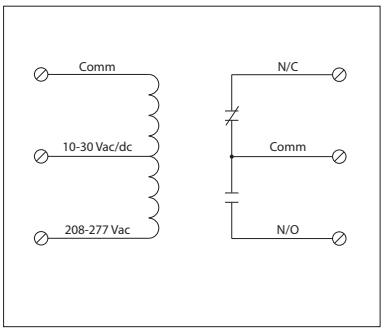
RIBMU1C

4.00˝ Track Mount Relay 15 Amp SPDT with 10-30 Vac/dc/120 Vac Coil



RIBMH1C

4.00˝ Track Mount Relay 15 Amp SPDT with 10-30 Vac/dc/208-277 Vac Coil



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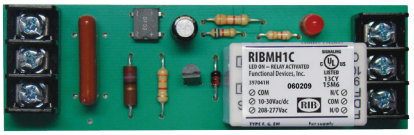


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.250˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
15 Amp Inductive @ 150 Vac
15 Amp Resistive @ 150 Vac, 28 Vdc
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

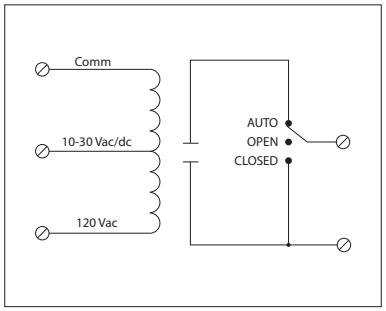
Coil Current:
33 mA @ 10 Vac 13 mA @ 10 Vdc
35 mA @ 12 Vac 15 mA @ 12 Vdc
46 mA @ 24 Vac 18 mA @ 24 Vdc
55 mA @ 30 Vac 20 mA @ 30 Vdc
28 mA @ 120 Vac (RIBMU1C)
39 mA @ 208-277 Vac (RIBMH1C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

15 AMP TRACK MOUNT CONTROL RELAYS

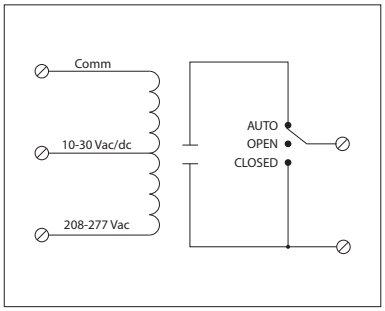
RIBMU1S

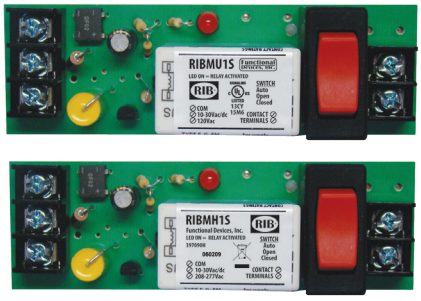
4.00˝ Track Mount Relay 15 Amp SPST-N/O + Override with 10-30 Vac/dc/120 Vac Coil



RIBMH1S

4.00˝ Track Mount Relay 15 Amp SPST-N/O + Override with 10-30 Vac/dc/208-277 Vac Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.275˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: Yes

Contact Ratings:
15 Amp Resistive @ 150 Vac
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1S)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1S)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

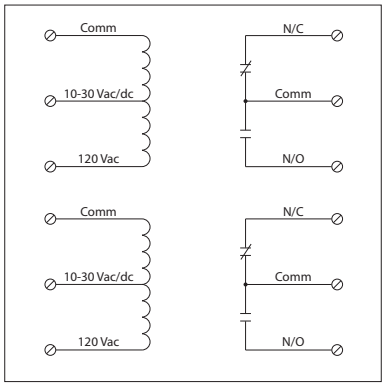
28 mA @ 120 Vac (RIBMU1S)
39 mA @ 208-277 Vac (RIBMH1S)

Notes:
- Order Normally Closed by adding "-NC" to end of model number

15 AMP TRACK MOUNT CONTROL RELAYS

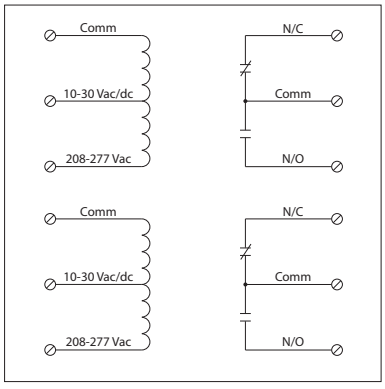
RIBMU2C

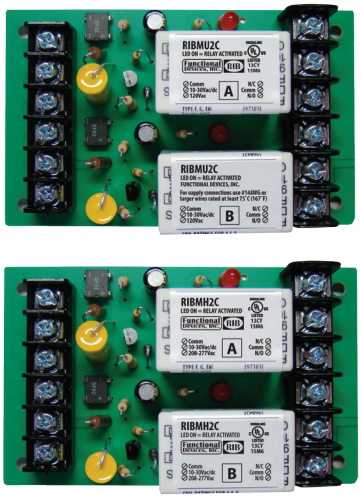
4.00˝ Track Mount Relays 15 Amp 2 SPDT with 10-30 Vac/dc/120 Vac Coil



RIBMH2C

4.00˝ Track Mount Relays 15 Amp 2 SPDT with 10-30 Vac/dc/208-277 Vac Coil





SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.450˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
15 Amp Inductive @ 150 Vac
15 Amp Resistive @ 150 Vac, 28 Vdc
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

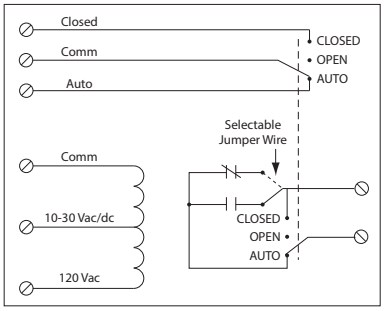
28 mA @ 120 Vac (RIBMU2C)
39 mA @ 208-277 Vac (RIBMH2C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU2C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH2C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

15 AMP TRACK MOUNT CONTROL RELAYS

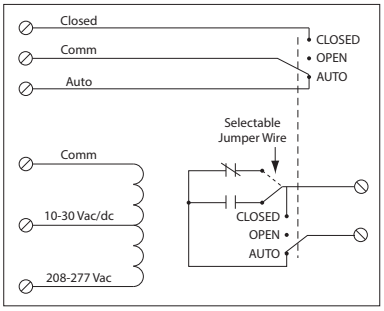
RIBMU1SM-250

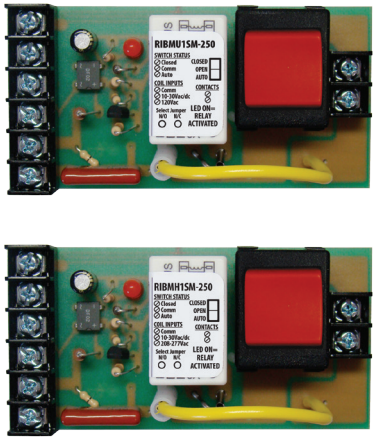
4.00˝ Track Mount Relay 15 Amp SPST + Override + Monitor with 10-30 Vac/dc/ 120 Vac Coil



RIBMH1SM-250

4.00˝ Track Mount Relay 15 Amp SPST + Override + Monitor with 10-30 Vac/dc/ 208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.000˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: Yes + Monitor

Contact Ratings:
15 Amp Resistive @ 125 Vac
10 Amp Resistive @ 250 Vac
345 VA Pilot Duty @ 120/240 Vac (N/O)
211 VA Pilot Duty @ 120/240 Vac (N/C)
1/3 HP for N/O @ 120-240 Vac
1/6 HP for N/C @ 120-240 Vac

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1SM-250)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1SM-250)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

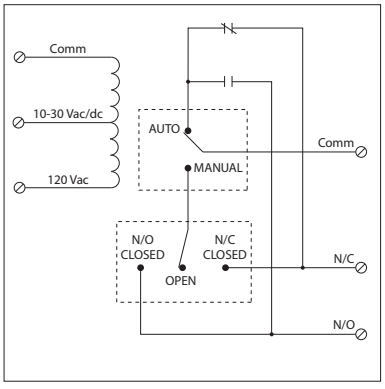
28 mA @ 120 Vac (RIBMU1SM-250)
39 mA @ 208-277 Vac (RIBMH1SM-250)

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire
- Second pole of override switch can be connected to digital-in of controller to report position of override switch
- Rating of second pole is 50 Vac/dc, 0.25 Amp max

15 AMP TRACK MOUNT CONTROL RELAYS

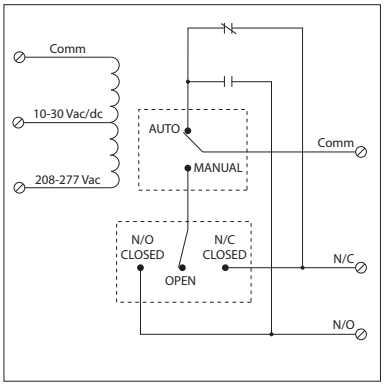
RIBMU1SC

4.00˝ Track Mount Relay 15 Amp SPDT + Override with 10-30 Vac/dc/120 Vac Coil



RIBMH1SC

4.00˝ Track Mount Relay 15 Amp SPDT + Override with 10-30 Vac/dc/208-277 Vac Coil



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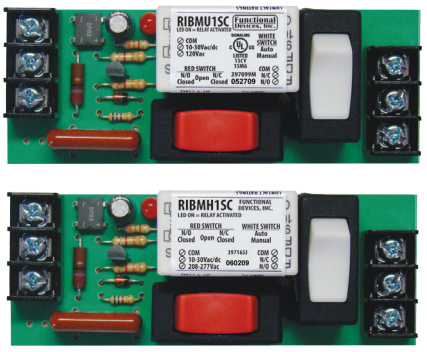


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.500˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: Yes (2)

Contact Ratings:
15 Amp Resistive @ 150 Vac
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

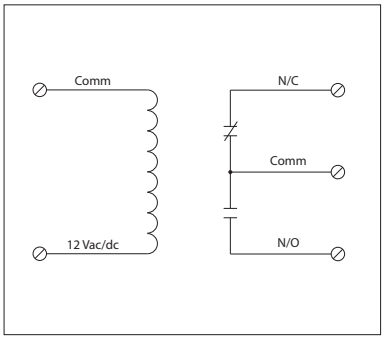
28 mA @ 120 Vac (RIBMU1SC)
39 mA @ 208-277 Vac (RIBMH1SC)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMU1SC)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMH1SC)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

15 AMP TRACK MOUNT CONTROL RELAYS

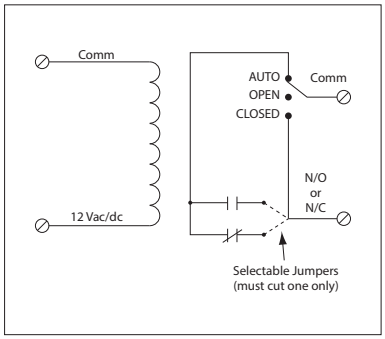
RIBMN12C

2.75″ Track Mount Relay 15 Amp SPDT with 12 Vac/dc Coil



RIBMN12S

2.75″ Track Mount Relay 15 Amp SPST + Override with 12 Vac/dc Coil



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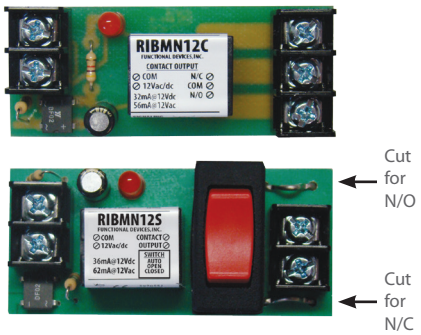


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBMN12C)
One (1) SPST Continuous Duty Coil (RIBMN12S)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.100″ x 2.750″ x 1.750″ (RIBMN12C)
1.250″ x 2.750″ x 1.750″(RIBMN12S)
Track Mount: 2.750″, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBMN12C)
Yes (RIBMN12S)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Current:
53 mA @ 10 Vac
62 mA @ 12 Vac
29 mA @ 11 Vdc
35 mA @ 12 Vdc

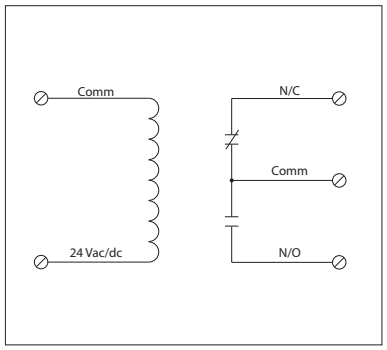
Coil Voltage Input:
12 Vac/dc ; 50-60 Hz
Drop Out = 2 Vac / 2.5 Vdc
Pull In = 9 Vac / 11 Vdc

Notes:
• Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN12S)

15 AMP TRACK MOUNT CONTROL RELAYS

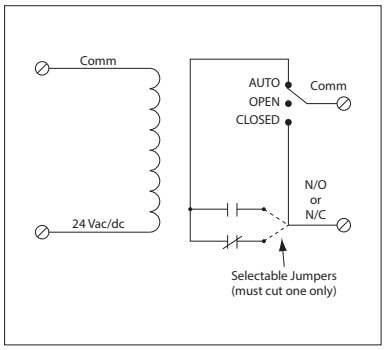
RIBMN24C

2.75″ Track Mount Relay 15 Amp SPDT with 24 Vac/dc Coil



RIBMN24S

2.75″ Track Mount Relay 15 Amp SPST + Override with 24 Vac/dc Coil



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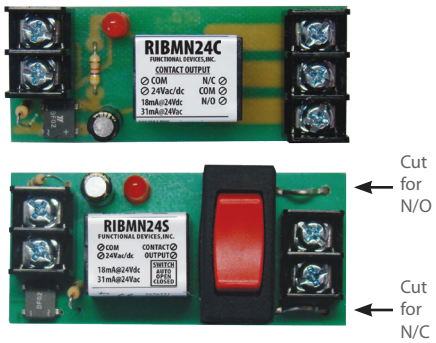


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBMN24C)
One (1) SPST Continuous Duty Coil (RIBMN24S)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions (RIBMN24C): 1.100″ x 2.750″ x 0.750″ (without track)
1.100″ x 2.750″ x 1.250″ (including track)
Dimensions (RIBMN24S): 1.250″ x 2.750″ x 1.000″ (without track)
1.250″ x 2.750″ x 1.500″ (including track)
Track Mount: 2.750″, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBMN24C), Yes (RIBMN24S)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Current:
26 mA @ 20 Vac
31 mA @ 24 Vac
48 mA @ 35 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

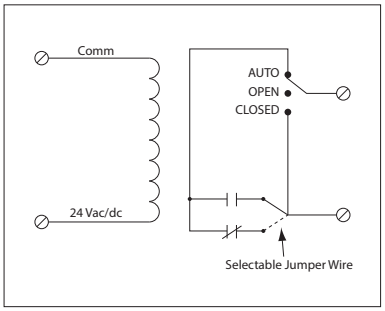
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

Notes:
• Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN24S)

15 AMP TRACK MOUNT CONTROL RELAY

RIBMN24S-J

2.75″ Track Mount Relay 15 Amp SPST + Override with 24 Vac/dc Coil and Jumper Selectable Output



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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.250″ x 2.750″ x 1.750″
Track Mount: 2.750″, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: Yes

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Current:
26 mA @ 20 Vac
31 mA @ 24 Vac
48 mA @ 35 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

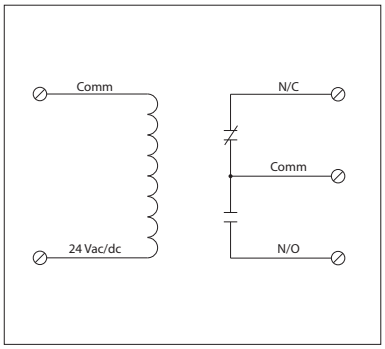
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire.

15 AMP TRACK MOUNT CONTROL RELAYS

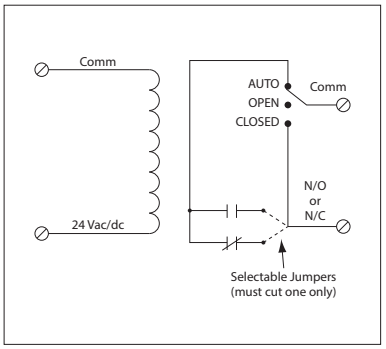
RIBMN24C-4T

Four 2.75″ Track Mount Relays 15 Amp SPDT with 24 Vac/dc Coil and 2.75″ x 6.00″ Mounting Track



RIBMN24S-4T

Four 2.75″ Track Mount Relays 15 Amp SPST + Override with 24 Vac/dc Coil and 2.75″ x 6.00″ Mounting Track



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SPECIFICATIONS

 # Relays & Contact Type: Four (4) SPDT Continuous Duty Coils (RIBMN24C-4T)
Four (4) SPST Continuous Duty Coils (RIBMN24S-4T)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 6.000″ x 2.750″ x 1.150″ (RIBMN24C-4T)
6.000″ x 2.750″ x 1.500″ (RIBMN24S-4T)
Track Mount: 2.750″ x 6.000″; MT212-6 Mounting Track Included
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBMN24C-4T)
Yes (RIBMN24S-4T)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
C300 Pilot Duty

Coil Current:
26 mA @ 20 Vac
31 mA @ 24 Vac
48 mA @ 35 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

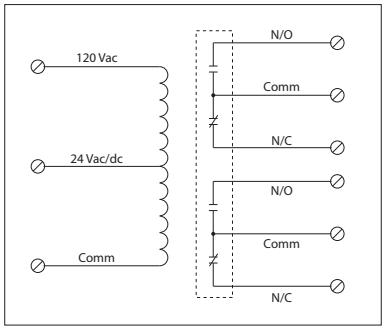
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

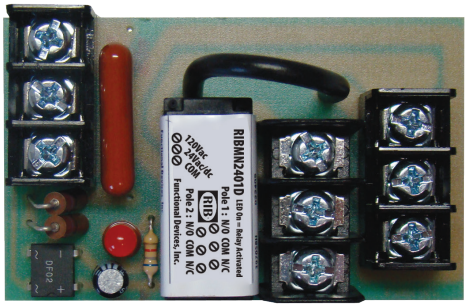
Notes:
- Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN24S-4T)

10 AMP TRACK MOUNT CONTROL RELAY

RIBMN2401D

2.75˝ Track Mount Relay 10 Amp DPDT with
24 Vac/dc/120 Vac Coil





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RELAYS

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Relay Status: LED On = Activated
Dimensions: 1.700˝ x 2.750˝ x 1.750˝
Track Mount: 2.750˝, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp Resistive @ 30 Vdc
10 Amp General Use @ 277 Vac
1/2 HP @ 120/240 Vac (N/O)
1/3 HP @ 120/240 Vac (N/C)
B300 Pilot Duty
120 Vac 30A Make 3A Break (360 VA)
240 Vac 15 A Make 1.5A Break (360 VA)
208 Vac 17.3A Make 1.73A Break (360 VA)
277 Vac 13A Make 1.3A Break (360 VA)
24 Vac 30A Make 5A Break (120VA) 5A Max

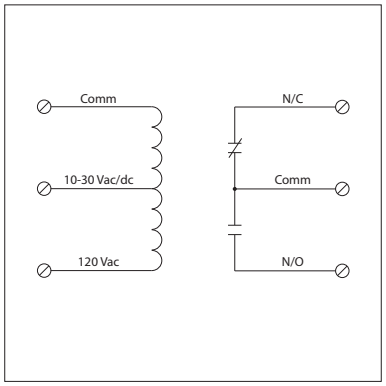
Coil Current:
36 mA @ 30Vdc
24 mA @ 18 Vac
32 mA @ 24 Vac
40 mA @ 30 Vac
31 mA @ 120 Vac

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 18 Vac / 20 Vdc

15 AMP TRACK MOUNT CONTROL RELAYS

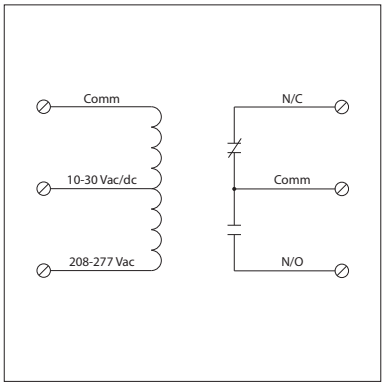
RIBMNU1C

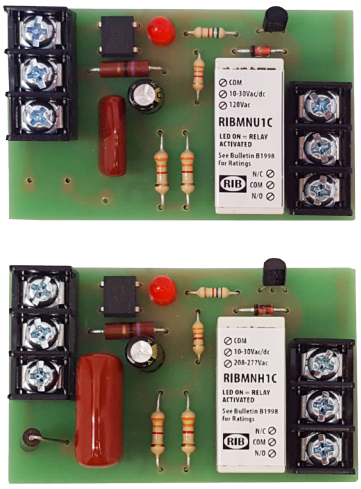
2.75˝ Track Mount Relay 15 Amp SPDT with
10-30 Vac/dc/120 Vac Coil



RIBMNH1C

2.75˝ Track Mount Relay 15 Amp SPDT with
10-30 Vac/dc/208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 1.700˝ x 2.750˝ x 1.750˝
Track Mount: 2.750˝, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: No

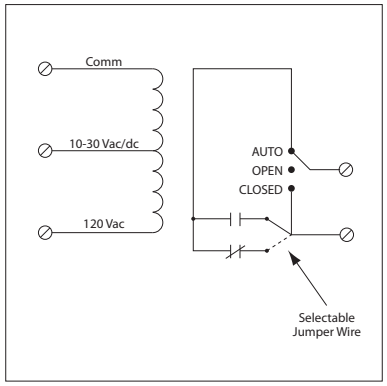
Contact Ratings:
15 Amp Resistive @ 150 Vac, 28Vdc
15 Amp Inductive @ 150 Vac
10 Amp Resistive @ 120-277 Vac, 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Current:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc
28 mA @ 120 Vac (RIBMNU1C)
39 mA @ 208-277 Vac (RIBMNH1C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMNU1C)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMNH1C)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

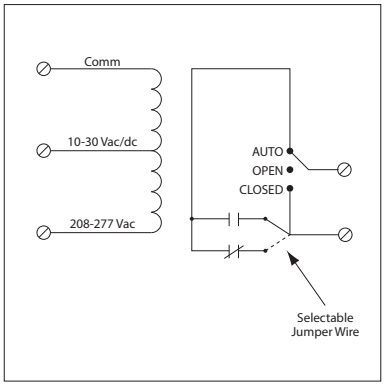
RIBMNU1S

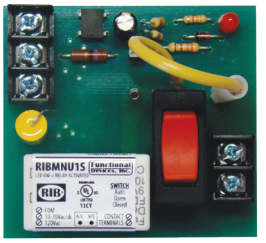
2.75˝ Track Mount Relay 15 Amp SPST
+ Override with 10-30 Vac/dc/120 Vac Coil

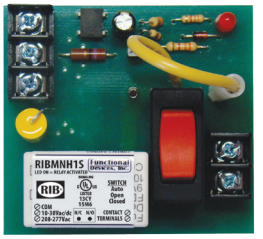


RIBMNH1S

2.75˝ Track Mount Relay 15 Amp SPST
+ Override with 10-30 Vac/dc/208-277 Vac Coil







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"Buy American"
of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.500˝ x 2.750˝ x 1.750˝
Track Mount: 2.750˝, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: Yes

Contact Ratings:
15 Amp Resistive @ 150 Vac
10 Amp Resistive @ 277 Vac
480 VA Pilot Duty @ 277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Coil Voltage Input:
10-30 Vac/dc ; 120 Vac ; 50-60 Hz (RIBMNU1S)
10-30 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBMNH1S)
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

Coil Current:

33 mA @ 10 Vac	13 mA @ 10 Vdc
35 mA @ 12 Vac	15 mA @ 12 Vdc
46 mA @ 24 Vac	18 mA @ 24 Vdc
55 mA @ 30 Vac	20 mA @ 30 Vdc

28 mA @ 120 Vac (RIBMNU1S)
39 mA @ 208-277 Vac (RIBMNH1S)

Notes:
• Normally Open or Normally Closed selected by yellow jumper wire

POWER RELAYS: 20–30 AMPS

Enclosed | T Style | Track Mount

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

ENCLOSED POWER RELAYS

MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIB2401B	•	24	120	1	SPDT			24
RIB2402B	•	24	208-277	1	SPDT			24
RIB2401SB	•	24	120	1	SPST	1		25
RIB2402SB	•	24	208-277	1	SPST	1		25
RIB2421B	•	24	120/208-277	1	SPDT			25
RIB2421SB	•	24	120/208-277	1	SPST	1		25
RIB01P	•		120	1	DPDT			26
RIB02P	•		208-277	1	DPDT			27
RIB347P	•		347	1	DPDT		NEW	27
RIB04P	•		480	1	DPDT			28
RIB2401SBC	•	24	120	1	SPDT	2 [1]		26
RIB2402SBC	•	24	208-277	1	SPDT	2 [1]		26
RIB243P	• [3]	24		1	3PST			28
RIB013P	•		120	1	3PST			29
RIB023P	•		208-277	1	3PST			29
RIB043P	•		480	1	3PST			30
RIB24Z	•	24		1	1 SPST N/O, 1 SPST N/C			30
RIB12P	•	12		1	DPDT			31
RIB12P30	•	12		1	DPDT			31
RIB24P	•	24		1	DPDT			31
RIB24P30	•	24		1	DPDT			31
RIB01P30	•		120	1	DPST			32
RIB01P30-S	•		120	1	DPST	1		32
RIB02P30	•		208-277	1	DPST			32

T STYLE POWER RELAYS

MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBT24B	•	24		1	SPDT			33
RIBT2401B	•	24	120	1	SPDT			33
RIBTD2401B	•	24	120	1	SPDT		2	35
RIBT2402B	•	24	208-277	1	SPDT			33
RIBT242B	•	24		2	2 SPDT			36
RIBT243B	• [3]	24		3	2 SPST, 1 SPDT			36
RIBT24SB	•	24		1	SPST	1		33
RIBT2401SB	•	24	120	1	SPST	1		34
RIBT2402SB	•	24	208-277	1	SPST	1		34
RIBT2401SBC	•	24	120	1	SPDT	2 [1]		34
RIBT2402SBC	•	24	208-277	1	SPDT	2 [1]		34
RIBT24P	•	24		1	DPDT			36
RIBT24Z	•	24		1	1 SPST N/O, 1 SPST N/C			37
RIBT243P	• [3]	24		1	3PST			37

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

1 = SPDT with override requires 2 switches

2 = Time Delay

3 = UL Listed : UL916 Energy Management ; USA & Canada

TRACK MOUNT POWER RELAYS

MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBM2401B	•	24	120	1	SPDT			38
RIBM2402B	•	24	208-277	1	SPDT			38
RIBM2401SB	•	24	120	1	SPST	1		38
RIBM2402SB	•	24	208-277	1	SPST	1		38
RIBM2401SBC	•	24	120	1	SPDT	2 [1]		39
RIBM2402SBC	•	24	208-277	1	SPDT	2 [1]		39
RIBM24ZN		24		1	DPDT			39
RIBM24ZL	•	24		1	DPST			40
RIBMN24ZL	•	24		1	DPST			40
RIBM243PN		24		1	3PDT			41
RIBM013PN			120	1	3PDT			41
RIBM023PN			208-277	1	3PDT			42
RIBM043PN			480	1	3PDT			42
RIBM043PN-HD			480	1	3PDT			43

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

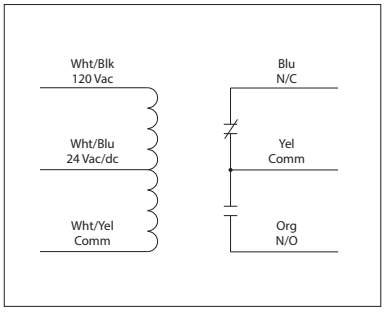
= UL Component Recognized : UL916 Energy Management; USA & Canada

1 = SPDT with override requires 2 switches

20 AMP POWER CONTROL RELAYS

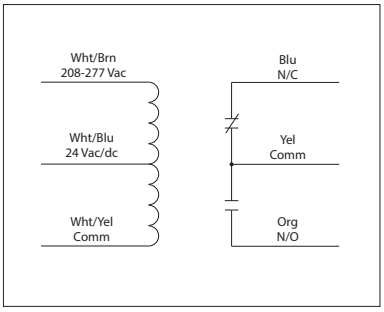
RIB2401B

Enclosed Relay 20 Amp SPDT with
24 Vac/dc/120 Vac Coil



RIB2402B

Enclosed Relay 20 Amp SPDT with
24 Vac/dc/208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

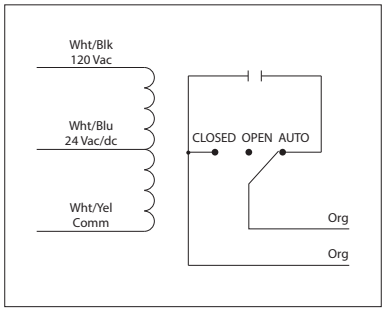
Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIB2401B)
69 mA @ 208-277 Vac (RIB2402B)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIB2401B)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIB2402B)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

20 AMP POWER CONTROL RELAYS

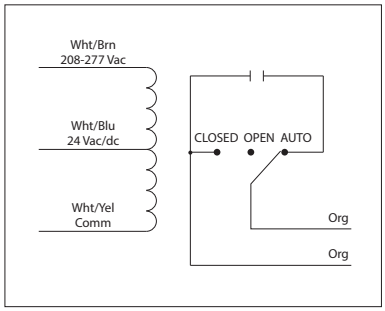
RIB2401SB

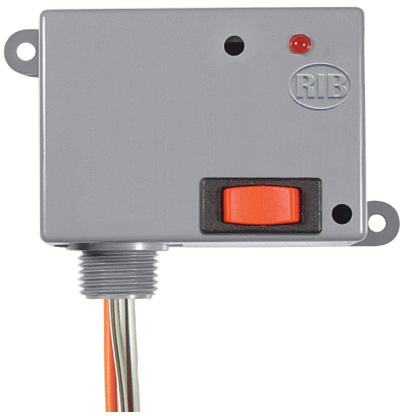
Enclosed Relay 20 Amp SPST-N/O + Override with 24 Vac/dc/120 Vac Coil



RIB2402SB

Enclosed Relay 20 Amp SPST-N/O + Override with 24 Vac/dc/208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, UL508, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIB2401SB)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIB2402SB)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

Coil Current:

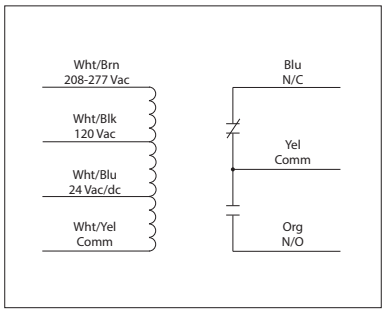
50 mA @ 18 Vac	33 mA @ 22 Vdc
83 mA @ 24 Vac	35 mA @ 24 Vdc
47 mA @ 120 Vac (RIB2401SB)	47 mA @ 30 Vdc
69 mA @ 208-277 Vac (RIB2402SB)	

Notes:
- Order Normally Closed by adding "-NC" to end of model number

20 AMP POWER CONTROL RELAYS

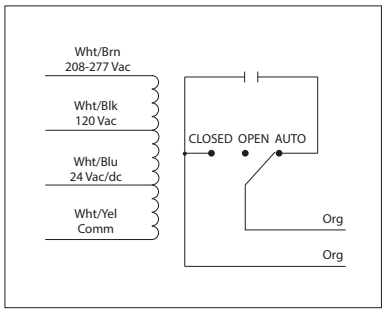
RIB2421B

Enclosed Relay 20 Amp with 24 Vac/dc/208-277 Vac/120 Vac Coil



RIB2421SB

Enclosed Relay 20 Amp + Override with 24 Vac/dc/208-277 Vac/120 Vac Coil



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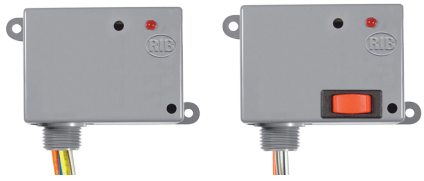


GREAT SERVICE TRUCK RELAY
ONE RELAY COVERS MOST APPLICATIONS

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIB2421B)
One (1) SPST Continuous Duty Coil (RIB2421SB)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No (RIB2421B)
Yes (RIB2421SB)

Contact Ratings (RIB2421B):
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Current:
83 mA @ 24 Vac
47 mA @ 120 Vac
69 mA @ 208-277 Vac
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 208-277 Vac ;
120 Vac ; 50-60 Hz
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

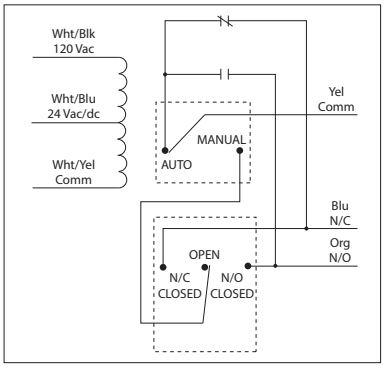
Contact Ratings (RIB2421SB):
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Notes:
- Order Normally Closed by adding "-NC" to end of model number (RIB2421SB)

20 AMP POWER CONTROL RELAYS

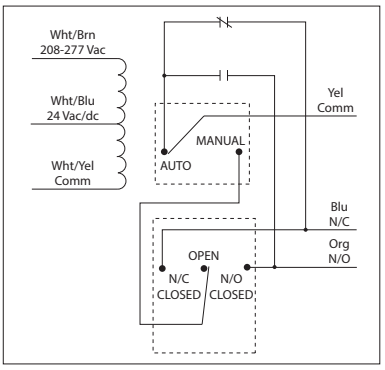
RIB2401SBC

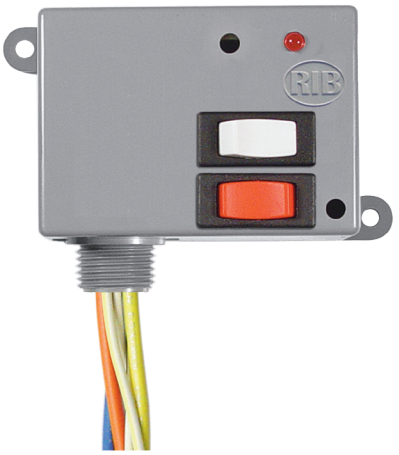
Enclosed Relay 20 Amp SPDT + Override with 24 Vac/dc/120 Vac Coil



RIB2402SBC

Enclosed Relay 20 Amp SPDT + Override with 24 Vac/dc/208-277 Vac Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes (2)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

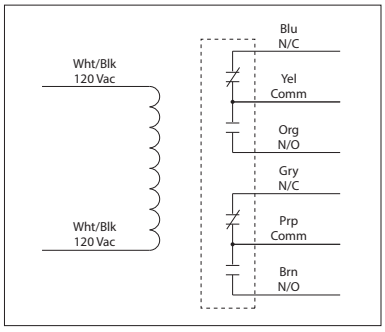
Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIB2401SBC)
69 mA @ 208-277 Vac (RIB2402SBC)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIB2401SBC)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIB2402SBC)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

20 AMP POWER CONTROL RELAY

RIB01P

Enclosed Relay 20 Amp DPDT with 120 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

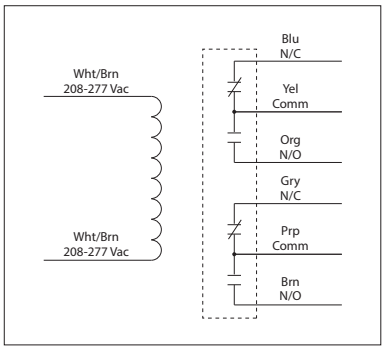
Coil Current:
105 mA @ 120 Vac

Coil Voltage Input:
120 Vac ; 50-60 Hz
Drop Out = 35 Vac
Pull In = 85 Vac

20 AMP POWER CONTROL RELAY

RIB02P

Enclosed Relay 20 Amp DPDT with 208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

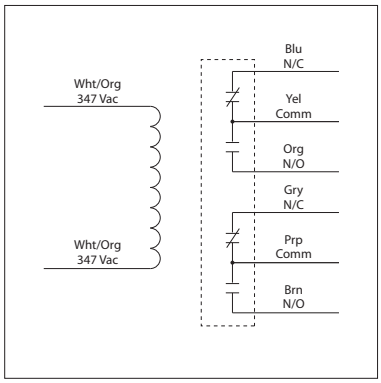
Coil Current:
105 mA @ 208-277 Vac

Coil Voltage Input:
208-277 Vac ; 50-60 Hz
Drop Out = 60 Vac
Pull In = 160 Vac

20 AMP POWER CONTROL RELAY

RIB347P

Enclosed Relay 20 Amp DPDT with 347 Vac Coil



LIGHTING RETROFITS
347 VAC FOR OUR FRIENDS IN CANADA

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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

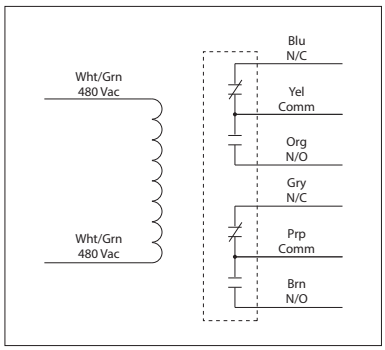
Coil Current:
105 mA @ 347 Vac

Coil Voltage Input:
347 Vac ; 50-60 Hz
Drop Out = 70 Vac
Pull In = 295 Vac

20 AMP POWER CONTROL RELAY

RIB04P

Enclosed Relay 20 Amp DPDT with 480 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

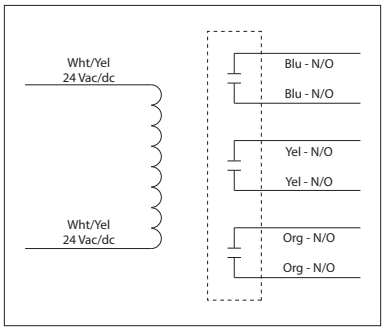
Coil Current:
105 mA @ 480 Vac

Coil Voltage Input:
480 Vac ; 50-60 Hz
Drop Out = 140 Vac
Pull In = 340 Vac

20 AMP POWER CONTROL RELAY

RIB243P

Enclosed Relay 20 Amp 3PST-N/O with
24 Vac/dc Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Coil Current:
210 mA @ 24 Vac
154 mA @ 30 Vdc

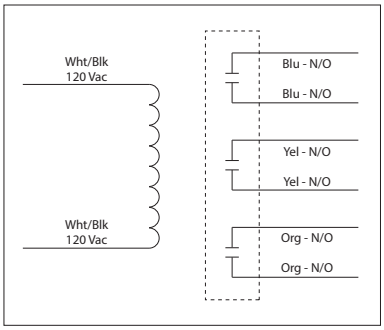
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 22 Vdc

Notes:
- Order Normally Closed by adding "-NC" to end of model number

20 AMP POWER CONTROL RELAY

RIB013P

Enclosed Relay 20 Amp 3PST-N/O with
120 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Coil Current:
154 mA @ 120 Vac

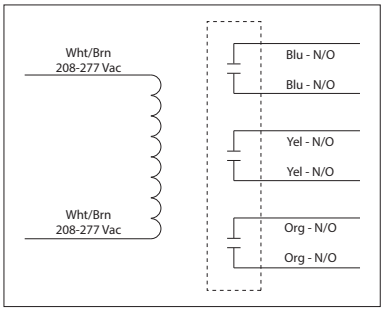
Coil Voltage Input:
120 Vac ; 50-60 Hz
Drop Out = 35 Vac
Pull In = 85 Vac

Notes:
• Order Normally Closed by adding "-NC" to end of model number

20 AMP POWER CONTROL RELAY

RIB023P

Enclosed Relay 20 Amp 3PST-N/O with
208-277 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Coil Current:
187 mA @ 208-277 Vac

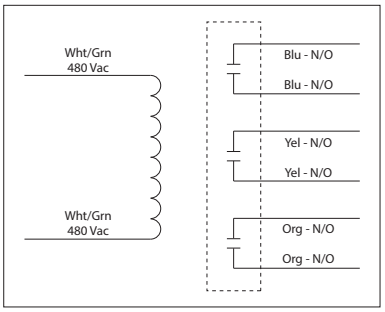
Coil Voltage Input:
208-277 Vac ; 50-60 Hz
Drop Out = 60 Vac
Pull In = 160 Vac

Notes:
• Order Normally Closed by adding "-NC" to end of model number

20 AMP POWER CONTROL RELAY

RIB043P

Enclosed Relay 20 Amp 3PST-N/O with 480 Vac Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Coil Current:
132 mA @ 480 Vac

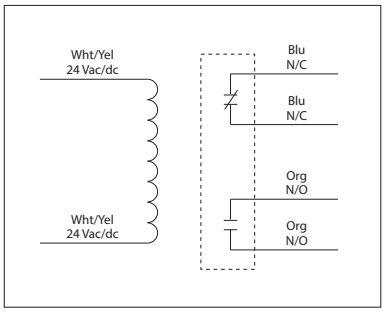
Coil Voltage Input:
480 Vac ; 50-60 Hz
Drop Out = 140 Vac
Pull In = 340 Vac

Notes:
• Order Normally Closed by adding "-NC" to end of model number

30 AMP POWER CONTROL RELAY

RIB24Z

Enclosed Relay 30 Amp SPST-N/O + SPST-N/C with 24 Vac/dc Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST-N/O + SPST-N/C
Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

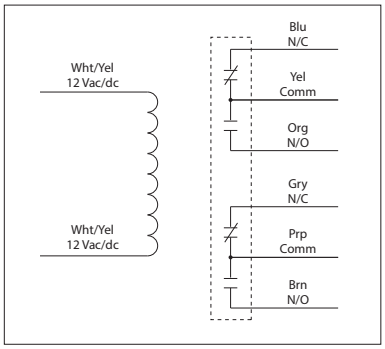
Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

20 / 30 AMP POWER CONTROL RELAYS

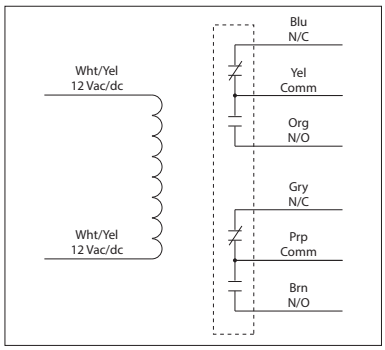
RIB12P

Enclosed Relay 20 Amp DPDT with 12 Vac/dc Coil



RIB12P30

Enclosed Relay 30 Amp DPDT with 12 Vac/dc Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝
with .50˝ NPT Nipple (RIB12P)
2.30˝ x 3.20˝ x 1.80˝
with .75˝ NPT Nipple (RIB12P30)
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL60947, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings: (RIB12P)
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

Contact Ratings: (RIB12P30)
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

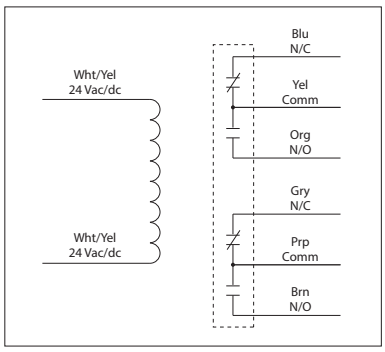
Coil Current:
115 mA @ 10 Vac
180 mA @ 12 Vac
79 mA @ 11 Vdc
90 mA @ 12 Vdc
115 mA @ 15 Vdc

Coil Voltage Input:
12 Vac/dc ; 50-60 Hz
Drop Out = 4.5 Vac / 4.8 Vdc
Pull In = 9.7 Vac / 11 Vdc

20 / 30 AMP POWER CONTROL RELAYS

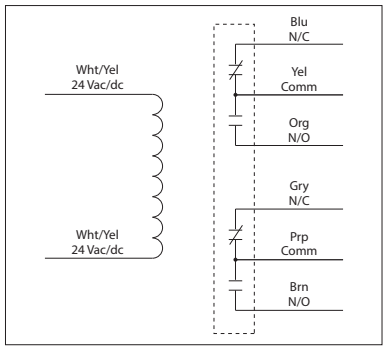
RIB24P

Enclosed Relay 20 Amp DPDT with 24 Vac/dc Coil



RIB24P30

Enclosed Relay 30 Amp DPDT with 24 Vac/dc Coil



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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝
with .50˝ NPT Nipple (RIB24P)
2.30˝ x 3.20˝ x 1.80˝
with .75˝ NPT Nipple (RIB24P30)
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, UL60947, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings: (RIB24P)
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

Contact Ratings: (RIB24P30)
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

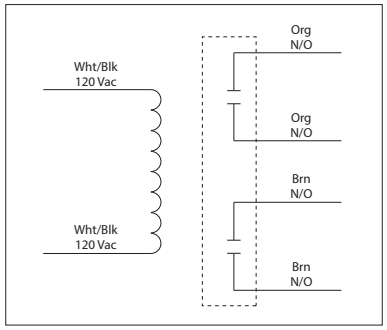
Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

30 AMP POWER CONTROL RELAYS

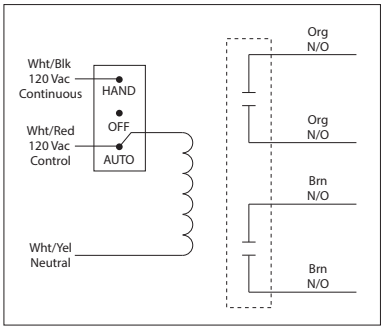
RIB01P30

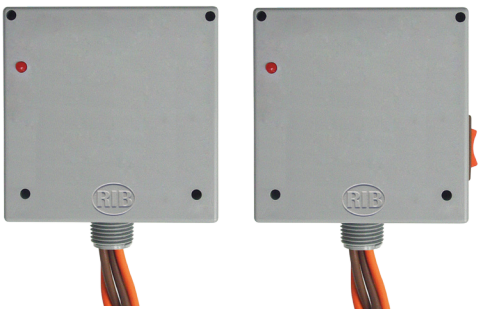
Enclosed Relay 30 Amp DPST-N/O with 120 Vac Coil



RIB01P30-S

Enclosed Relay 30 Amp DPST-N/O + Coil Side Override with 120 Vac Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) DPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No (RIB01P30)
Coil Side (RIB01P30-S)

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

Coil Current:
105 mA @ 120 Vac

Control Input: (RIB01P30-S)
Wht/Blk = 120 Vac Continuous
Wht/Red = 120 Vac Control
Wht/Yel = Neutral

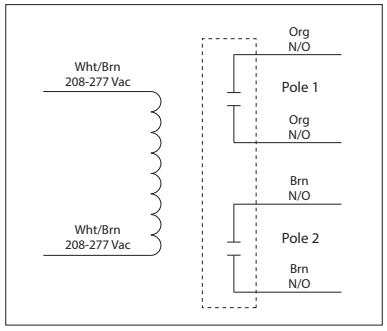
Coil Voltage Input:
120 Vac ; 50-60 Hz
Drop Out = 35 Vac
Pull In = 85 Vac

Notes:
- Order Both Poles Normally Closed by adding "-NC" to end of model number
- Order Pole 1 Normally Open and Pole 2 Normally Closed by adding "-NONC" to end of model number

30 AMP POWER CONTROL RELAY

RIB02P30

Enclosed Relay 30 Amp DPST-N/O with 208-277 Vac Coil



SPECIFICATIONS

 # Relays & Contact Type: One (1) DPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

Coil Current:
105 mA @ 208-277 Vac

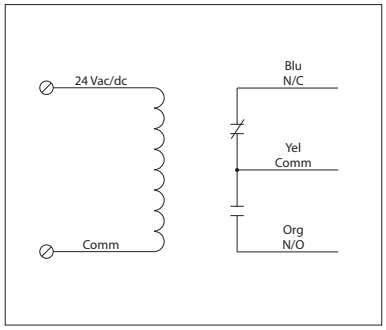
Coil Voltage Input:
208-277 Vac ; 50-60 Hz
Drop Out = 60 Vac
Pull In = 160 Vac

Notes:
- Order Both Poles Normally Closed by adding "-NC" to end of model number
- Order Pole 1 Normally Open and Pole 2 Normally Closed by adding "-NONC" to end of model number

20 AMP POWER CONTROL RELAYS

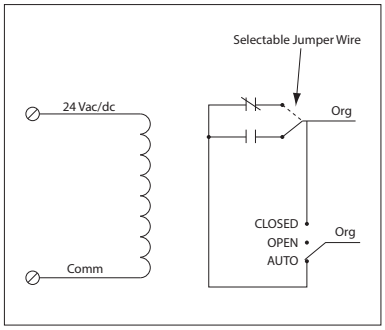
RIBT24B

Enclosed Relay Hi/Low Separation 20 Amp
SPDT with 24 Vac/dc Coil



RIBT24SB

Enclosed Relay Hi/Low Separation 20 Amp
SPST + Override with 24 Vac/dc Coil



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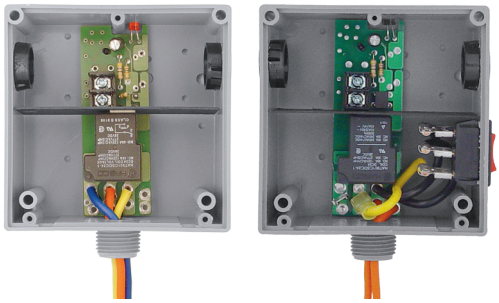


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil (RIBT24B)
One (1) SPST Continuous Duty Coil (RIBT24SB)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No (RIBT24B)
Yes (RIBT24SB)

Contact Ratings (RIBT24B):
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Current:
45 mA @ 18 Vac
75 mA @ 24 Vac
30 mA @ 22 Vdc
32 mA @ 24 Vdc
42 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

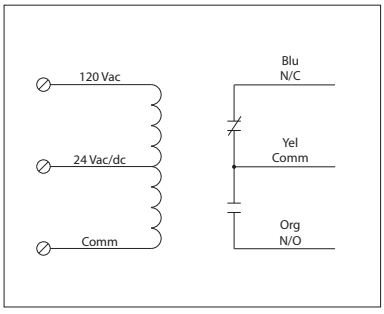
Contact Ratings (RIBT24SB):
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire (RIBT24SB)

20 AMP POWER CONTROL RELAYS

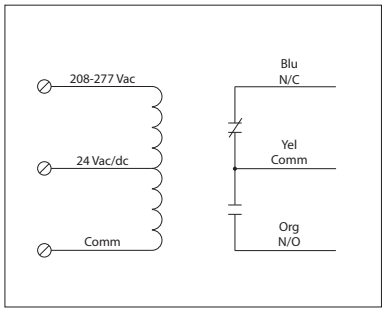
RIBT2401B

Enclosed Relay Hi/Low Separation 20 Amp
SPDT with 24 Vac/dc/120 Vac Coil



RIBT2402B

Enclosed Relay Hi/Low Separation 20 Amp
SPDT with 24 Vac/dc/208-277 Vac Coil



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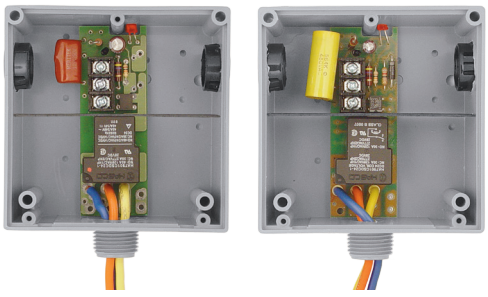


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

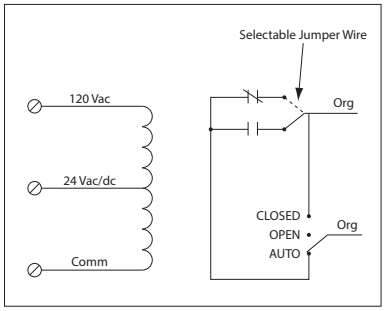
Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIBT2401B)
69 mA @ 208-277 Vac (RIBT2402B)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBT2401B)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBT2402B)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

20 AMP POWER CONTROL RELAYS

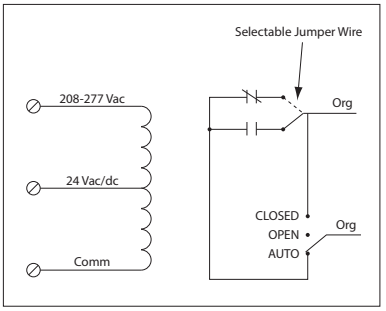
RIBT2401SB

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override with 24 Vac/dc/120 Vac Coil



RIBT2402SB

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override with 24 Vac/dc/208-277 Vac Coil



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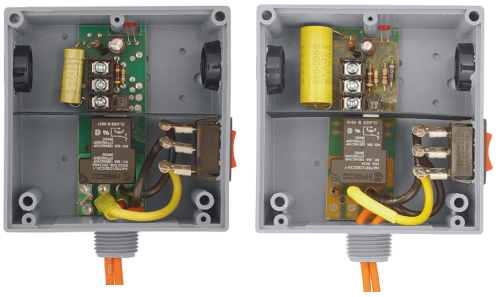


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBT2401SB)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBT2402SB)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

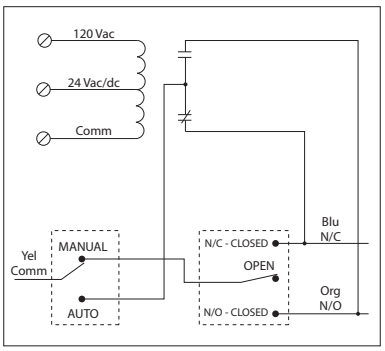
Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIBT2401SB)
69 mA @ 208-277 Vac (RIBT2402SB)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Notes:
• Normally Open or Normally Closed selected by yellow jumper wire

20 AMP POWER CONTROL RELAYS

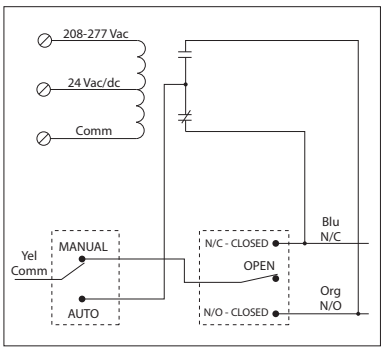
RIBT2401SBC

Enclosed Relay Hi/Low Separation 20 Amp SPDT + Override with 24 Vac/dc/120 Vac Coil



RIBT2402SBC

Enclosed Relay Hi/Low Separation 20 Amp SPDT + Override with 24 Vac/dc/208-277 Vac Coil



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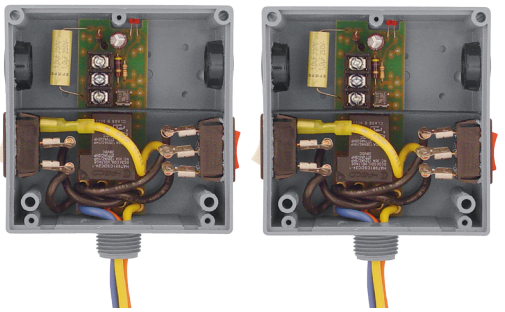


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes (2)

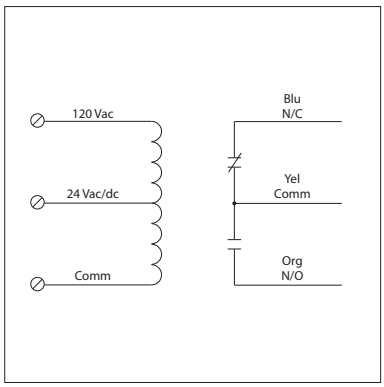
Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBT2401SBC)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBT2402SBC)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIBT2401SBC)
69 mA @ 208-277 Vac (RIBT2402SBC)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

RIBTD2401B

Enclosed Time Delay Relay 20 Amp SPDT with 24 Vac/dc/120 Vac Coil



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RELAYS

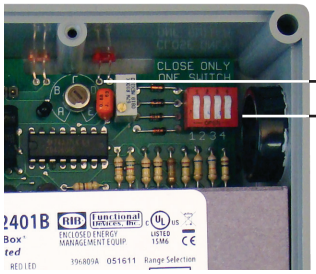
SPECIFICATIONS

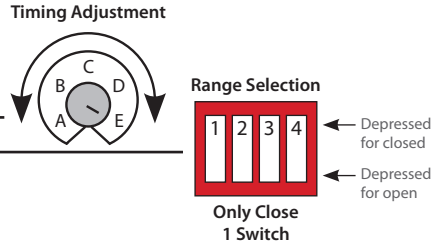
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms after time delay
Relay Status: RED LED On = Activated
Time Delay Status: PINK LED FLASHING = Timing
Timing Mode: Delay On Make (N/O)
Timing Range: 6 seconds - 20 minutes
Timing Adjustment: 4 position DIP switch for range selection and single turn potentiometer for timing adjustment within range
Timing Tolerance: Switches 1& 2 = ±10%
Switches 3 & 4 = ±5%
Timing Repeatability: ±1%
Temperature Timing Variance: ±1%
Voltage Timing Variance: ±1%
Recycle Time: 750ms Maximum
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Input Current:
133 mA @ 24 Vac
45 mA @ 24 Vdc
51 mA @ 120 Vac

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

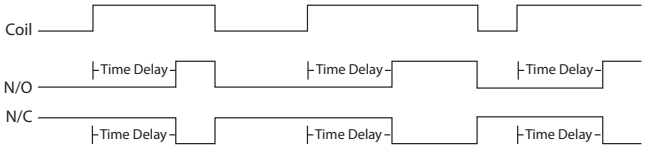




TIMING TABLE

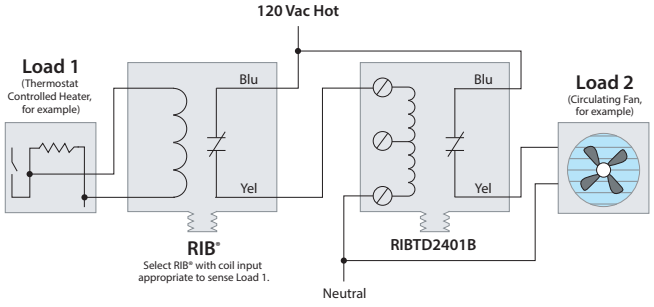
Switch Ranges	Close Dip Switch	Potentiometer Setting A	B	C	D	E
6s-20s	1	6s	9s	13s	16s	20s
22s-1min15s	2	22s	36s	50s	1min4s	1min15s
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min
6min-20min	4	6min	9min	13min20s	17min20s	20min

Timing Diagram



Time Delay Application

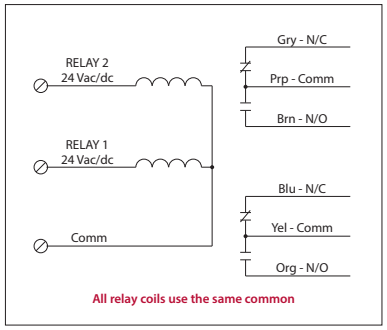
Load 2 stays on selected amount of time after Load 1 goes off.



20 AMP POWER CONTROL RELAYS

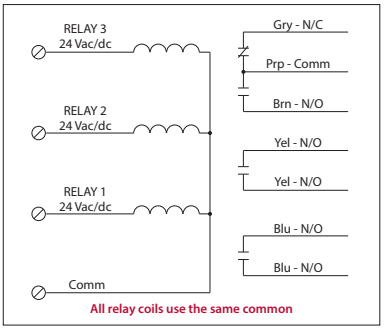
RIBT242B

Enclosed Relays Hi/Low Separation 20 Amp
2 SPDT with 24 Vac/dc Coil



RIBT243B

Enclosed Relays Hi/Low Separation 20 Amp
2 SPST + 1 SPDT with 24 Vac/dc Coil



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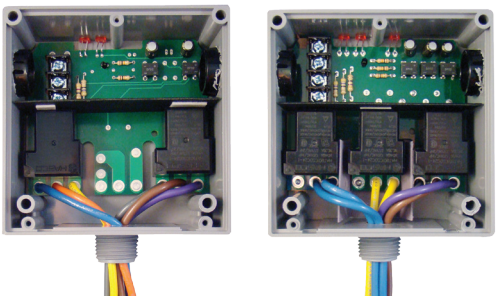


SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil (RIBT242B)
Two (2) SPST + One (1) SPDT Continuous Duty Coil (RIBT243B)
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

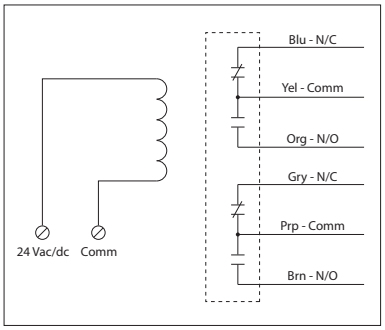
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

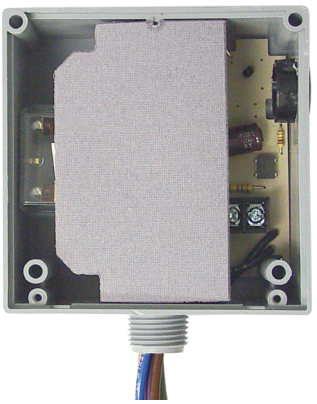
Notes:
• RIBT243B not rated for UL864.

20 AMP POWER CONTROL RELAY

RIBT24P

Enclosed Relay Hi/Low Separation 20 Amp
DPDT with 24 Vac/dc Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

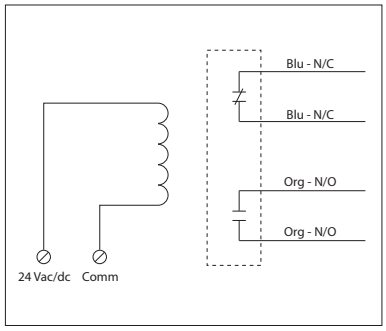
Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

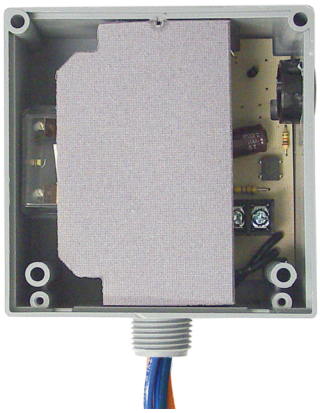
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

30 AMP POWER CONTROL RELAY

RIBT24Z

Enclosed Relay Hi/Low Separation 30 Amp
SPST-N/O + SPST-N/C with 24 Vac/dc Coil





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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST-N/O + One (1) SPST-N/C Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

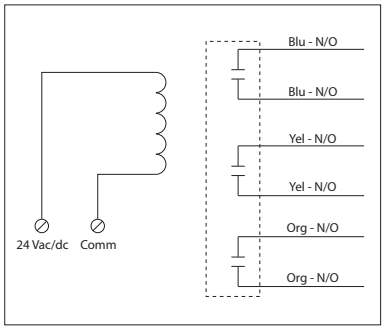
Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

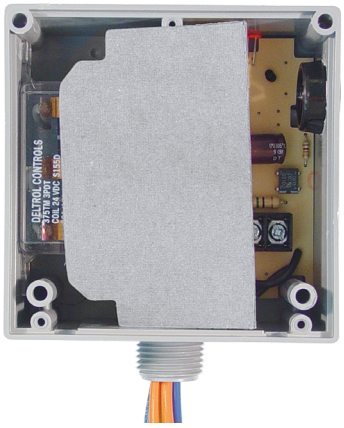
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

20 AMP POWER CONTROL RELAY

RIBT243P

Enclosed Relay Hi/Low Separation 20 Amp
3PST-N/O with 24 Vac/dc Coil





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RoHS

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SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Coil Current:
210 mA @ 24 Vac
154 mA @ 30 Vdc

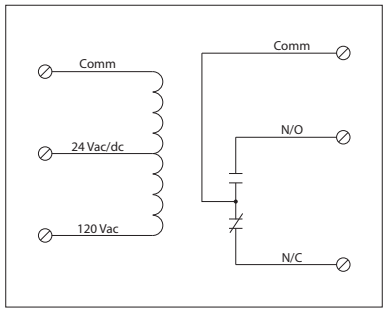
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 22 Vdc

Notes:
- Order Normally Closed by adding "-NC" to end of model number

20 AMP TRACK MOUNT CONTROL RELAYS

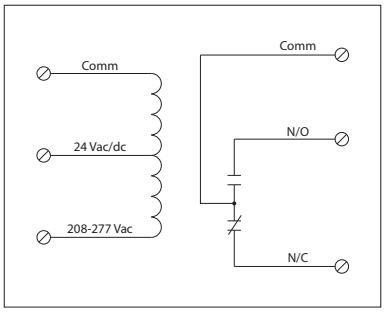
RIBM2401B

4.00˝ Track Mount Relay 20 Amp SPDT with 24 Vac/dc/120 Vac Coil



RIBM2402B

4.00˝ Track Mount Relay 20 Amp SPDT with 24 Vac/dc/208-277 Vac Coil



Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 1.250˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Current:

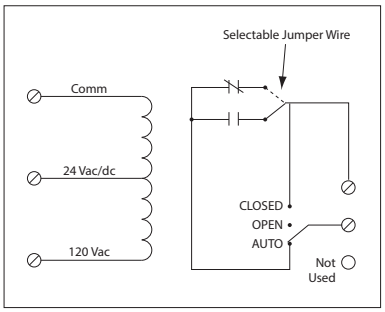
50 mA @ 18 Vac	33 mA @ 22 Vdc
83 mA @ 24 Vac	35 mA @ 24 Vdc
47 mA @ 120 Vac (RIBM2401B)	47 mA @ 30 Vdc
69 mA @ 208-277 Vac (RIBM2402B)	

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBM2401B)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBM2402B)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

20 AMP TRACK MOUNT CONTROL RELAYS

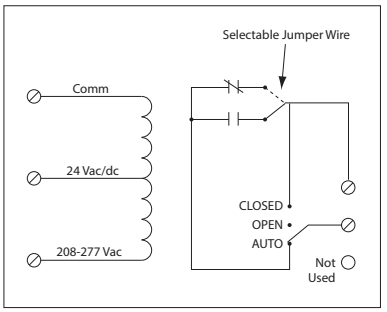
RIBM2401SB

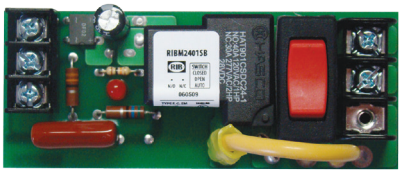
4.00˝ Track Mount Relay 20 Amp SPST + Override with 24 Vac/dc/120 Vac Coil

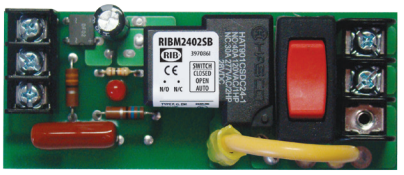


RIBM2402SB

4.00˝ Track Mount Relay 20 Amp SPST + Override with 24 Vac/dc/208-277 Vac Coil







Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 1.600˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBM2401SB)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBM2402SB)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

Coil Current:

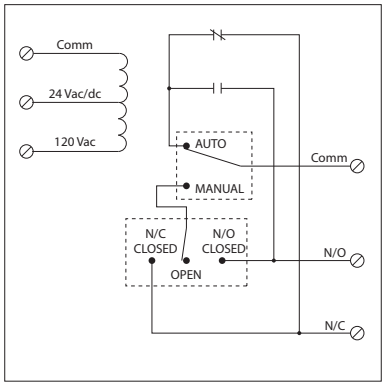
50 mA @ 18 Vac	33 mA @ 22 Vdc
83 mA @ 24 Vac	35 mA @ 24 Vdc
47 mA @ 120 Vac (RIBM2401SB)	47 mA @ 30 Vdc
69 mA @ 208-277 Vac (RIBM2402SB)	

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire

20 AMP TRACK MOUNT CONTROL RELAYS

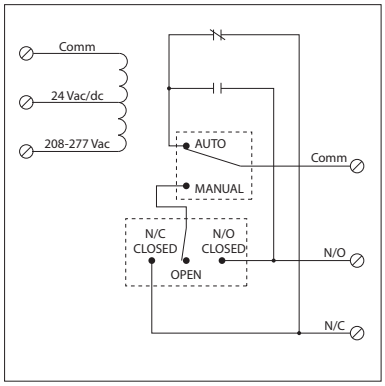
RIBM2401SBC

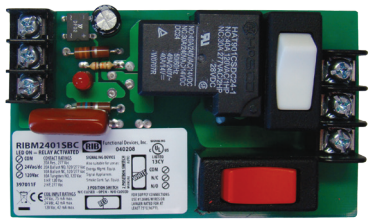
4.00˝ Track Mount Relay 20 Amp SPDT + Override with 24 Vac/dc/120 Vac Coil

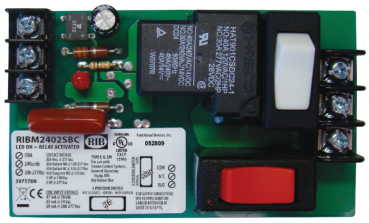


RIBM2402SBC

4.00˝ Track Mount Relay 20 Amp SPDT + Override with 24 Vac/dc/208-277 Vac Coil







Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.350˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: Yes (2)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

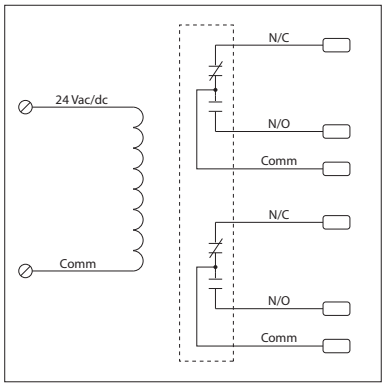
Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIBM2401SBC)
69 mA @ 208-277 Vac (RIBM2402SBC)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBM2401SBC)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBM2402SBC)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

30 AMP TRACK MOUNT CONTROL RELAY

RIBM24ZN

4.00˝ Track Mount Relay 30 Amp DPDT with 24 Vac/dc Coil



Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 1.600˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916
C-UL, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
3 HP @ 480-600 Vac
2 HP @ 240/277 Vac
1 HP @ 120 Vac
NEMA B600 Pilot Duty

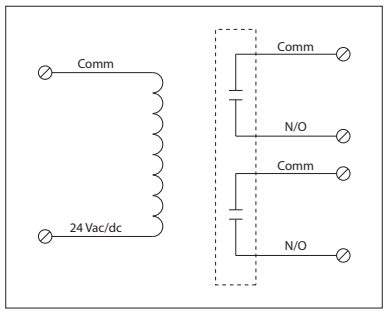
Coil Current:
110 mA @ 20 Vac
125 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
70 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

30 AMP TRACK MOUNT CONTROL RELAY

RIBM24ZL

4.00˝ Track Mount Relay 30 Amp DPST-N/O
with 24 Vac/dc Coil



Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.350˝ x 4.000˝ x 2.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
3 HP @ 480-600 Vac
2 HP @ 240/277 Vac
1 HP @ 120 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac

Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

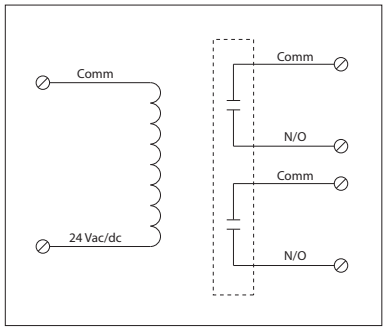
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

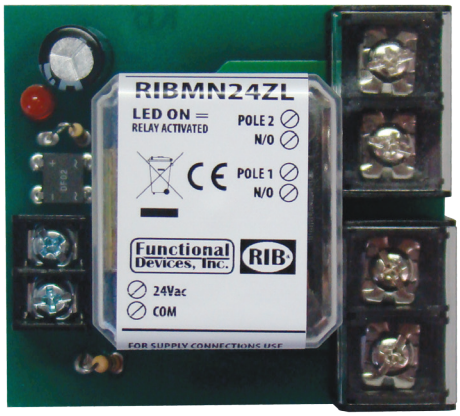
Notes:
• Order Normally Closed by adding "-NC" to end of model number

30 AMP TRACK MOUNT CONTROL RELAY

RIBMN24ZL

2.75˝ Track Mount Relay 30 Amp DPST-N/O
with 24 Vac/dc Coil





Made in USA
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of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.350˝ x 2.750˝ x 2.750˝
Track Mount: 2.750˝, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240/277 Vac
1 HP @ 120 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1109 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
Heavy Pilot Duty @ 600 Vac

Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

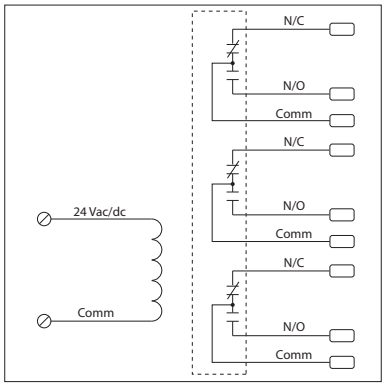
Notes:
• Order Normally Closed by adding "-NC" to end of model number

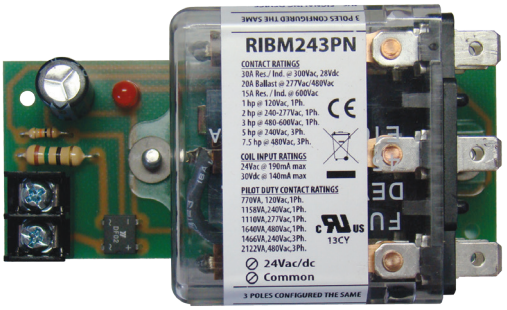
30 AMP TRACK MOUNT CONTROL RELAY

RIBM243PN

4.00˝ Track Mount Relay 30 Amp 3PDT with 24 Vac/dc Coil

Made in USA
Meets "Buy American" of ARRA 2009





SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.450˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916
C-UL, California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
30 Amp General Use @ 300 Vac
30 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac
770 VA @ 120 Vac, 1 Phase
1158 VA @ 240 Vac, 1 Phase
1110 VA @ 277 Vac, 1 Phase
1640 VA @ 480 Vac, 1 Phase
1466 VA @ 240 Vac, 3 Phase
2122 VA @ 480 Vac, 3 Phase

Coil Current:
190 mA @ 24 Vac
140 mA @ 30 Vdc

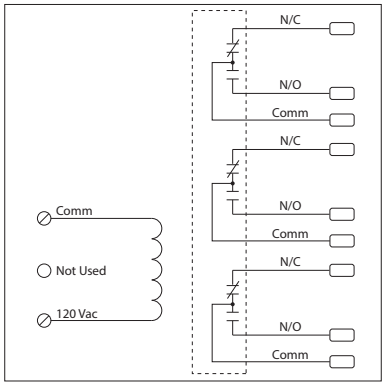
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 22 Vdc

30 AMP TRACK MOUNT CONTROL RELAY

RIBM013PN

4.00˝ Track Mount Relay 30 Amp 3PDT with 120 Vac Coil

Made in USA
Meets "Buy American" of ARRA 2009



SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.450˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916, UL864
C-UL, California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
30 Amp General Use @ 300 Vac
30 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac
770 VA @ 120 Vac, 1 Phase
1158 VA @ 240 Vac, 1 Phase
1110 VA @ 277 Vac, 1 Phase
1640 VA @ 480 Vac, 1 Phase
1466 VA @ 240 Vac, 3 Phase
2122 VA @ 480 Vac, 3 Phase

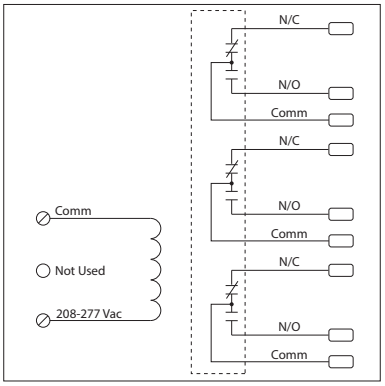
Coil Current:
140 mA @ 120 Vac

Coil Voltage Input:
120 Vac ; 50-60 Hz
Drop Out = 35 Vac
Pull In = 85 Vac

30 AMP TRACK MOUNT CONTROL RELAY

RIBM023PN

4.00˝ Track Mount Relay 30 Amp 3PDT with 208-277 Vac Coil



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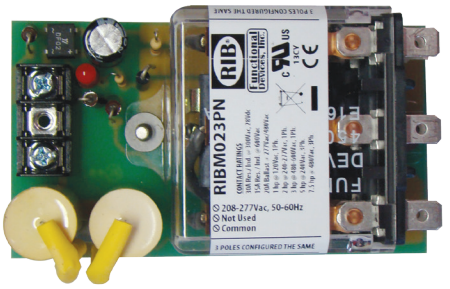
of ARRA 2009



SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.450˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916, UL864
C-UL, California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
30 Amp General Use @ 300 Vac
30 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac
770 VA @ 120 Vac, 1 Phase
1158 VA @ 240 Vac, 1 Phase
1110 VA @ 277 Vac, 1 Phase
1640 VA @ 480 Vac, 1 Phase
1466 VA @ 240 Vac, 3 Phase
2122 VA @ 480 Vac, 3 Phase

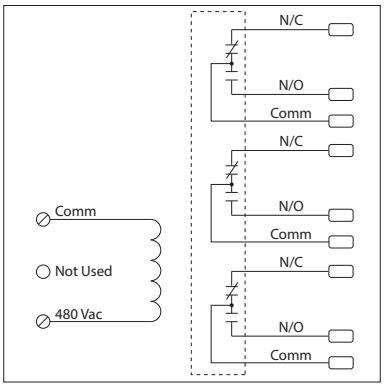
Coil Current:
170 mA @ 208-277 Vac

Coil Voltage Input:
208-277 Vac ; 50-60 Hz
Drop Out = 60 Vac
Pull In = 160 Vac

30 AMP TRACK MOUNT CONTROL RELAY

RIBM043PN

4.00˝ Track Mount Relay 30 Amp 3PDT with 480 Vac Coil



Made in USA
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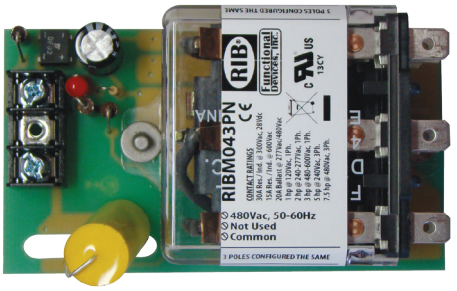
"Buy American"
of ARRA 2009



SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 2.450˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916, UL864
C-UL, California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
30 Amp General Use @ 300 Vac
30 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac
770 VA @ 120 Vac, 1 Phase
1158 VA @ 240 Vac, 1 Phase
1110 VA @ 277 Vac, 1 Phase
1640 VA @ 480 Vac, 1 Phase
1466 VA @ 240 Vac, 3 Phase
2122 VA @ 480 Vac, 3 Phase

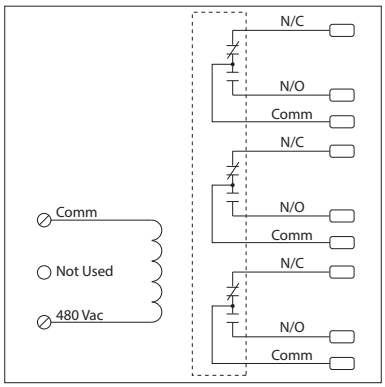
Coil Current:
140 mA @ 480 Vac

Coil Voltage Input:
480 Vac/dc ; 50-60 Hz
Drop Out = 140 Vac
Pull In = 340 Vac

Notes:
- See model RIBM043PN-HD for use in more transient prone environments

RIBM043PN-HD

4.00˝ Track Mount Relay 30 Amp 3PDT with 480 Vac Coil (-HD for More Transient Prone Environments)



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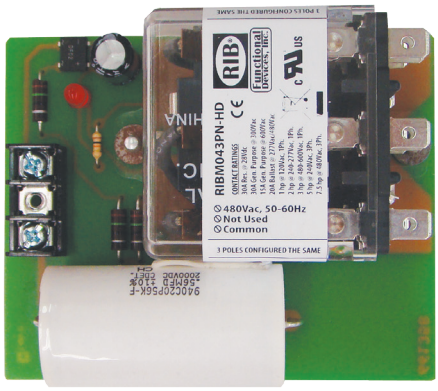


RELAYS

SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 3.250˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916, UL864
C-UL, California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
30 Amp General Use @ 300 Vac
30 Amp Resistive @ 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Heavy Pilot Duty @ 600 Vac
770 VA @ 120 Vac, 1 Phase
1158 VA @ 240 Vac, 1 Phase
1110 VA @ 277 Vac, 1 Phase
1640 VA @ 480 Vac, 1 Phase
1466 VA @ 240 Vac, 3 Phase
2122 VA @ 480 Vac, 3 Phase

Coil Current:
140 mA @ 480 Vac

Coil Voltage Input:
480 Vac/dc ; 50-60 Hz
Drop Out = 140 Vac
Pull In = 340 Vac

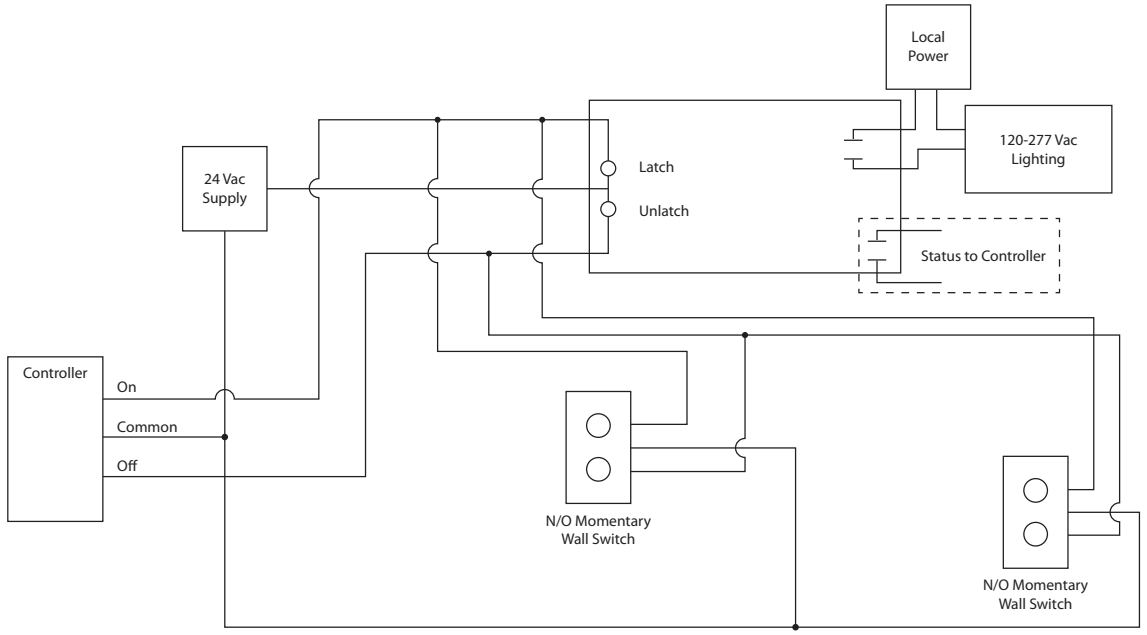
LATCHING RELAYS

Enclosed

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Features

- Prepackaged for convenience
- Electromechanical relay
- Mechanically latching
- Status output contact
- Electronic ballast rating
- 20 Amp rating



ENCLOSED LATCHING RELAYS

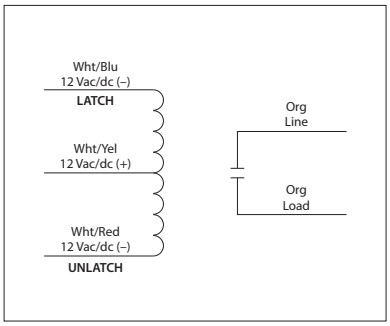
MODEL #	UL	COIL VOLTAGE AC/DC	RELAYS	CONTACTS	OVERRIDE SWITCH	AUXILIARY OUTPUT	NOTES	SPEC PAGE
RIBL12B	•	12	1	SPST				45
RIBL12BM	•	12	1	SPST		•		45
RIBL12SB	•	12	1	SPST	•			45
RIBL12SBM	•	12	1	SPST	•	•		45
RIBL24B	•	24	1	SPST				46
RIBL24BM	•	24	1	SPST		•		46
RIBL24SB	•	24	1	SPST	•			46
RIBL24SBM	•	24	1	SPST	•	•		46

UL = UL Listed : UL60947 Low-Voltage Switchgear and Controlgear

LATCHING RELAYS

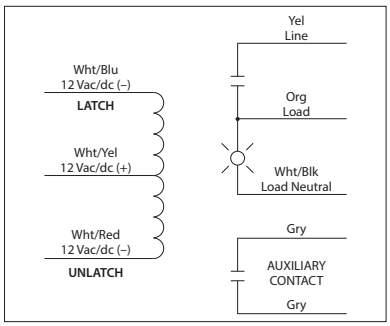
RIBL12B

Enclosed Mechanically Latching Relay 20 Amp SPST with 12 Vac/dc Coil

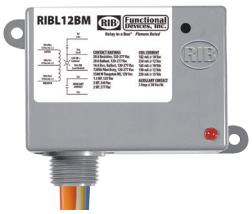


RIBL12BM

Enclosed Mechanically Latching Relay 20 Amp SPST with 12 Vac/dc Coil, Status LED and Auxiliary Output



Made in USA
Meets "Buy American" of ARRA 2009



RIBL12B-RD
- Red housing

RIBL12B-N4
- NEMA 4X housing (Not available on switched models)

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Latching Relay, Dual Coil
Expected Relay Life: 1 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 50ms
Maximum Pulse Length: 30 seconds
Relay Status / Auxiliary Contact Closed: LED On = Voltage Detected on Load Wire (RIBL12BM)
Dimensions: 1.70˝ x 2.80˝ x 1.50˝ with .50˝ NPT Nipple (RIBL12B)
2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple (RIBL12BM)
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL60947, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No

Contact Ratings:
20 Amp Resistive @ 120-277 Vac
20 Amp Ballast @ 120-277 Vac
16 Amp Electronic Ballast @ 120-277 Vac
5540 Watt Tungsten @ 277 Vac
720 VA Pilot Duty @ 120-277 Vac
2 HP @ 277 Vac
3 HP @ 240 Vac
1.5 HP @ 120 Vac

Coil Current:
182 mA @ 10 Vac
250 mA @ 12 Vac
165 mA @ 10 Vdc
198 mA @ 12 Vdc
250 mA @ 15 Vdc

Latch / Unlatch:
Min. 10 Vdc / 11 Vac

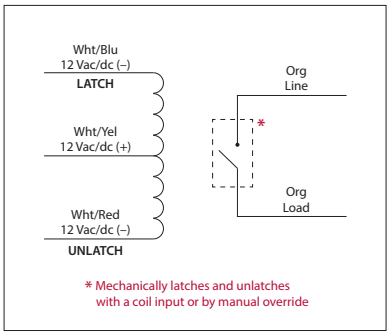
Auxiliary Contact:
3 Amp @ 30 Vac/dc max.

Notes:
- Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will open the contact.
- Auxiliary contact and status LED activate when 120-277 Vac is applied between Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL12BM)

LATCHING RELAYS

RIBL12SB

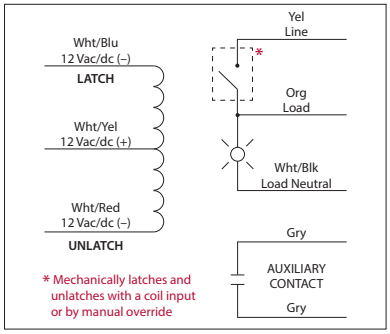
Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 12 Vac/dc Coil



* Mechanically latches and unlatches with a coil input or by manual override

RIBL12SBM

Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 12 Vac/dc Coil, Status LED and Auxiliary Output



* Mechanically latches and unlatches with a coil input or by manual override

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Latching Relay, Dual Coil
Expected Relay Life: 1 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 50ms
Maximum Pulse Length: 30 seconds
Relay Status / Auxiliary Contact Closed: LED On = Voltage Detected on Load Wire (RIBL12SBM)
Dimensions: 1.70˝ x 2.80˝ x 1.50˝ with .50˝ NPT Nipple (RIBL12SB)
2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple (RIBL12SBM)
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL60947, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 120-277 Vac
20 Amp Ballast @ 120-277 Vac
16 Amp Electronic Ballast @ 120-277 Vac
5540 Watt Tungsten @ 277 Vac
720 VA Pilot Duty @ 120-277 Vac
2 HP @ 277 Vac
3 HP @ 240 Vac
1.5 HP @ 120 Vac

Coil Current:
182 mA @ 10 Vac
250 mA @ 12 Vac
165 mA @ 10 Vdc
198 mA @ 12 Vdc
250 mA @ 15 Vdc

Latch / Unlatch:
Min. 10 Vdc / 11 Vac

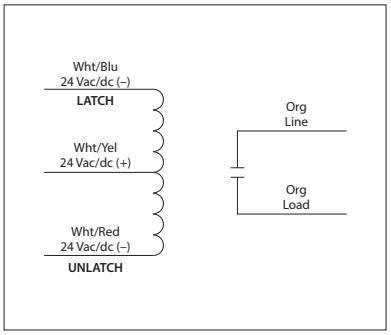
Auxiliary Contact:
3 Amp @ 30 Vac/dc max.

Notes:
- Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will open the contact.
- Auxiliary contact and status LED activate when 120-277 Vac is applied between Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL12SBM)

LATCHING RELAYS

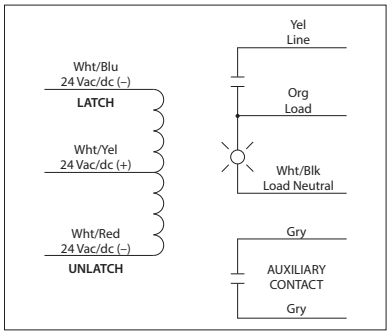
RIBL24B

Enclosed Mechanically Latching Relay 20 Amp SPST with 24 Vac/dc Coil



RIBL24BM

Enclosed Mechanically Latching Relay 20 Amp SPST with 24 Vac/dc Coil, Status LED and Auxiliary Output



Made in USA
Meets "Buy American" of ARRA 2009

RIBL24B-RD
- Red housing

RIBL24B-N4
- NEMA 4X housing (Not available on switched models)

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Latching Relay Dual Coil
Expected Relay Life: 1 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 50ms
Maximum Pulse Length: 30 seconds
Relay Status / Auxiliary Contact Closed: LED On = Voltage Detected on Load Wire (RIBL24BM)
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT Nipple (RIBL24B)
2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple (RIBL24BM)
Wires: 16″, 600V Rated
Approvals: UL Listed, UL60947, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No

Contact Ratings:
20 Amp Resistive @ 120-277 Vac
20 Amp Ballast @ 120-277 Vac
16 Amp Electronic Ballast @ 120-277 Vac
5540 Watt Tungsten @ 277 Vac
720 VA Pilot Duty @ 120-277 Vac
2 HP @ 277 Vac
3 HP @ 240 Vac
1.5 HP @ 120 Vac

Coil Current:
175 mA @ 20 Vac
210 mA @ 24 Vac
92 mA @ 20 Vdc
110 mA @ 24 Vdc
138 mA @ 30 Vdc

Latch / Unlatch:
Min. 20 Vdc / 22 Vac

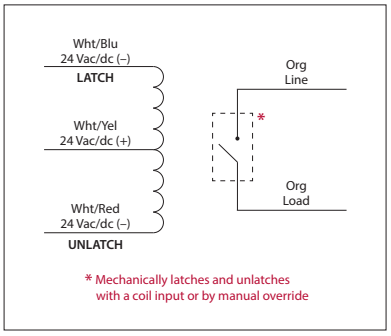
Auxiliary Contact:
3 Amp @ 30 Vac/dc max.

Notes:
- Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will open the contact.
- Auxiliary contact and status LED activate when 120-277 Vac is applied between Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL24BM)

LATCHING RELAYS

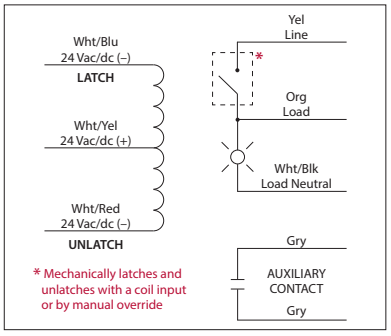
RIBL24SB

Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 24 Vac/dc Coil



RIBL24SBM

Enclosed Mechanically Latching Relay 20 Amp SPST + Override with 24 Vac/dc Coil, Status LED and Auxiliary Output



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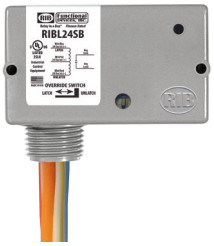


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Latching Relay Dual Coil
Expected Relay Life: 1 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 50ms
Maximum Pulse Length: 30 seconds
Relay Status / Auxiliary Contact Closed: LED On = Voltage Detected on Load Wire (RIBL24SBM)
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT Nipple (RIBL24SB)
2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple (RIBL24SBM)
Wires: 16″, 600V Rated
Approvals: UL Listed, UL60947, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 120-277 Vac
20 Amp Ballast @ 120-277 Vac
16 Amp Electronic Ballast @ 120-277 Vac
5540 Watt Tungsten @ 277 Vac
720 VA Pilot Duty @ 120-277 Vac
2 HP @ 277 Vac
3 HP @ 240 Vac
1.5 HP @ 120 Vac

Coil Current:
175 mA @ 20 Vac
210 mA @ 24 Vac
92 mA @ 20 Vdc
110 mA @ 24 Vdc
138 mA @ 30 Vdc

Latch / Unlatch:
Min. 20 Vdc / 22 Vac

Auxiliary Contact:
3 Amp @ 30 Vac/dc max.

Notes:
- Application of voltage on latch coil (Wht/Blu & Wht/Yel) will close the contact.
- Application of voltage on unlatch coil (Wht/Red & Wht/Yel) will open the contact.
- Auxiliary contact and status LED activate when 120-277 Vac is applied between Load (Org) wire and Load Neutral (Wht/Blk) wire. (RIBL24SBM)

LOW-INPUT / OPTOISOLATED RELAYS

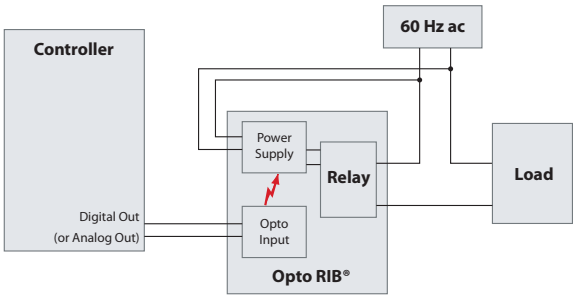
Enclosed | Track Mount

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

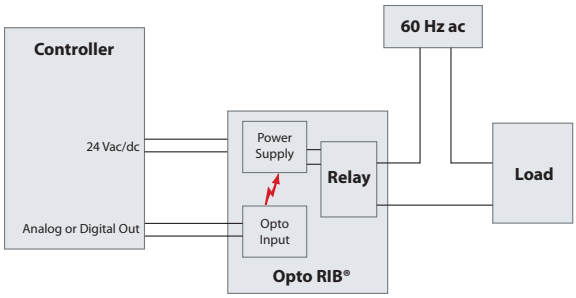
Prepackaged Like the Original RIB® with Special Features

- Extremely low current draw on the input
- Control input can connect to AO for relay control
- Protect controller from feedback or voltage transients

High Voltage



Low Voltage



- Optoisolated relays help isolate noisy loads from the controller. Good for controlling power relays from analog outputs.

ENCLOSED LOW-INPUT / OPTOISOLATED RELAYS

MODEL #	UL	CONTROL INPUT	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTELC	•	5-25 Vac/dc	10-30 Vac/dc	1	SPDT			48
RIBTELS	•	5-25 Vac/dc	10-30 Vac/dc	1	SPST	1		48
RIBTE24B	•	5-25 Vac/dc	24 Vac/dc	1	SPDT			48
RIBTE01B	•	5-25 Vac/dc	120 Vac	1	SPDT			49
RIBTE02B	•	5-25 Vac/dc	208-277 Vac	1	SPDT			49
RIBTE24SB	•	5-25 Vac/dc	24 Vac/dc	1	SPST	1		50
RIBTE01SB	•	5-25 Vac/dc	120 Vac	1	SPST	1		50
RIBTE02SB	•	5-25 Vac/dc	208-277 Vac	1	SPST	1		51
RIBTE24P	•	5-25 Vac/dc	24 Vac/dc	1	DPDT			51
RIBTE01P	•	5-25 Vac/dc	120 Vac	1	DPDT			52
RIBTE02P	•	5-25 Vac/dc	208-277 Vac	1	DPDT			52
RIBTE01P-S	•	5-25 Vac/dc	120 Vac	1	DPDT	1		53
RIBTE02P-S	•	5-25 Vac/dc	208-277 Vac	1	DPDT	1		53

TRACK MOUNT LOW-INPUT / OPTOISOLATED RELAYS

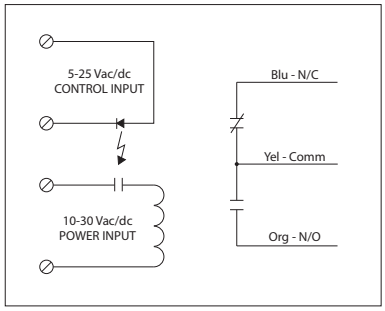
MODEL #	UL	CONTROL INPUT	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBME2401B	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1	SPDT			53
RIBME2402B	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1	SPDT			53
RIBME2401SB	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1	SPST	1		54
RIBME2402SB	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1	SPST	1		54
RIBME2401P	•	5-25 Vac/dc	24 Vac/dc/120 Vac	1	DPST			54
RIBME2402P	•	5-25 Vac/dc	24 Vac/dc/208-277 Vac	1	DPST			54

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

LOW COIL INPUT RELAYS

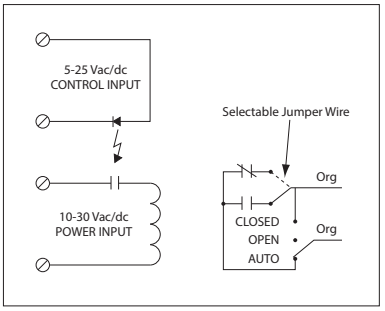
RIBTELC

Enclosed Relay Hi/Low Separation 10 Amp SPDT, 10-30 Vac/dc Power Input + 5-25 Vac/dc Control Input

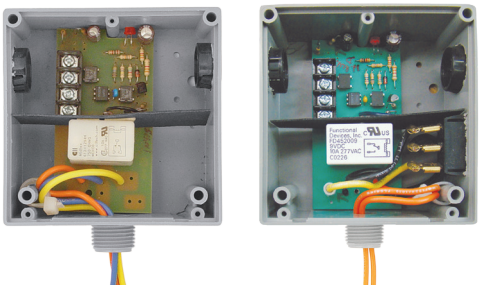


RIBTELS

Enclosed Relay Hi/Low Separation 10 Amp SPST + Override, 10-30 Vac/dc Power Input + 5-25 Vac/dc Control Input



Made in USA
Meets "Buy American" of ARRA 2009



SPECIFICATIONS

Power Input: 10-30 Vac/dc, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes (RIBTELC), No (RIBTELS)
Override Switch: No (RIBTELC), Yes (RIBTELS)

Contact Ratings:
10 Amp Resistive @ 120-277 Vac
10 Amp Resistive @ 28 Vdc
480 VA Pilot Duty @ 240-277 Vac
480 VA Ballast @ 277 Vac
Not rated for Electronic Ballast
600 Watt Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
1/3 HP @ 120-240 Vac (N/O)
1/6 HP @ 120-240 Vac (N/C)
1/4 HP @ 277 Vac (N/O)
1/8 HP @ 277 Vac (N/C)

Power Input Ratings:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

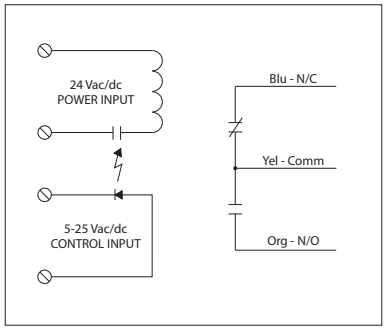
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

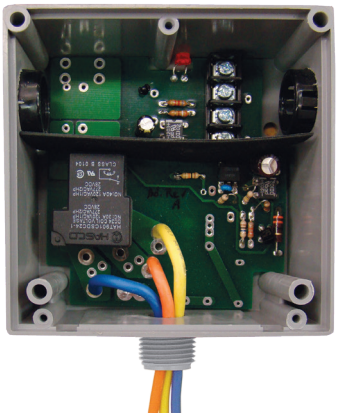
Notes:
- Normally Open or Normally Closed selected by yellow jumper wire (RIBTELS)

LOW COIL INPUT RELAY

RIBTE24B

Enclosed Relay Hi/Low Separation 20 Amp SPDT, 24 Vac/dc Power Input + 5-25 Vac/dc Control Input





Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Power Input: 24 Vac/dc, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

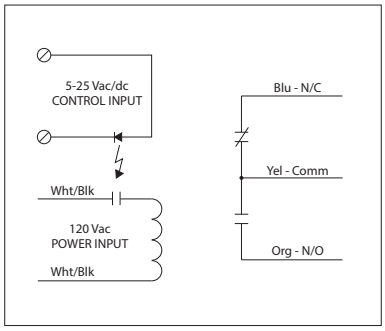
Power Input Ratings:
50 mA @ 18 Vac
83 mA @ 24 Vac
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

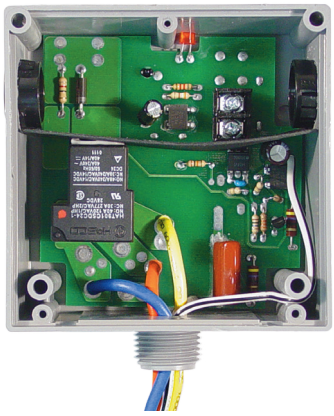
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT RELAY

RIBTE01B

Enclosed Relay Hi/Low Separation 20 Amp SPDT,
120 Vac Power Input + 5-25 Vac/dc Control Input





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Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

Power Input: 120 Vac, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

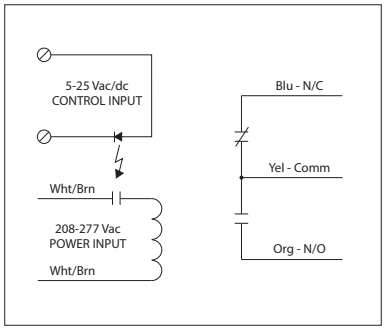
Power Input Ratings:
47 mA @ 120 Vac

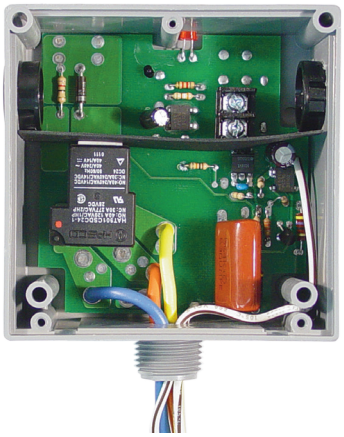
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT RELAY

RIBTE02B

Enclosed Relay Hi/Low Separation 20 Amp SPDT,
208-277 Vac Power Input + 5-25 Vac/dc
Control Input





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SPECIFICATIONS

Power Input: 208-277 Vac, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

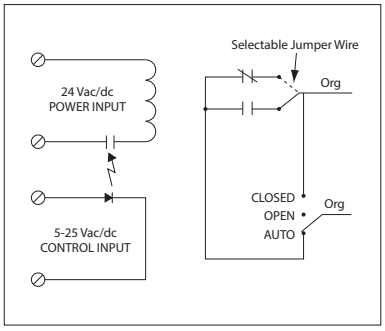
Power Input Ratings:
69 mA @ 208-277 Vac

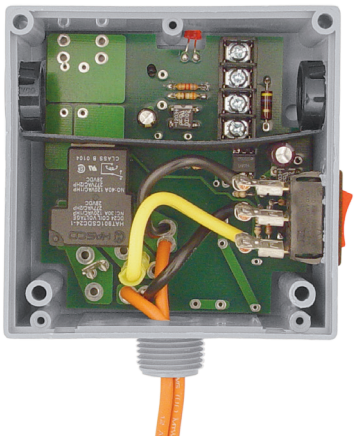
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT RELAY

RIBTE24SB

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override, 24 Vac/dc Power Input + 5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 24 Vac/dc, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
50 mA @ 18 Vac
83 mA @ 24 Vac
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

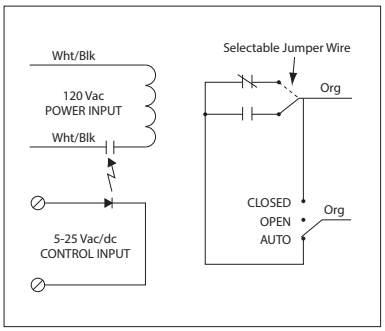
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

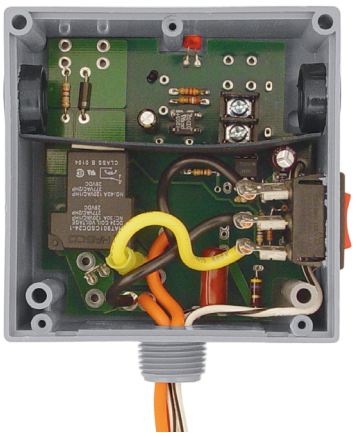
Notes:
- Normally Open or Normally Closed selected by yellow jumper wire

LOW COIL INPUT RELAY

RIBTE01SB

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override, 120 Vac Power Input + 5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 120 Vac, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

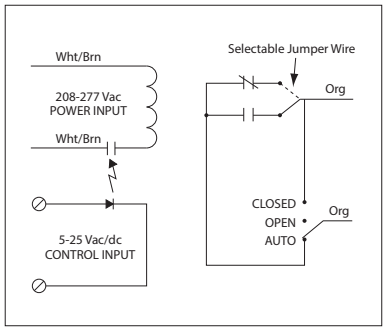
Power Input Ratings:
47 mA @ 120 Vac

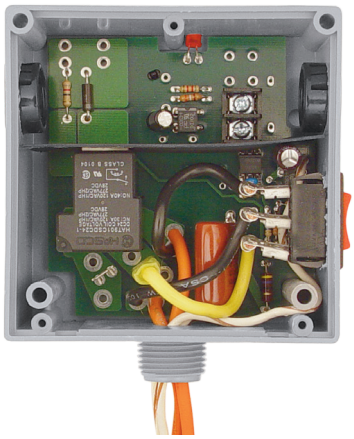
Notes:
- Normally Open or Normally Closed selected by yellow jumper wire

LOW COIL INPUT RELAY

RIBTE02SB

Enclosed Relay Hi/Low Separation 20 Amp SPST + Override, 208-277 Vac Power Input + 5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 208-277 Vac, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
69 mA @ 208-277 Vac

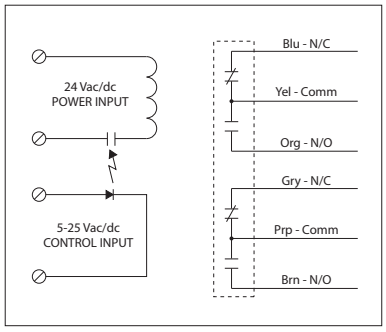
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

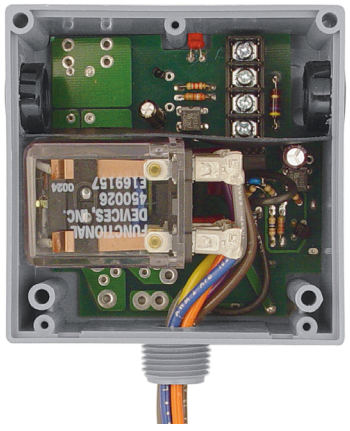
Notes:
- Normally Open or Normally Closed selected by yellow jumper wire

LOW COIL INPUT RELAY

RIBTE24P

Enclosed Relay Hi/Low Separation 20 Amp DPDT, 24 Vac/dc Power Input + 5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 24 Vac/dc, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

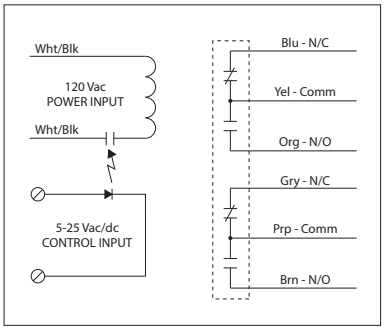
Power Input Ratings:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

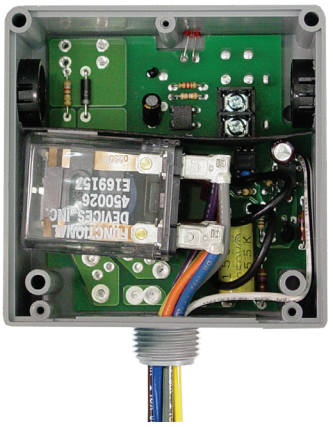
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT RELAY

RIBTE01P

Enclosed Relay Hi/Low Separation 20 Amp DPDT,
120 Vac Power Input + 5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 120 Vac, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

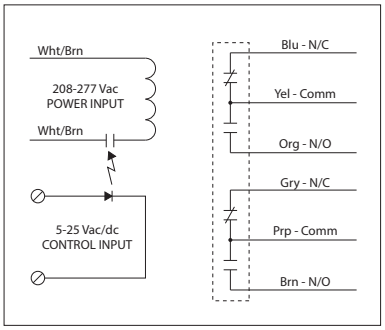
Power Input Ratings:
105 mA @ 120 Vac

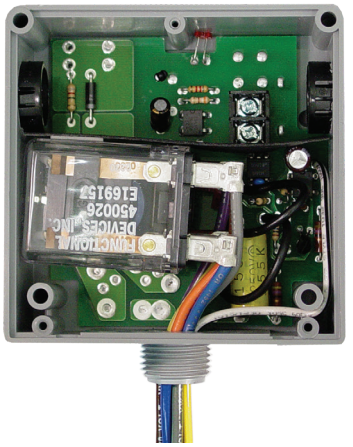
Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT RELAY

RIBTE02P

Enclosed Relay Hi/Low Separation 20 Amp
DPDT, 208-277 Vac Power Input + 5-25 Vac/dc
Control Input





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SPECIFICATIONS

Power Input: 208-277 Vac, 50-60 Hz
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

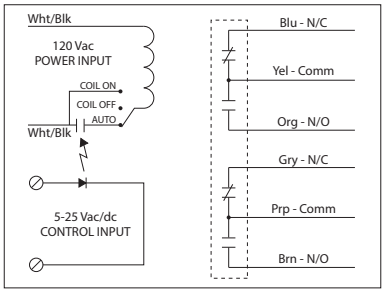
Power Input Ratings:
105 mA @ 208-277 Vac

Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT RELAYS

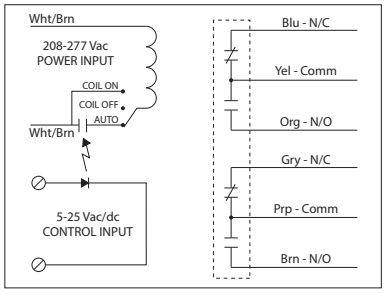
RIBTE01P-S

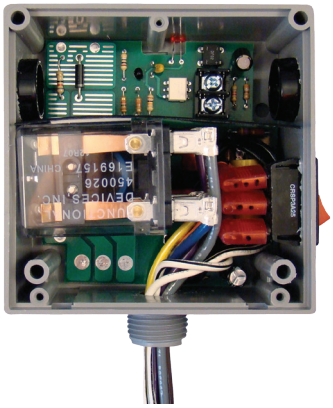
Enclosed Relay Hi/Low Separation 20 Amp DPDT +Override, 120 Vac Power Input + 5-25 Vac/dc Control Input



RIBTE02P-S

Enclosed Relay Hi/Low Separation 20 Amp DPDT +Override, 208-277 Vac Power Input + 5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 120 Vac, 50-60 Hz (RIBTE01P-S)
208-277 Vac, 50-60 Hz (RIBTE02P-S)
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes*

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

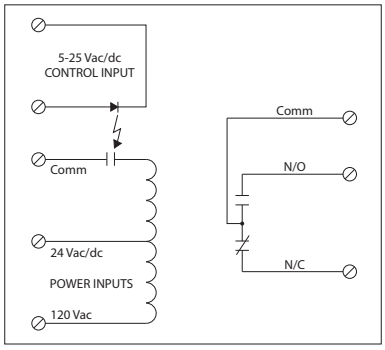
Power Input Ratings:
105 mA @ 120 Vac (RIBTE01P-S)
105 mA @ 208-277 Vac (RIBTE02P-S)

Notes:
- Override capability is made possible by supplying constant voltage on the Power Input. No Control Input Voltage is necessary to override the relay. *

LOW COIL INPUT TRACK MOUNT RELAYS

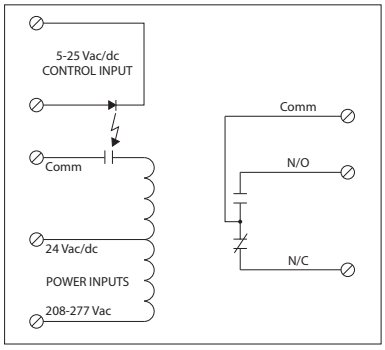
RIBME2401B

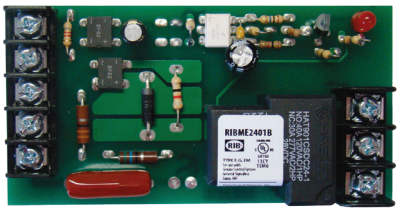
4.00˝ Track Mount Relay 20 Amp SPDT, 24 Vac/dc/120 Vac Power Input + 5-25 Vac/dc Control Input

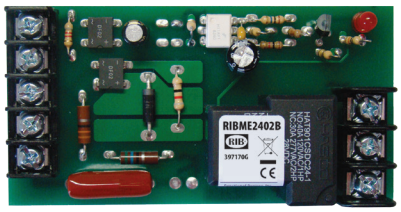


RIBME2402B

4.00˝ Track Mount Relay 20 Amp SPDT, 24 Vac/dc/208-277 Vac Power Input + 5-25 Vac/dc Control Input







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SPECIFICATIONS

Power Input: 24 Vac/dc/120 Vac, 50-60 Hz (RIBME2401B)
24 Vac/dc/208-277 Vac, 50-60 Hz (RIBME2402B)
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.050˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

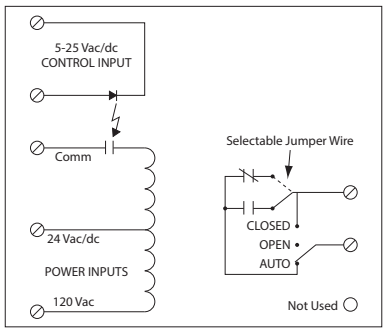
Power Input Ratings:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIBME2401B)
69 mA @ 208-277 Vac (RIBME2402B)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

LOW COIL INPUT TRACK MOUNT RELAYS

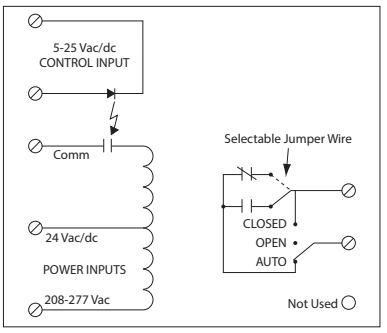
RIBME2401SB

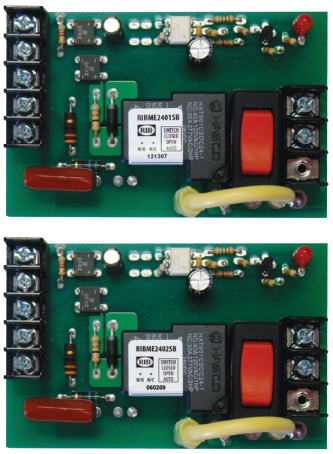
4.00˝ Track Mount Relay 20 Amp SPST + Override,
24 Vac/dc/120 Vac Power Input +
5-25 Vac/dc Control Input



RIBME2402SB

4.00˝ Track Mount Relay 20 Amp SPST + Override,
24 Vac/dc/208-277 Vac Power Input +
5-25 Vac/dc Control Input





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SPECIFICATIONS

Power Input: 24 Vac/dc/120 Vac, 50-60 Hz (RIBME2401SB)
24 Vac/dc/208-277 Vac, 50-60 Hz (RIBME2402SB)
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.550˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

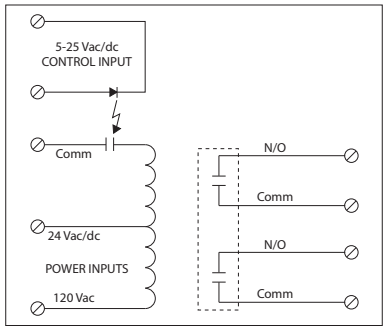
Power Input Ratings:
50 mA @ 18 Vac
83 mA @ 24 Vac
47 mA @ 120 Vac (RIBME2401SB)
69 mA @ 208-277 Vac (RIBME2402SB)
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire

LOW COIL INPUT TRACK MOUNT RELAYS

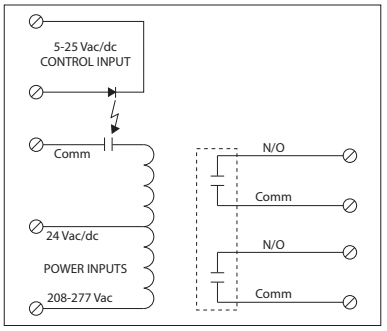
RIBME2401P

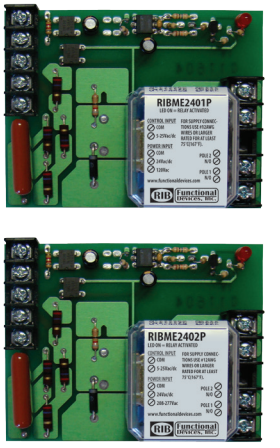
4.00˝ Track Mount Relay 20 Amp DPST,
24 Vac/dc/120 Vac Power Input +
5-25 Vac/dc Control Input



RIBME2402P

4.00˝ Track Mount Relay 20 Amp DPST,
24 Vac/dc/208-277 Vac Power Input +
5-25 Vac/dc Control Input





Made in USA
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of ARRA 2009

SPECIFICATIONS

Power Input: 24 Vac/dc/120 Vac, 50-60 Hz (RIBME2401P)
24 Vac/dc/208-277 Vac, 50-60 Hz (RIBME2402P)
Control Input: 5-25 Vac/dc, 50-60 Hz
 # Relays & Contact Type: One (1) DPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 3.100˝ x 4.000˝ x 2.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc, 15 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac
1158 VA Pilot Duty @ 240 Vac
1110 VA Pilot Duty @ 277 Vac
1640 VA Pilot Duty @ 480 Vac
3 HP @ 480-600 Vac
2 HP @ 240-277 Vac
1 HP @ 120 Vac

Power Input Ratings:
138 mA @ 24 Vac
105 mA @ 120 Vac (RIBME2401P)
105 mA @ 208-277 Vac (RIBME2402P)
77 mA @ 30 Vdc

Control Input Ratings:
.4 mA @ 5 Vdc
.9 mA @ 10 Vdc
1 mA @ 12 Vdc
2 mA @ 24 Vdc
3 mA @ 24 Vac
(Non Polarized)

POLARIZED RELAYS

Enclosed | Track Mount

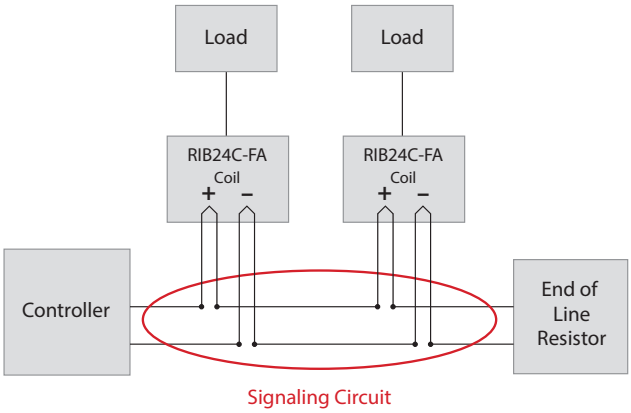
Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Same Great Prepackaging

- Relays are polarized to work in a supervised system and may be turned on and off by reversing polarity. For fire alarm systems, smoke control systems, etc.

Fire Alarm Systems Application

- Coil input is polarity sensitive
- For use with fire alarm systems
- System supervision for controllers that utilize end-of-line resistors
- Four wire circuit ensures indication of broken wiring connection with RIB®



ENCLOSED ALARM RELAYS

MODEL #	UL	COIL VOLTAGE	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIB12C-FA	•	12 Vac/dc	1	SPDT			56
RIB24C-FA	•	24 Vac/dc	1	SPDT			56
RIB12S-FA	•	12 Vac/dc	1	SPST	1		56
RIB24S-FA	•	24 Vac/dc	1	SPST	1		56
RIBT24B-FA	•	24 Vac/dc	1	SPDT			57
RIB24P-FA	•	24 Vac/dc	1	DPDT			57

TRACK MOUNT ALARM RELAYS

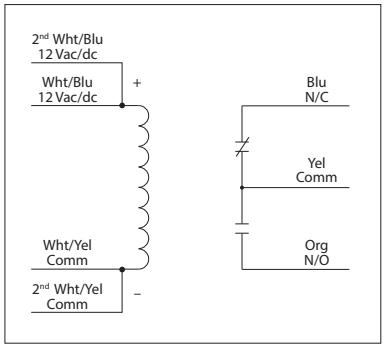
MODEL #	UL	COIL VOLTAGE	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBMN12C-FA	•	12 Vac/dc	1	SPDT			58
RIBMN24C-FA	•	24 Vac/dc	1	SPDT			58
RIBMN12S-FA	•	12 Vac/dc	1	SPST	1		58
RIBMN24S-FA	•	24 Vac/dc	1	SPST	1		58

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

FIRE ALARM RELAYS

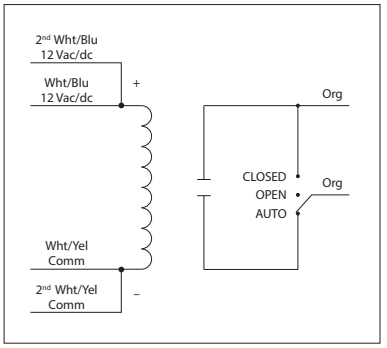
RIB12C-FA

Enclosed Relay 10 Amp, Polarized with 12 Vac/dc Coil



RIB12S-FA

Enclosed Relay 10 Amp + Override, Polarized with 12 Vac/dc Coil



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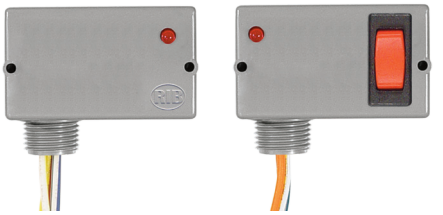


RIB12C-FA-RD
RIB12S-FA-RD
• Red housing

RIB12C-FA-N4
• NEMA 4X housing, UL508 only

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No (RIB12C-FA)
Yes (RIB12S-FA)

Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Coil Current:
53 mA @ 10 Vac
62 mA @ 12 Vac
29 mA @ 11 Vdc
36 mA @ 12 Vdc

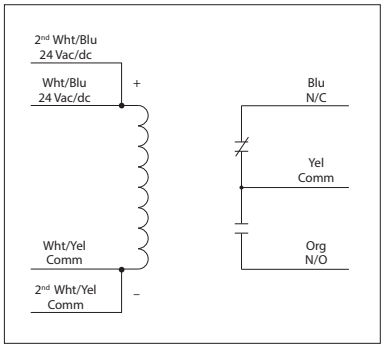
Coil Voltage Input:
12 Vac/dc ; 50-60 Hz
Drop Out = 2 Vac / 2.5 Vdc
Pull In = 9 Vac / 11 Vdc

Notes:
• Order Normally Closed by adding "-NC" to end of model number (RIB12S-FA)

FIRE ALARM RELAYS

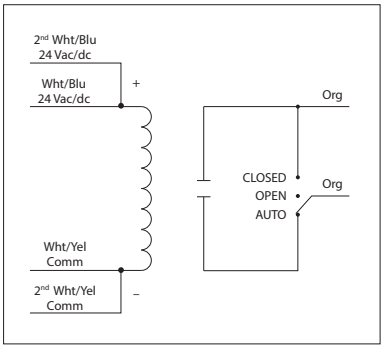
RIB24C-FA

Enclosed Relay 10 Amp, Polarized with 24 Vac/dc Coil



RIB24S-FA

Enclosed Relay 10 Amp + Override, Polarized with 24 Vac/dc Coil



Made in USA
Meets "Buy American" of ARRA 2009

RIB24C-FA-RD
RIB24S-FA-RD
• Red housing

RIB24C-FA-N4
• NEMA 4X housing, UL508 only

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.70″ x 2.80″ x 1.50″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No (RIB24C-FA)
Yes (RIB24S-FA)

Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Coil Current:
26 mA @ 20 Vac
31 mA @ 24 Vac
48 mA @ 35 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

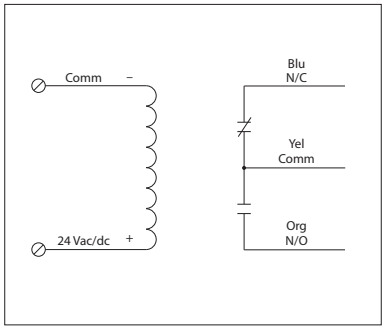
Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

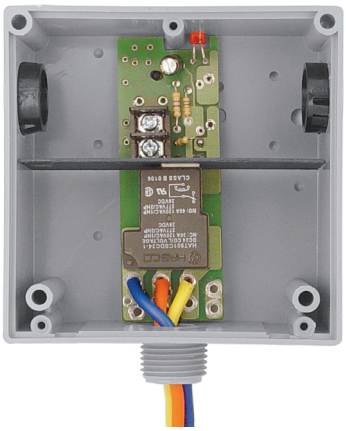
Notes:
• Order Normally Closed by adding "-NC" to end of model number (RIB24S-FA)

FIRE ALARM RELAY

RIBT24B-FA

Enclosed Relay Hi/Low Separation 20 Amp SPDT, Polarized with 24 Vac/dc Coil





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RoHS

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

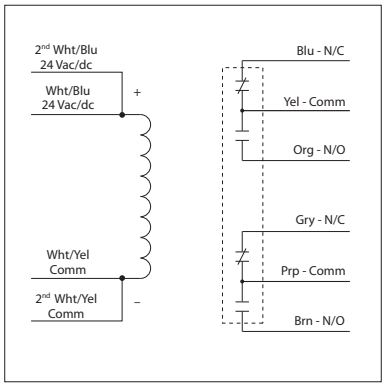
Coil Current:
47 mA @ 18 Vac
83 mA @ 24 Vac
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

FIRE ALARM RELAY

RIB24P-FA

Enclosed Relay 20 Amp DPDT, Polarized with 24 Vac/dc Coil



c UL us LISTED

RoHS

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 300 Vac
20 Amp Resistive @ 28 Vdc, 15 Vdc
15 Amp Resistive @ 600 Vac
1 HP @ 120 Vac
2 HP @ 240-277 Vac
3 HP @ 480 Vac - 600 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
770 VA Pilot Duty @ 120 Vac
1,158 VA Pilot Duty @ 240 Vac
1,110 VA Pilot Duty @ 277 Vac
1,640 VA Pilot Duty @ 480 Vac

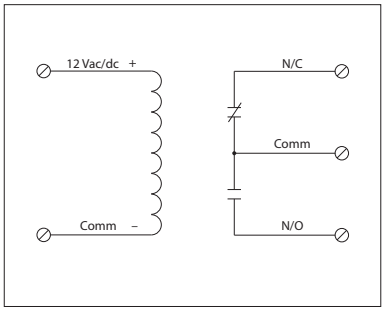
Coil Current:
110 mA @ 20 Vac
138 mA @ 24 Vac
55 mA @ 20 Vdc
55 mA @ 24 Vdc
77 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 20 Vdc

FIRE ALARM TRACK MOUNT RELAYS

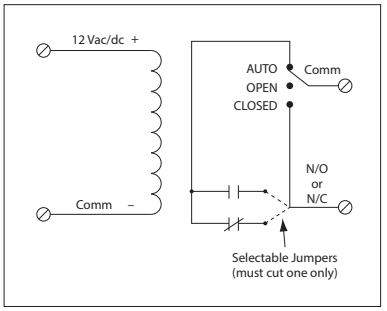
RIBMN12C-FA

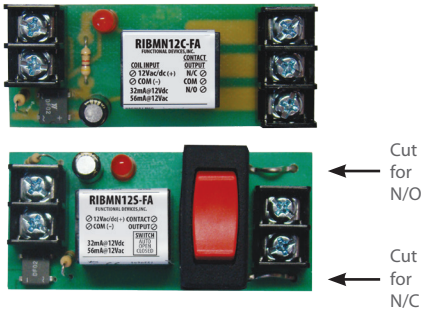
2.75˝ Track Mount Relay 15 Amp, Polarized with 12 Vac/dc Coil



RIBMN12S-FA

2.75˝ Track Mount Relay 15 Amp + Override, Polarized with 12 Vac/dc Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.100˝ x 2.750˝ x 1.750˝
Track Mount: 2.750˝, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBMN12C-FA)
Yes (RIBMN12S-FA)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Coil Current:
53 mA @ 10 Vac
62 mA @ 12 Vac
29 mA @ 11 Vdc
35 mA @ 12 Vdc

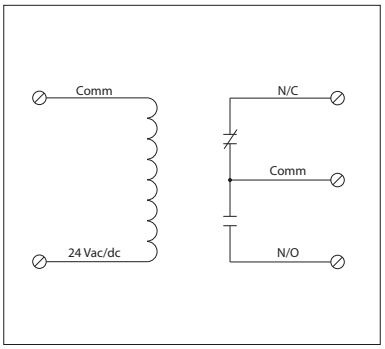
Coil Voltage Input:
12 Vac/dc ; 50-60 Hz
Drop Out = 2 Vac / 2.5 Vdc
Pull In = 9 Vac / 11 Vdc

Notes:
• Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN12S-FA)

FIRE ALARM TRACK MOUNT RELAYS

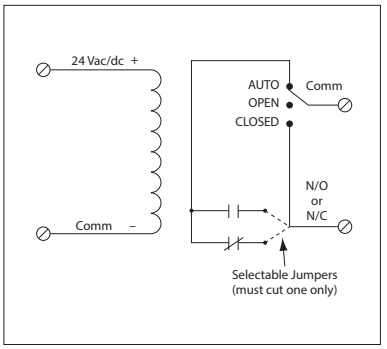
RIBMN24C-FA

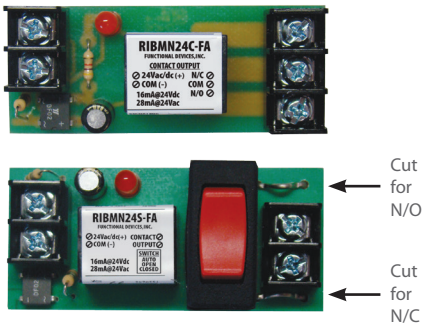
2.75˝ Track Mount Relay 15 Amp, Polarized with 24 Vac/dc Coil



RIBMN24S-FA

2.75˝ Track Mount Relay 15 Amp + Override, Polarized with 24 Vac/dc Coil





SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 6ms
Relay Status: LED On = Activated
Dimensions: 1.100˝ x 2.750˝ x 1.750˝
Track Mount: 2.750˝, See MT212 Series on page 152
MT212 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No
Override Switch: No (RIBMN24C-FA)
Yes (RIBMN24S-FA)

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Coil Current:
26 mA @ 20 Vac
31 mA @ 24 Vac
48 mA @ 35 Vac
14 mA @ 20 Vdc
18 mA @ 24 Vdc
28 mA @ 35 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 2 Vac / 2.5 Vdc
Pull In = 9 Vac / 11 Vdc

Notes:
• Must cut appropriate jumper to select Normally Open or Normally Closed (RIBMN24S-FA)

DRY CONTACT INPUT RELAYS

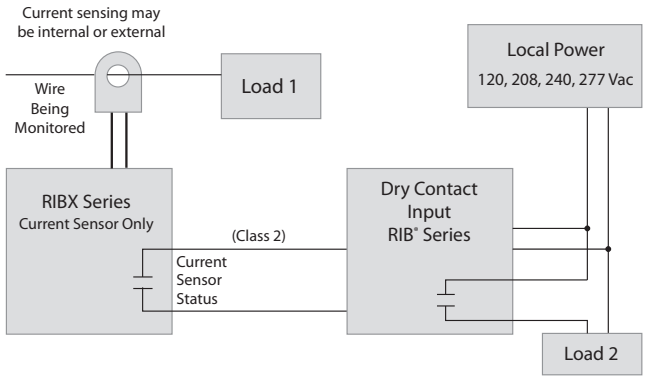
Enclosed | Track Mount

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

The Dry Contact Input RIB® Series offers all the advantages of the standard RIB® line plus it can be activated by a wide range of dry contacts such as thermostats, current switches, other relays, solid-state switches, etc. The Dry Contact Input RIB® accepts local power to provide the low-voltage (Class 2) power needed to activate the relay; just close the dry contact input. The power to energize the relay can be brought to the relay on a separate pair of wires along with the control output of a controller, or can be a local power source near the relay. The relay contacts are isolated from the input power and the dry contact input; thus, the relay contacts can be wired to switch any other power-load or low-voltage load (see specifications for contact ratings.) One model can be used for many installations (model RIB21CDC can be powered from any voltage from 120 Vac to 277 Vac; see specifications for the input power of other models.)

Can be activated by dry contacts such as thermostats, current switches, etc.

- Self-powered current switches of the RIBX Series and relays of the Dry Contact Input RIB® Series may be applied to interlock Load 2 to Load 1.



ENCLOSED DRY CONTACT INPUT RELAYS

MODEL #	UL	POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIB21CDC	•	120-277 Vac	1	SPDT			60
RIB01BDC	•	120 Vac	1	SPDT			60
RIB02BDC	•	208-277 Vac	1	SPDT			60
RIB01SBDC	•	120 Vac	1	SPST	1		61
RIB02SBDC	•	208-277 Vac	1	SPST	1		61
RIB01SBCDC	•	120 Vac	1	SPDT	2		61
RIB02SBCDC	•	208-277 Vac	1	SPDT	2		61
RIBD01BDC	•	120 Vac	1	SPDT		#	62
RIBD02BDC	•	208-277 Vac	1	SPDT		#	62
RIBD01BDC-DOB	•	120 Vac	1	SPDT		#	63
RIBD02BDC-DOB	•	208-277 Vac	1	SPDT		#	63

TRACK MOUNT DRY CONTACT INPUT RELAYS

MODEL #		POWER INPUT	RELAYS	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBM01ZNDC	•	120 Vac	1	DPDT			64
RIBM02ZNDC	•	208-277 Vac	1	DPDT			64
RIBM013PNDC	•	120 Vac	1	3PDT			64

UL = UL Listed : UL916 Energy Management; USA & Canada

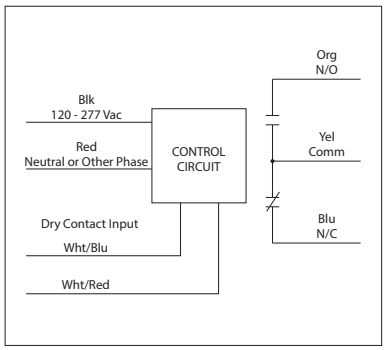
= Time Delay

= UL Component Recognized : UL916 Energy Management; USA & Canada

DRY CONTACT INPUT RELAYS

RIB21CDC

Enclosed Relay 10 Amp SPDT, Class 2 Dry Contact Input, 120-277 Vac Power Input



RIB21CDC-RD
- Red housing

RIB21CDC-N4
- NEMA 4X housing, UL508 only

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 1.70˝ x 2.80˝ x 1.50˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

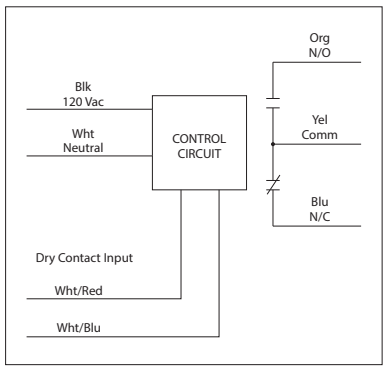
Power Input:
50 mA @ 240 Vac Max.

Notes:
- Dry Contact Input Operation:
Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.

DRY CONTACT INPUT RELAYS

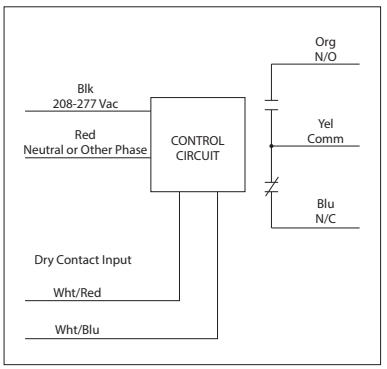
RIB01BDC

Enclosed Relay 20 Amp SPDT, Class 2 Dry Contact Input, 120 Vac Power Input



RIB02BDC

Enclosed Relay 20 Amp SPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input



SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 2.30˝ x 3.20˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

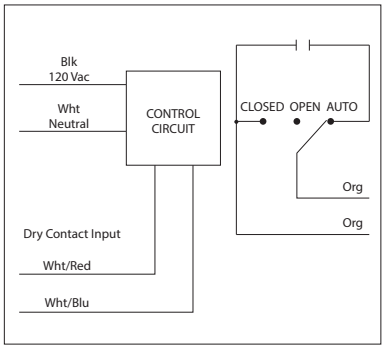
Power Input:
42 mA @ 120 Vac (RIB01BDC)
62 mA @ 208-277 Vac (RIB02BDC)

Notes:
- Dry Contact Input Operation:
Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.

DRY CONTACT INPUT RELAYS

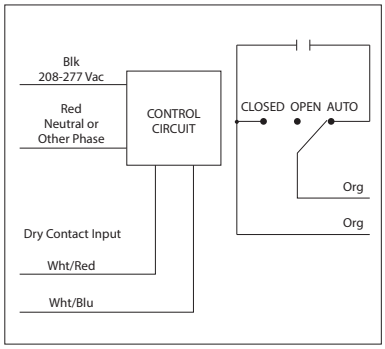
RIB01SBDC

Enclosed Relay 20 Amp SPST-N/O + Override, Class 2 Dry Contact Input, 120 Vac Power Input



RIB02SBDC

Enclosed Relay 20 Amp SPST-N/O + Override, Class 2 Dry Contact Input, 208-277 Vac Power Input



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Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

Contact Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac (N/O)
10 Amp Ballast @ 277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
240 Watt Tungsten @ 120 Vac (N/C)
2 HP @ 277 Vac
1 HP @ 120 Vac

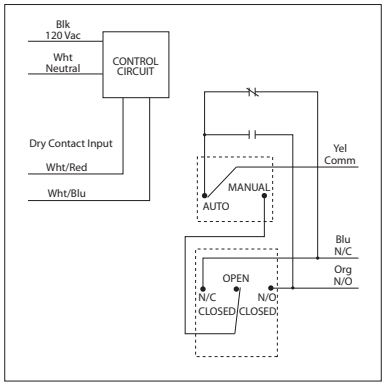
Power Input:
42 mA @ 120 Vac (RIB01SBDC)
62 mA @ 208-277 Vac (RIB02SBDC)

Notes:
- Dry Contact Input Operation: Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.
- Order Normally Closed by adding "-NC" to end of model number

DRY CONTACT INPUT RELAYS

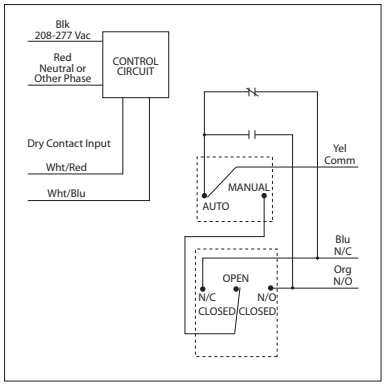
RIB01SBCDC

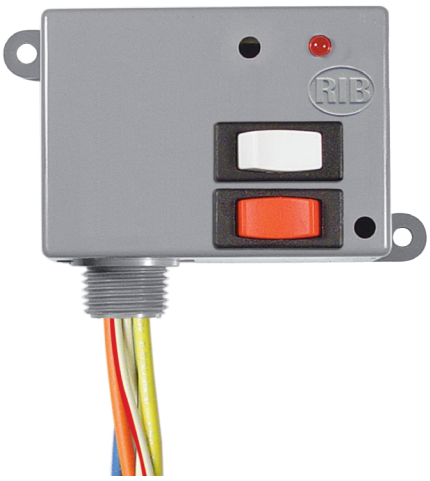
Enclosed Relay 20 Amp SPDT + Override, Class 2 Dry Contact Input, 120 Vac Power Input



RIB02SBCDC

Enclosed Relay 20 Amp SPDT + Override, Class 2 Dry Contact Input, 208-277 Vac Power Input





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Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 1.8 Seconds
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes (2)

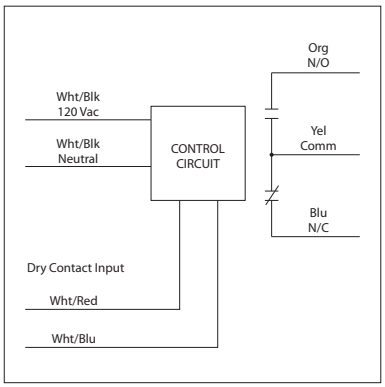
Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input:
42 mA @ 120 Vac (RIB01SBCDC)
62 mA @ 208-277 Vac (RIB02SBCDC)

Notes:
- Dry Contact Input Operation: Close White/Red wire to White/Blue wire to activate relay. If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.

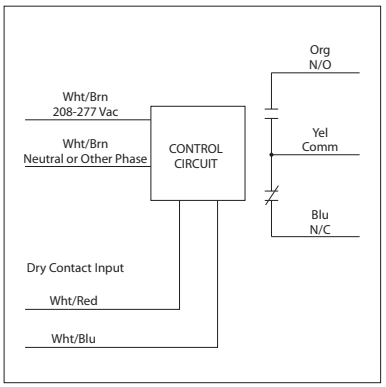
RIBD01BDC

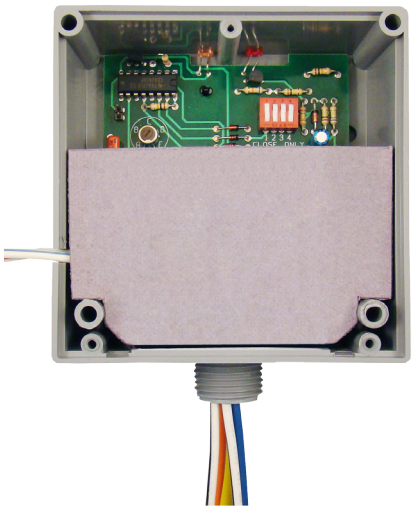
Enclosed Delay on Make Relay 20 Amp
SPDT, Class 2 Dry Contact Input, 120 Vac Power Input



RIBD02BDC

Enclosed Delay on Make Relay 20 Amp
SPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input





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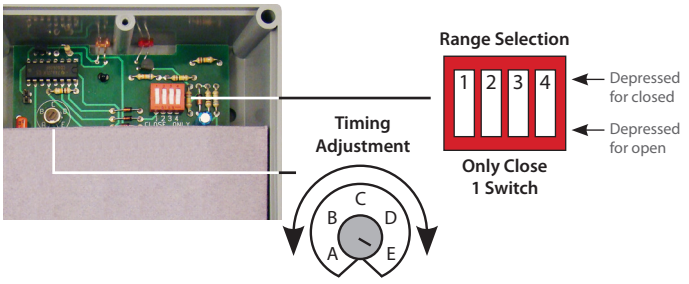
SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms after time delay
Relay Status: Red LED On = Activated
Time Delay Status: Pink LED FLASHING = Timing / Relay Deactivated
Timing Mode: Delay On Make
Timing Range: 6 seconds - 20 minutes
Timing Adjustment: 4 position DIP switch for range selection and single turn potentiometer for timing adjustment within range
Timing Tolerance: Switches 1& 2 = ±10%
Switches 3 & 4 = ±5%
Timing Repeatability: ±1%
Temperature Timing Variance: ±1%
Voltage Timing Variance: ±1%
Recycle Time: 750ms Maximum
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input:
42 mA @ 120 Vac (RIBD01BDC)
62 mA @ 208-277 Vac (RIBD02BDC)

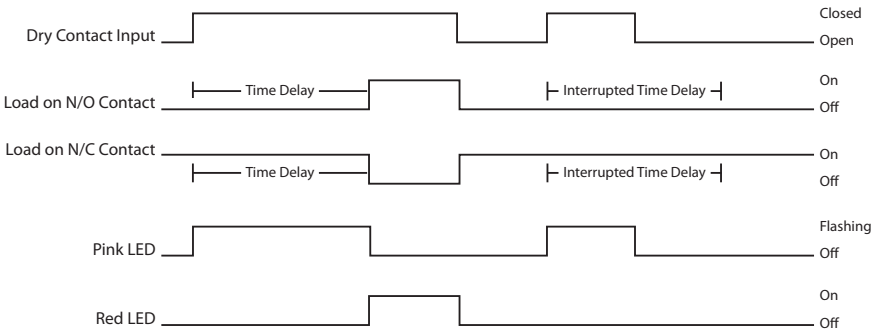
Notes:
- Dry Contact Input Operation: Close White/Red wire to White/Blue wire to start timing. Relay will activate after timing sequence has ended.
- If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.



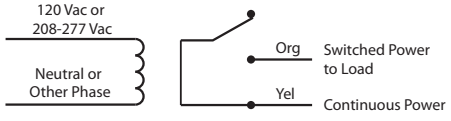
TIMING TABLE

Switch Ranges	Close Dip Switch	Potentiometer Setting A ⟷ B ⟷ C ⟷ D ⟷ E				
6s-20s	1	6s	9s	13s	16s	20s
22s-1min15s	2	22s	36s	50s	1min4s	1min15s
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min
6min-20min	4	6min	9min	13min20s	17min20s	20min

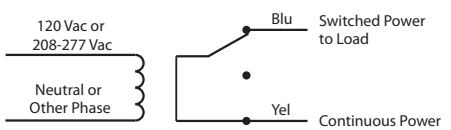
Delay on Make



Wiring for Load on N/O Contact

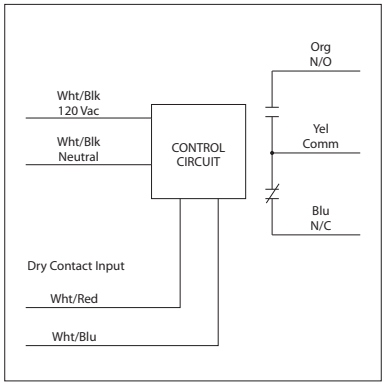


Wiring for Load on N/C Contact



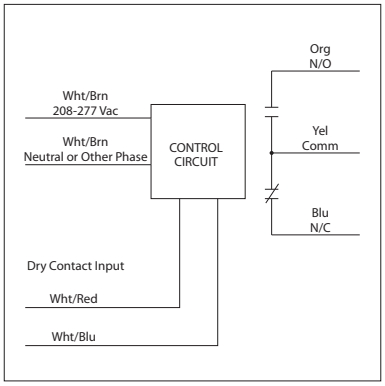
RIBD01BDC-DOB

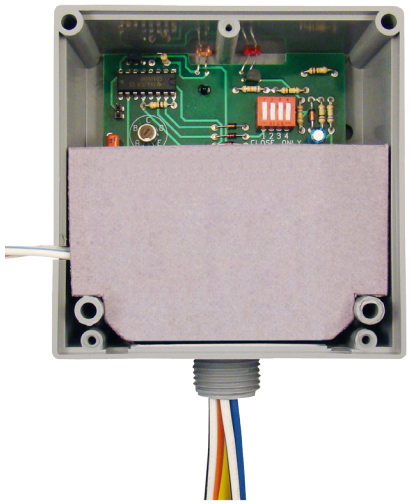
Enclosed Delay on Break Relay 20 Amp SPDT, Class 2 Dry Contact Input, 120 Vac Power Input



RIBD02BDC-DOB

Enclosed Delay on Break Relay 20 Amp SPDT, Class 2 Dry Contact Input, 208-277 Vac Power Input





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RELAYS

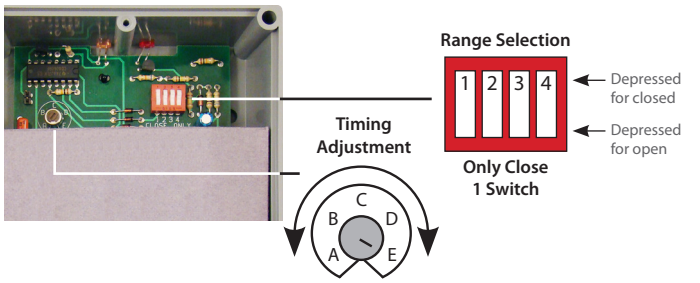
SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms after time delay
Relay Status: Red LED On = Activated
Time Delay Status: Pink LED FLASHING = Timing / Relay Deactivated
Timing Mode: Delay On Break
Timing Range: 6 seconds - 20 minutes
Timing Adjustment: 4 position DIP switch for range selection and single turn potentiometer for timing adjustment within range
Timing Tolerance: Switches 1& 2 = ±10%
Switches 3 & 4 = ±5%
Timing Repeatability: ±1%
Temperature Timing Variance: ±1%
Voltage Timing Variance: ±1%
Recycle Time: 750ms Maximum
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT nipple
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input:
42 mA @ 120 Vac (RIBD01BDC-DOB)
62 mA @ 208-277 Vac (RIBD02BDC-DOB)

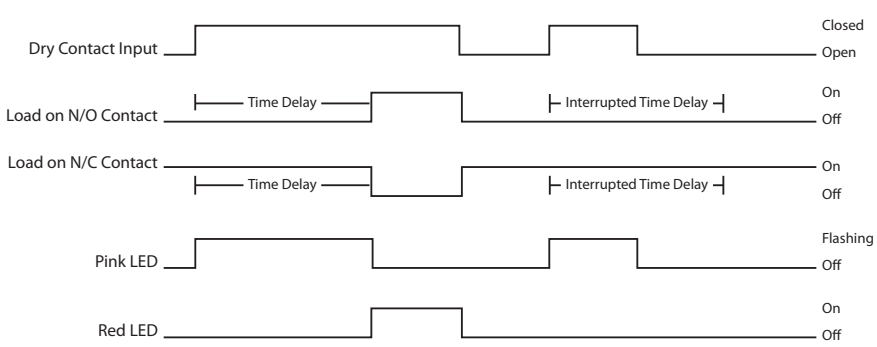
Notes:
- Dry Contact Input Operation: Open White/Red wire and White/Blue wire to start timing. Relay will activate after timing sequence has ended.
- If more than one dry contact RIB® shares a single dry contact input, White/Blue must be common.



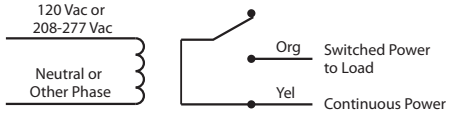
TIMING TABLE

Switch Ranges	Close Dip Switch	Potentiometer Setting A ⟷ B	B ⟷ C	C ⟷ D	D ⟷ E
6s-20s	1	6s	9s	13s	16s	20s
22s-1min15s	2	22s	36s	50s	1min4s	1min15s
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min
6min-20min	4	6min	9min	13min20s	17min20s	20min

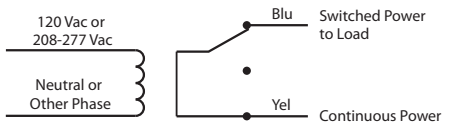
Delay on Make



Wiring for Load on N/O Contact



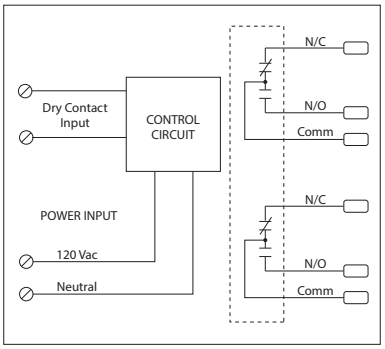
Wiring for Load on N/C Contact



DRY CONTACT INPUT TRACK MOUNT RELAYS

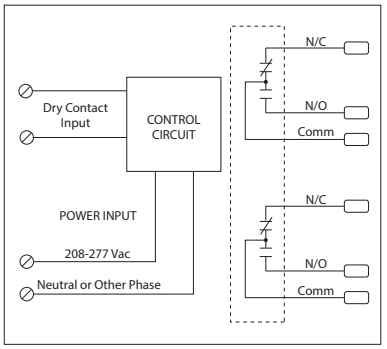
RIBM01ZNDC

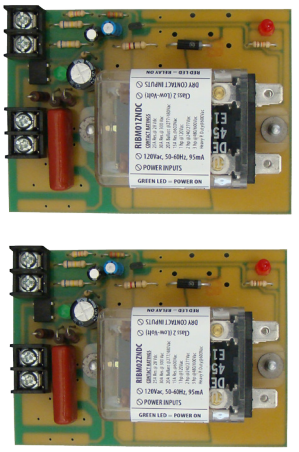
4.00˝ Track Mount Relay 30 Amp DPDT, Class 2
Dry Contact Input, 120 Vac Power Input



RIBM02ZNDC

4.00˝ Track Mount Relay 30 Amp DPDT, Class 2
Dry Contact Input, 208-277 Vac Power Input





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SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: Red LED On = Activated
Power Status: Green LED On = Activated
Dimensions: 2.875˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916
C-UL, CE, RoHS
Gold Flash: Yes
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
25 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
3 HP @ 480-600 Vac
2 HP @ 240/277 Vac
1 HP @ 120 Vac
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast

770 VA @ 120 Vac
1158 VA @ 240 Vac
1109 VA @ 277 Vac
1640 VA @ 480 Vac
NEMA B600 Pilot Duty

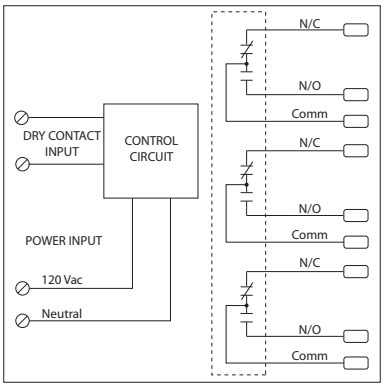
Power Input:
95 mA @ 120 Vac (RIBM01ZNDC)
95 mA @ 208-277 Vac (RIBM02ZNDC)

Notes:
• Dry Contact Input Operation:
Close dry contact to activate relay.

DRY CONTACT INPUT TRACK MOUNT RELAYS

RIBM013PNDC

4.00˝ Track Mount Relay 30 Amp 3PDT, Class 2
Dry Contact Input, 120 Vac Power Input



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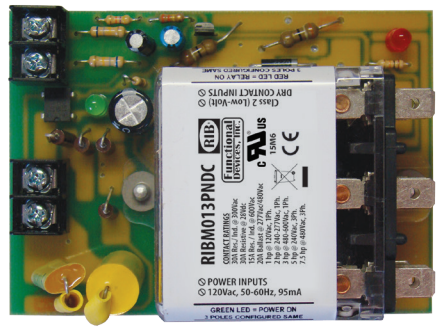


SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Power Status: Green LED On = Activated
Dimensions: 2.875˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Component Recognized, UL916
C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
30 Amp Resistive @ 300 Vac
30 Amp Resistive @ 28 Vdc
15 Amp Resistive @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240/277 Vac, 1 Phase
1 HP @ 120 Vac, 1Phase
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast

Heavy Pilot Duty
770 VA @ 120 Vac, 1 Phase
1158 VA @ 240 Vac, 1 Phase
1109 VA @ 277 Vac, 1 Phase
1640 VA @ 480 Vac, 1 Phase
1466 VA @ 240 Vac, 3 Phase
2122 VA @ 480 Vac, 3 Phase

Power Input:
95 mA @ 120 Vac

Notes:
• Dry Contact Input Operation:
Close dry contact to activate relay.

NETWORK COMPATIBLE RELAYS

LonMark® | BACnet® | Wi-Fi | Modbus®

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Use These Devices When a More Expensive Multi-Output Controller is Too Much for the Job

- UL Listed
- LonWorks®,BACnet®, Wi-Fi, and Modbus® protocol
- Analog input
- Analog output
- Binary output
- Binary input
- Thermistor inputs available
- On-board current sensors available
- Enclosed versions
- NEMA 4X available

LONMARK® DEVICES

MODEL #	UL	RELAY OUTPUT	DRY CONTACT BINARY INPUT	ANALOG INPUT	INTERNAL CURRENT SENSOR FEEDBACK	PRECON® THERMISTOR INPUT	DEVICE POWER AC/DC	DEVICE POWER AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTW2401B-LN	•	1	1				24	120	SPDT			66
RIBTW2402B-LN	•	1	1				24	208-277	SPDT			66
RIBTW2401SB-LN	•	1	1				24	120	SPST	1		67
RIBTW2402SB-LN	•	1	1				24	208-277	SPST	1		67
RIBMNWX2401SB-LN	•	1			•		24	120	SPST	1		68
RIBTWX2401SB-LN	•	1			•		24	120	SPST	1		68
RIBMNWX2402SB-LN	•	1			•		24	208-277	SPST	1		69
RIBTWX2402SB-LN	•	1			•		24	208-277	SPST	1		69
RIBMW24SB-LNAI	•	1	1	1			24		SPST	1		70
RIBTW24SB-LNAI	•	1	1	1			24		SPST	1		70
RIBMW24SB-LNT2	•	1	1			10kΩ Type 2	24		SPST	1		71
RIBTW24SB-LNT2	•	1	1			10kΩ Type 2	24		SPST	1		71
RIBMW24SB-LNT3	•	1	1			10kΩ Type 3	24		SPST	1		71
RIBTW24SB-LNT3	•	1	1			10kΩ Type 3	24		SPST	1		71

BACNET® DEVICES

MODEL #	UL	RELAY OUTPUT	DRY CONTACT BINARY INPUT	ANALOG INPUT	ANALOG OUTPUT	ACCUMULATOR INPUT	INTERNAL CURRENT SENSOR FEEDBACK	PRECON® THERMISTOR INPUT	DEVICE POWER AC/DC	DEVICE POWER AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTW2401B-BC	•	1	1						24	120	SPDT	#		72
RIBTW2402B-BC	•	1	1						24	208-277	SPDT	#		72
RIBMNWX2401B-BC	•	1	1				•		24	120	SPDT	#		73
RIBTWX2401B-BC	•	1	1				•		24	120	SPDT	#		73
RIBMNWX2402B-BC	•	1	1				•		24	208-277	SPDT	#		74
RIBTWX2402B-BC	•	1	1				•		24	208-277	SPDT	#		74
RIBMNW24B-BCAI	•	1	2	1				10kΩ Type 2 or 3	24		SPDT	#		75
RIBTW24B-BCAI	•	1	2	1				10kΩ Type 2 or 3	24		SPDT	#		75
RIBTW24B-BCAO	•	1	2	1	1			10kΩ Type 2 or 3	24		SPDT	#	NEW	76
RIBMNWD12-BCDI			12						24					77
RIBMNWD12-BC			12			2			24					78
RIBMW24B-44-BC	•	4	4						24		SPDT	#		79

WI-FI DEVICES

MODEL #	UL	RELAY OUTPUT	DRY CONTACT BINARY INPUT	UNIVERSAL INPUT	DEVICE POWER AC/DC	DEVICE POWER AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBTW24B-WI-N4	•	1	1		24		SPDT	#	NEW	80
RIBTW2401B-WIUI-N4	•	1	1	2	24	120	SPDT	#	NEW	81

MODBUS® DEVICES

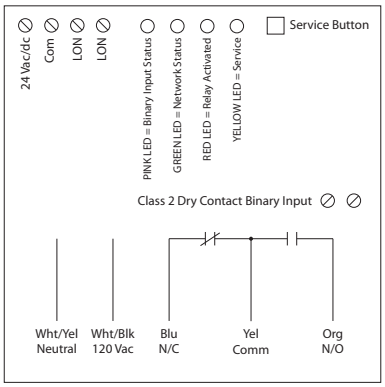
MODEL #	UL	RELAY OUTPUT	DRY CONTACT BINARY INPUT	ANALOG INPUT	INTERNAL CURRENT SENSOR FEEDBACK	PRECON® THERMISTOR INPUT	DEVICE POWER AC/DC	DEVICE POWER AC	CONTACTS	OVERRIDE SWITCH	NOTES	SPEC PAGE
RIBMNW24B-MBAI	•	1	2	1		10kΩ Type 2	24		SPDT	#		82
RIBTW24B-MBAI	•	1	2	1		10kΩ Type 2	24		SPDT	#		82

UL = UL Listed : UL916 Energy Management, USA & Canada

= Coil Side Relay Override (requires unit to be powered)

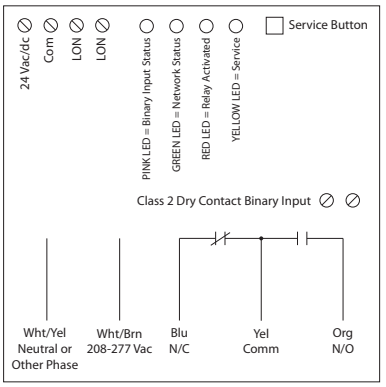
RIBTW2401B-LN

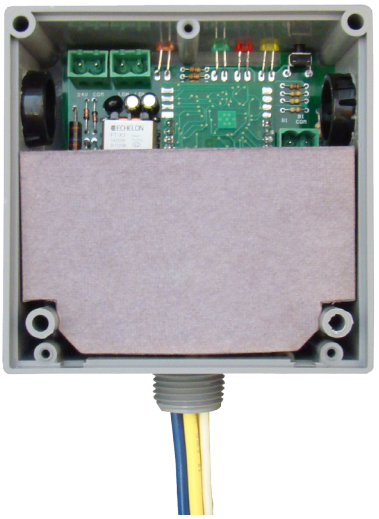
LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPDT), One Binary Input (Dry Contact Class 2); 24 Vac/dc or 120 Vac Power Input



RIBTW2402B-LN

LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPDT), One Binary Input (Dry Contact Class 2); 24 Vac/dc or 208-277 Vac Power Input





Made in USA
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SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Status
Red LED: Relay Status
Yellow LED: Service Status
Pink LED: Binary Input Status
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: FCC, LonMark®, CE, RoHS
UL Listed, UL916, C-UL
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

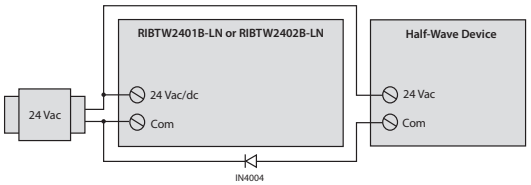
Channel: TP/FT-10
Transceiver Type: FT5000 Smart Transceiver
Transceiver Compatibility: FT3120 / FT3150, FTT-10 / FTT-10A, and LPT-10 / LPT-11 Tranceivers
Functional Blocks: 0000 Node Object
0004 Closed Loop Actuator Object
0001 Open Loop Sensor Object
Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac (N/O)
20 Amp Ballast @ 277 Vac (N/C)
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
111 mA @ 24 Vac
96 mA @ 120 Vac (RIBTW2401B-LN)
105 mA @ 208-277 Vac (RIBTW2402B-LN)
81 mA @ 24 Vdc

Power Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTW2401B-LN)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTW2402B-LN)

Notes:
- Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry contact binary input to command the relay. Contact closure on the BI will activate relay.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

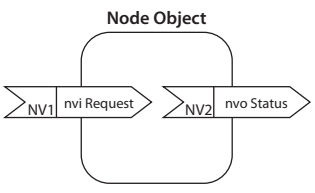


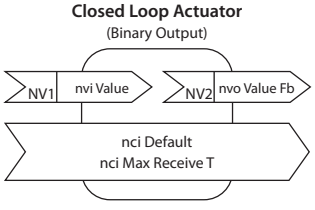
^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

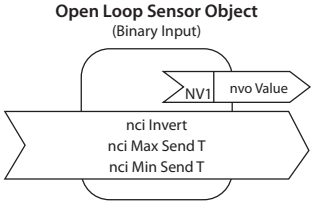
DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm

The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)

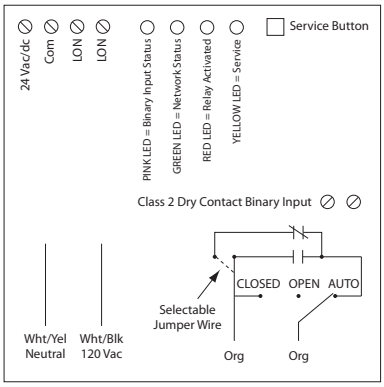






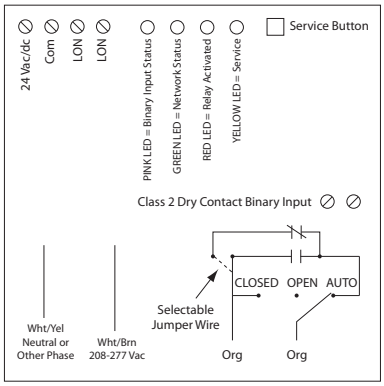
RIBTW2401SB-LN

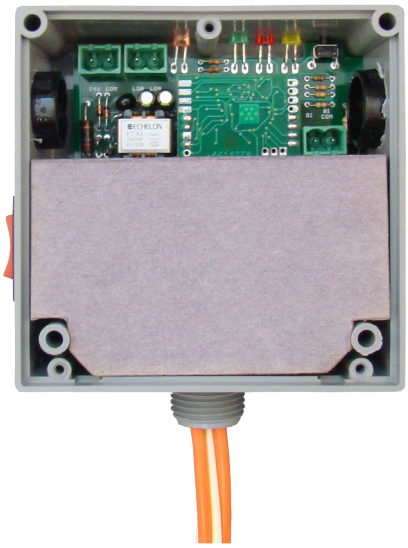
LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 120 Vac Power Input



RIBTW2402SB-LN

LonWorks® Twisted-Pair FT-10 Network Enclosed Dual I/O Device: One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 208-277 Vac Power Input





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RELAYS

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Status
Red LED: Relay Status
Yellow LED: Service Status
Pink LED: Binary Input Status
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: FCC, LonMark®, CE, RoHS
UL Listed, UL916, C-UL
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: Yes

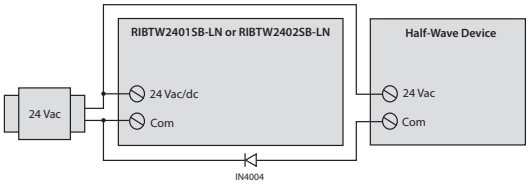
Channel: TP/FT-10
Transceiver Type: FT5000 Smart Transceiver
Transceiver Compatibility: FT3120 / FT3150, FTT-10 / FTT-10A, and LPT-10 / LPT-11 Tranceivers
Functional Blocks: 0000 Node Object
0004 Closed Loop Actuator Object
0001 Open Loop Sensor Object
Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac (N/O)
10 Amp Ballast @ 120/277 Vac Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
111 mA @ 24 Vac
96 mA @ 120 Vac (RIBTW2401SB-LN)
105 mA @ 208-277 Vac (RIBTW2402SB-LN)
81 mA @ 24 Vdc

Power Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIBTW2401SB-LN)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIBTW2402SB-LN)

Notes:
- Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry contact binary input to command the relay. Contact closure on the BI will activate relay.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^



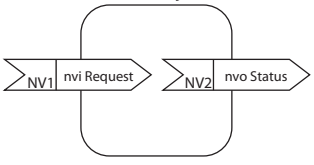
^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm

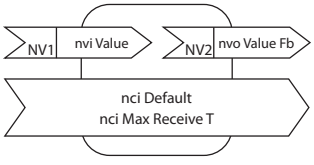
The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)

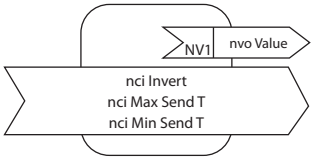
Node Object



Closed Loop Actuator
(Binary Output)



Open Loop Sensor Object
(Binary Input)

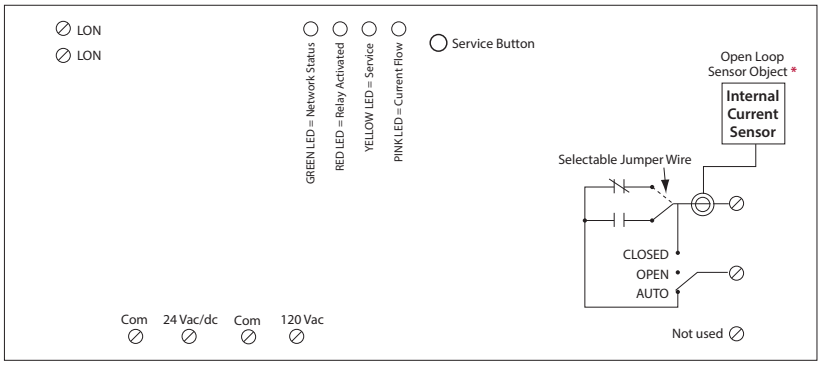


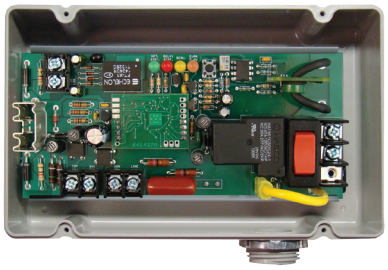
RIBMNWX2401SB-LN

2.75˝ Track Mount LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 120 Vac Power Input

RIBTWX2401SB-LN

Enclosed LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 120 Vac Power Input





Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Status
Red LED: Relay Status
Yellow LED: Service Status
Dimensions: 6.00˝ x 2.75˝ x 1.75˝ (RIBMNWX2401SB-LN)
7.00˝ x 4.28˝ x 2.00˝ with .75˝ NPT Nipple (RIBTWX2401SB-LN)
Track Mount: MT212-6 Mounting Track Provided
Approvals: FCC, LonMark®, CE, RoHS
UL Listed, UL916, C-UL
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
Gold Flash: No
Override Switch: Yes

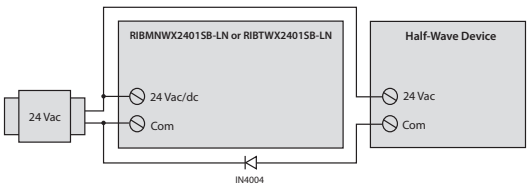
Channel: TP/FT-10
Transceiver Type: FT5000 Smart Transceiver
Functional Blocks: 0000 Node Object
0004 Closed Loop Actuator Object
0001 Open Loop Sensor Object
Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac (N/O)
10 Amp Ballast @ 120/277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
105 mA @ 24 Vac
78 mA @ 24 Vdc
105 mA @ 120 Vac

Current Sensor Range:
0.25 - 20 Amps
Threshold fixed at .25 Amps.

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2401SB-LN-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTWX2401SB-LN-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTWX2401SB-LN-N4-GY)
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

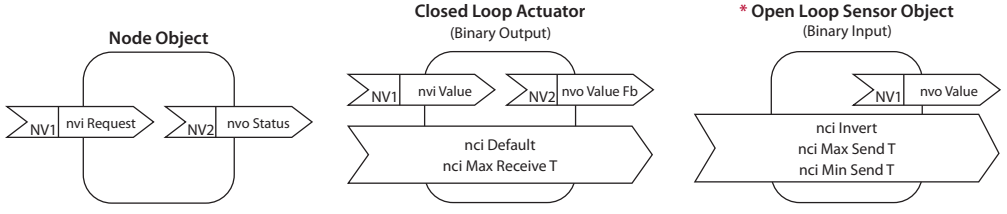


^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm

The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)

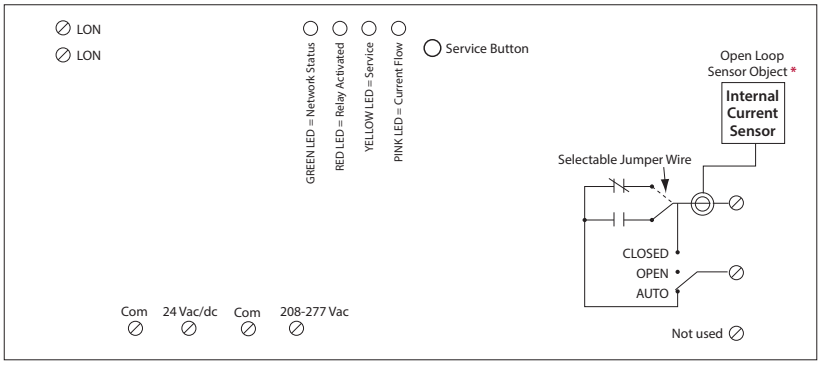


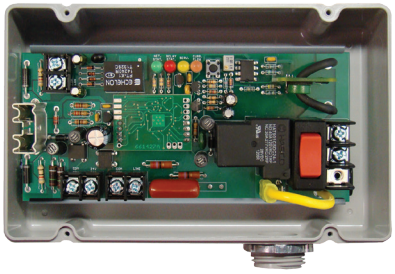
RIBMNWX2402SB-LN

2.75˝ Track Mount LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 208-277 Vac Power Input

RIBTWX2402SB-LN

Enclosed LonWorks® Twisted-Pair FT-10 Network Dual I/O Device; One Binary Output (20 Amp Relay SPST + Override); One Binary Input (Current Sensor 0.25 - 20 Amp, Relay Load Sensing), 24 Vac/dc or 208-277 Vac Power Input





c UL us LISTED

LonMark 3.4

CE

RoHS

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of ARRA 2009

RELAYS

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Status
Red LED: Relay Status
Yellow LED: Service Status
Dimensions: 6.00˝ x 2.75˝ x 1.75˝ (RIBMNWX2402SB-LN)
7.00˝ x 4.28˝ x 2.00˝ with .75˝ NPT Nipple (RIBTWX2402SB-LN)
Track Mount: MT212-6 Mounting Track Provided
Approvals: FCC, LonMark®, CE, RoHS
UL Listed, UL916, C-UL
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved,
UL Accepted for Use in Plenum,
Also available NEMA 4 / 4X
Gold Flash: No
Override Switch: Yes

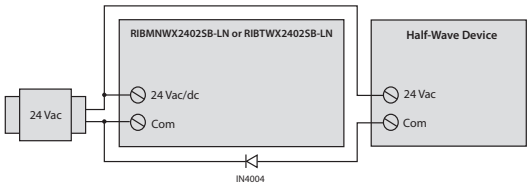
Channel: TP/FT-10
Transceiver Type: FT5000 Smart Transceiver
Functional Blocks: 0000 Node Object
0004 Closed Loop Actuator Object
0001 Open Loop Sensor Object
Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac (N/O)
10 Amp Ballast @ 120/277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
105 mA @ 24 Vac
78 mA @ 24 Vdc
120 mA @ 208-277 Vac

Current Sensor Range:
0.25 - 20 Amps
Threshold fixed at .25 Amps.

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2402SB-LN-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTWX2402SB-LN-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTWX2402SB-LN-N4-GY)
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur.
Option 1: Use separate transformers for each device.
Option 2: Add diode between devices, see Option 2 note below. ^^

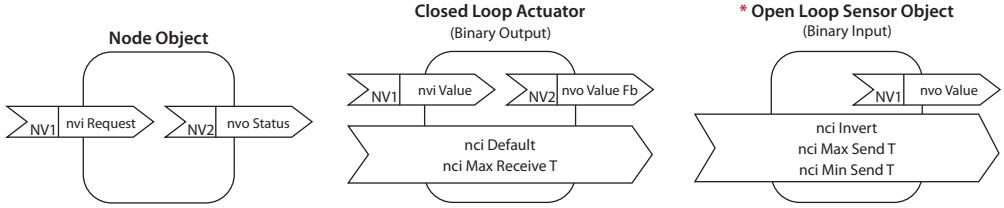


^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm

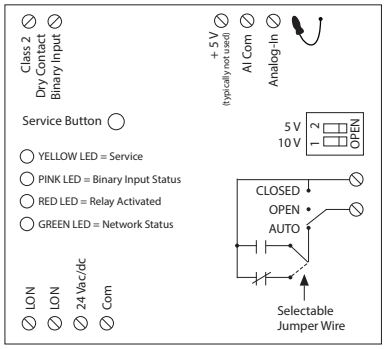
The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



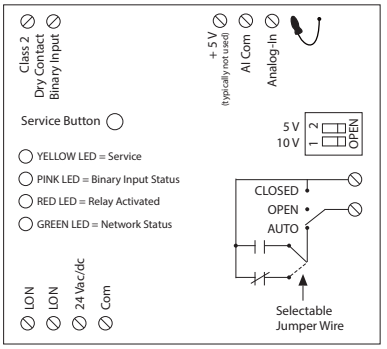
RIBMW24SB-LNAI

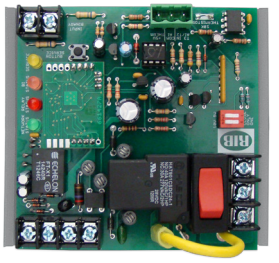
4.00˝ Track Mount LonWorks® Twisted-Pair FT-10 Network Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); One Analog Input (0-5Vdc / 0-10 Vdc); 24 Vac/dc Power Input



RIBTW24SB-LNAI

Enclosed LonWorks® Twisted-Pair FT-10 Network Enclosed Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); One Analog Input (0-5Vdc / 0-10 Vdc); 24 Vac/dc Power Input.





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SPECIFICATIONS

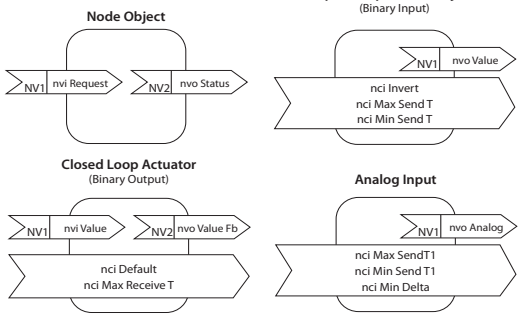
 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Status
Red LED: Relay Status
Yellow LED: Service Status
Pink LED: Binary Input Status
Dimensions: 4.00˝ x 4.00˝ x 1.50˝ (RIBMW24SB-LNAI)
4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple (RIBTW24SB-LNAI)
Track Mount: MT4-4 Mounting Track Provided
Approvals: FCC, LonMark®, CE, RoHS
UL Listed, UL916, C-UL
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
Gold Flash: No
Override Switch: Yes
Channel: TP/FT-10
Transceiver Type: FT5000 Smart Transceiver
Transceiver Compatibility: FT3120 / FT3150, FTT-10 / FTT-10A, and LPT-10 / LPT-11 Tranceivers
Functional Blocks: 0000 Node Object
0004 Closed Loop Actuator Object
0001 Open Loop Sensor Object
0520 Analog Input
Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac (N/O)
10 Amp Ballast @ 120/277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
111 mA @ 24 Vac
81 mA @ 24 Vdc

Power Input:
24 Vac/dc ; 50-60 Hz *

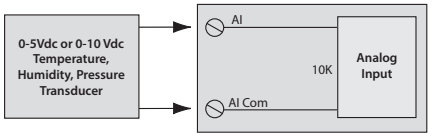
Notes:
- Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry contact binary input to command the relay. Contact closure on the BI will activate relay.
- Normally Open or Normally Closed selected by yellow jumper wire.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24SB-LNAI-N4)
- Close DIP switch 1 for 0-5 Vdc Analog Input. Close DIP switch 2 for 0-10 Vdc Analog Input.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^
- See page 71 for -LNT2 or -LNT3 models if using a thermistor. If using a thermistor on the Analog Input, set DIP switches to the 0-5 Vdc setting. A look-up table must also be made.

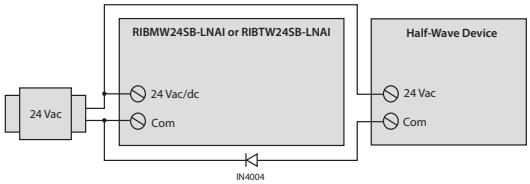


DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Binary Input	nvo Value	SNVT_switch
Invert status of Binary Input	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm
Value of Analog-In	nvo Analog	SNVT_lev_percent
Max time between Analog updates	nci Max Send T1	SNVT_elapsed_tm
Min time between Analog updates	nci Min Send T1	SNVT_elapsed_tm
Min change in Analog before updates	nci Min Delta	SNVT_lev_percent

The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)

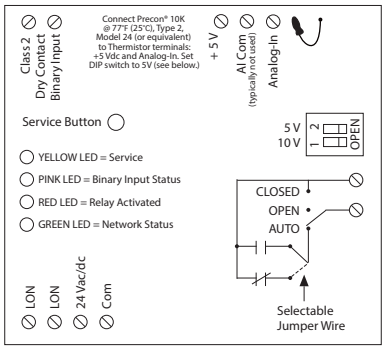




^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

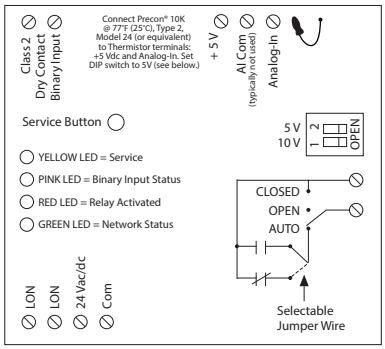
RIBMW24SB-LNT2

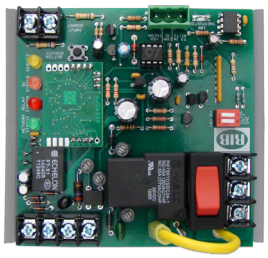
4.00˝ Track Mount LonWorks® Twisted-Pair FT-10 Network Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); Precon® Type 2 Thermistor Input; 24 Vac/dc Power Input



RIBTW24SB-LNT2

Enclosed LonWorks® Twisted-Pair FT-10 Network Three I/O Device; One Binary Output (20 Amp Relay SPST + Override), One Binary Input (Dry Contact, Class 2); Precon® Type 2 Thermistor Input; 24 Vac/dc Power Input





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THERMISTOR INPUT

RELAYS

SPECIFICATIONS

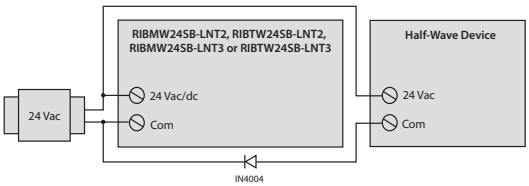
 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Status
Red LED: Relay Status
Yellow LED: Service Status
Pink LED: Binary Input Status
Dimensions: 4.00˝ x 4.00˝ x 1.50˝ (RIBMW24SB-LNT2)
4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple (RIBTW24SB-LNT2)
Track Mount: MT4-4 Mounting Track Provided
Approvals: FCC, LonMark®, CE, RoHS
UL Listed, UL916, C-UL
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
Gold Flash: No
Override Switch: Yes
Channel: TP/FT-10
Transceiver Type: FT5000 Smart Transceiver
Transceiver Compatibility: FT3120 / FT3150, FTT-10 / FTT-10A, and LPT-10 / LPT-11 Tranceivers
Functional Blocks: 0000 Node Object
0004 Closed Loop Actuator Object
0001 Open Loop Sensor Object
1040 Temperature Sensor
Downloadable Files: PDF, XIF, APB, VSS and NXE available on website.

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac (N/O)
10 Amp Ballast @ 120/277 Vac (N/C)
Not rated for Electronic Ballast
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
111 mA @ 24 Vac
81 mA @ 24 Vdc

Power Input:
24 Vac/dc ; 50/60 Hz ^

Notes:
- Order with P1 option by adding "-P1" to end of model number. The P1 option is pre-programmed to allow dry contact binary input to command the relay. Contact closure on the BI will activate relay.
- Normally Open or Normally Closed selected by yellow jumper wire.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24SB-LNT2-N4)
- -35 to 100°C range in one degree steps. -36°C indicates below range, 101°C indicates above range.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^
- Can be used with Precon® Type 3 Thermistor Input. Use suffix "-LNT3" instead of "LNT2" when ordering. Thermistor not included.

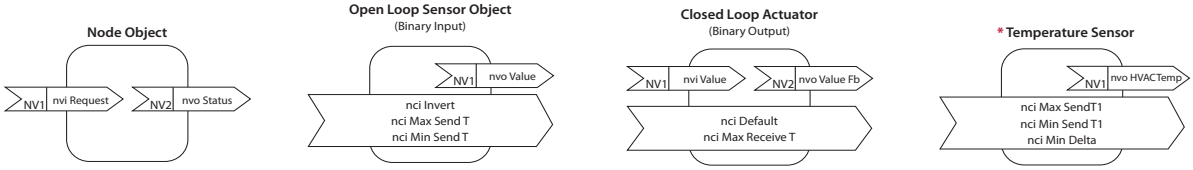


^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

DESCRIPTION	SNVT NAME	SNVT TYPE
Command to open/close relay	nvi Value	SNVT_switch
Command status of relay	nvo Value Fb	SNVT_switch
Default state of relay on/off	nci Default	SNVT_switch
Communication timer	nci Max Receive T	SNVT_elapsed_tm
Status of Digital-In	nvo Value	SNVT_switch
Invert status of Digital-In	nci Invert	SNVT_lev_disc
Max time between updates	nci Max Send T	SNVT_elapsed_tm
Min time between updates	nci Min Send T	SNVT_elapsed_tm
T2 Thermistor input *	nvo HVACTemp	SNVT_temp_p
Max time between Temperature updates	nci Max Send T1	SNVT_elapsed_tm
Min time between Temperature updates	nci Min Send T1	SNVT_elapsed_tm
Min change in Temperature before updates	nci Min Delta	SNVT_temp_p

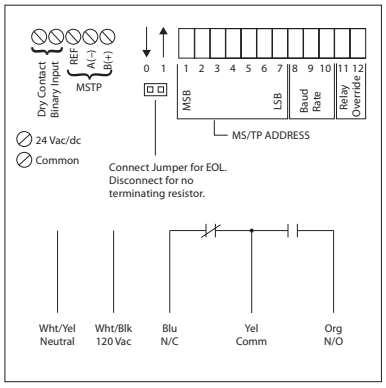
The relay will go to the default state when the communication timer times out. Setting the timer value to zero will cause the communication to never time out.

It is recommended to put a value in nci Max Send T to ensure the RIB re-synchronizes itself on the network after power loss. It is the responsibility of the user to ensure this value does not cause conflicts in network traffic. (No value = No "heartbeat" updates / no re-sychronization; Low Value = Many updates but may cause many traffic collisions; High value = Few updates but many less collisions.)



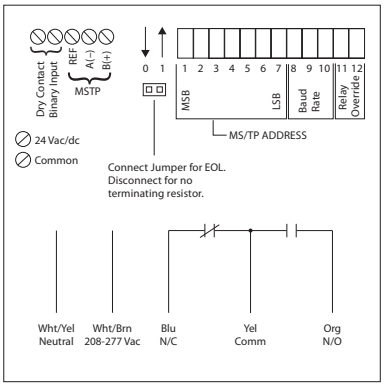
RIBTW2401B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 120 Vac Power Input, Optional End of Line Resistor (EOL) Included.



RIBTW2402B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); 24 Vac/dc or 208-277 Vac Power Input, Optional End of Line Resistor (EOL) Included.



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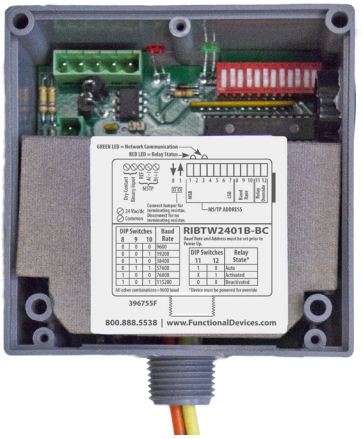


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Green LED: Network Communication
Red LED: Relay Status
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wires: 16˝, 600V Rated
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
81 mA @ 24 Vdc
111 mA @ 24 Vac
96 mA @ 120 Vac (RIBTW2401B-BC)
121 mA @ 208-277 Vac (RIBTW2402B-BC)

Power Input:
24 Vac/dc ; 120 Vac ; 50/60 Hz (RIBTW2401B-BC)
24 Vac/dc ; 208-277 Vac ; 50/60 Hz (RIBTW2402B-BC)

Notes:
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

BACnet® Details:
- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address.
  Examples:

MS/TP Address - 004 Device ID - 277004
MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), BI 1: (Dry contact binary input)
- Software objects also included but not utilized: BI 2 (Binary input), AI 1 (Analog input)
- Device Instance changed via Object Identifier Property of Device Object
- Each unit is 1/8 unit load if date code 041510 or later. (One full load prior to 041510)
- PIC Statement available on website. http://www.functionaldevices.com/pdf/datasheets/pics/BACnetRIB_PICS_V105.pdf

Or scan QR code with your smart phone.

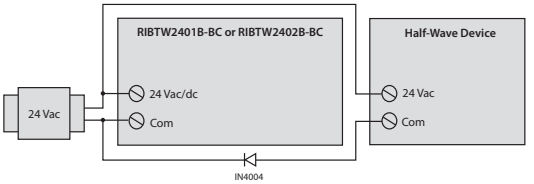
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

All other combinations=9600 baud

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
X	1	Override on
0	0	Override off

* 0 = Open ; 1 = Closed
** Device must be powered for override

- Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.



^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

RIBMNWX2401B-BC

2.75˝Track Mount BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 120 Vac Power Input, Optional End of Line Resistor (EOL) Included.

RIBTWX2401B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 120 Vac Power Input, Optional End of Line Resistor (EOL) Included.

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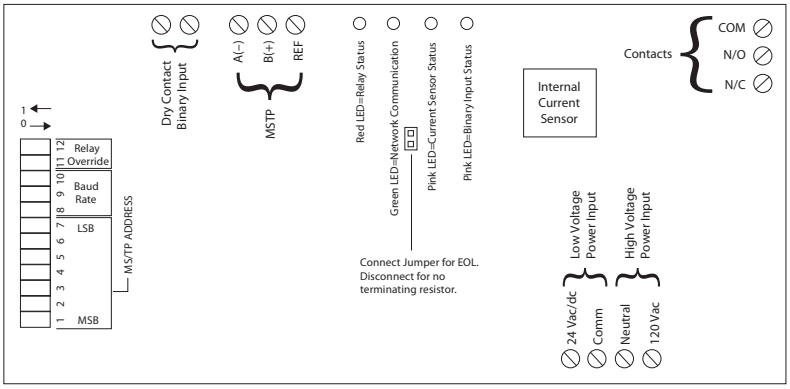
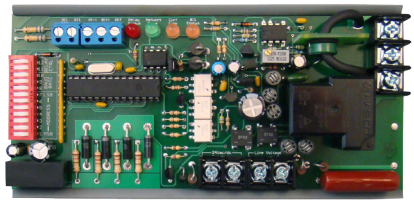
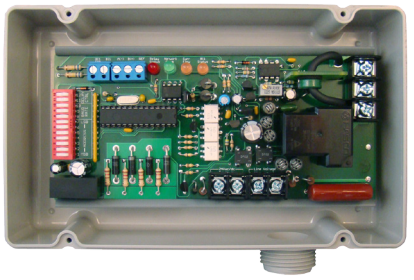






SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Network Communication: Green LED
Relay Status: Red LED On = Activated
Current Sensor Status: Pink LED On = Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 6.00˝ x 2.75˝ x 1.75˝ (RIBMNWX2401B-BC)
4.28˝ x 7.00˝ x 2.00˝
with .75˝ NPT Nipple (RIBTWX2401B-BC)
Track Mount: MT212-6 Mounting Track Provided
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved,
UL Accepted for Use in Plenum,
Also available NEMA 4 / 4X
Gold Flash: No
Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input:
24 Vac/dc ; 120 Vac ; 50/60 Hz

Power Input Ratings:
105 mA @ 24 Vac
78 mA @ 24 Vdc
105 mA @ 120 Vac

Current Sensor Range:
0.25 - 20 Amps
Threshold fixed at .25 Amps.

Notes:
- Device can be powered by either 24 Vac/dc or 120 Vac, but not both.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2401B-BC-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTWX2401B-BC-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTWX2401B-BC-N4-GY)
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

BACnet® Details:
- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address.
  Examples:

MS/TP Address - 004 Device ID - 277004
MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), BI 2 (Internal current sensor input)
- Software objects also included but not utilized: AI 1 (Analog input)
- Device Instance changed via Object Identifier Property of Device Object
- Each unit is 1/8 unit load if date code 041510 or later. (One full load prior to 041510)
- PIC Statement available on website.
  http://www.functionaldevices.com/pdf/datasheets/pics/BACnetRIB_PICS_V105.pdf

Or scan QR code with your smart phone.

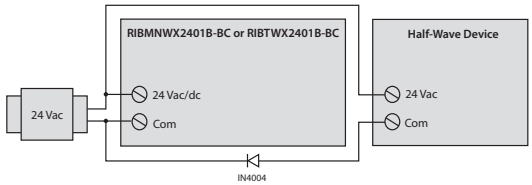
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

All other combinations=9600 baud

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
X	1	Override on
0	0	Override off

* 0 = Open ; 1 = Closed
** Device must be powered for override

- Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.



^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

RIBMNWX2402B-BC

2.75˝ Track Mount BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 208-277 Vac Power Input, Optional End of Line Resistor (EOL) Included.

RIBTWX2402B-BC

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (One Current Sensor 0.25 - 20 Amp, Relay Load Sensing & One Dry Contact Binary Input), 24 Vac/dc or 208-277 Vac Power Input, Optional End of Line Resistor (EOL) Included.

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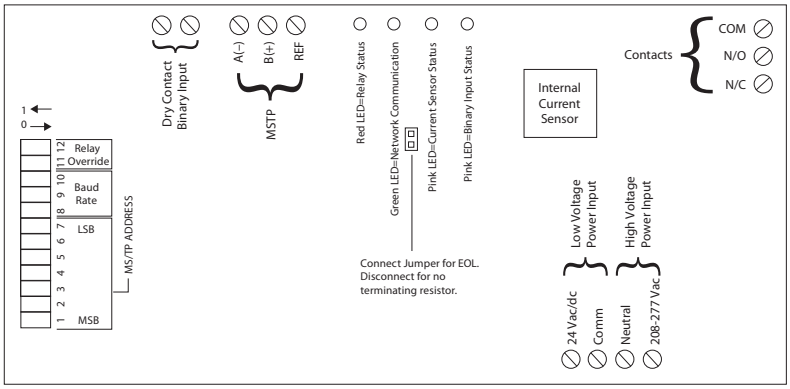
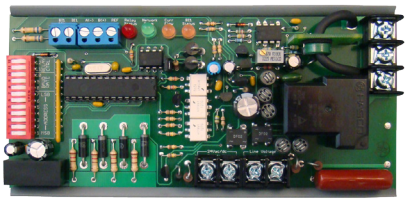
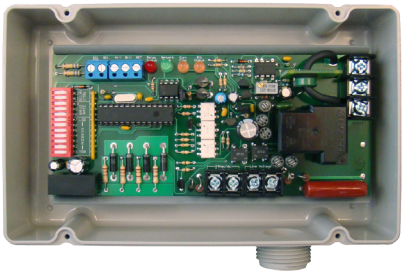






SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Network Communication: Green LED
Relay Status: Red LED On = Activated
Current Sensor Status: Pink LED On = Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 6.00˝ x 2.75˝ x 1.75˝ (RIBMNWX2402B-BC)
4.28˝ x 7.00˝ x 2.00˝
with .75˝ NPT Nipple (RIBTWX2402B-BC)
Track Mount: MT212-6 Mounting Track Provided
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved,
UL Accepted for Use in Plenum,
Also available NEMA 4 / 4X
Gold Flash: No
Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input:
24 Vac/dc ; 208-277 Vac ; 50/60 Hz

Power Input Ratings:
105 mA @ 24 Vac
78 mA @ 24 Vdc
120 mA @ 208-277 Vac

Current Sensor Range:
0.25 - 20 Amps
Threshold fixed at .25 Amps.

Notes:
- Device can be powered by either 24 Vac/dc or 208-277 Vac, but not both.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTWX2402B-BC-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTWX2402B-BC-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTWX2402B-BC-N4-GY)
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

BACnet® Details:
- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address.
  Examples:

MS/TP Address - 004 Device ID - 277004
MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), BI 2 (Internal current sensor input)
- Software objects also included but not utilized: AI 1 (Analog input)
- Device Instance changed via Object Identifier Property of Device Object
- Each unit is 1/8 unit load if date code 041510 or later. (One full load prior to 041510)
- PIC Statement available on website.
  http://www.functionaldevices.com/pdf/datasheets/pics/BACnetRIB_PICS_V105.pdf

Or scan QR code with your smart phone.

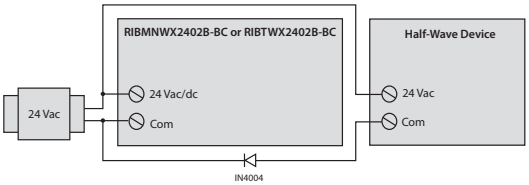
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

All other combinations=9600 baud

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
X	1	Override on
0	0	Override off

* 0 = Open ; 1 = Closed
** Device must be powered for override

- Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.



^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

RIBMNW24B-BCAI

2.75" Track Mount BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

RIBTW24B-BCAI

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

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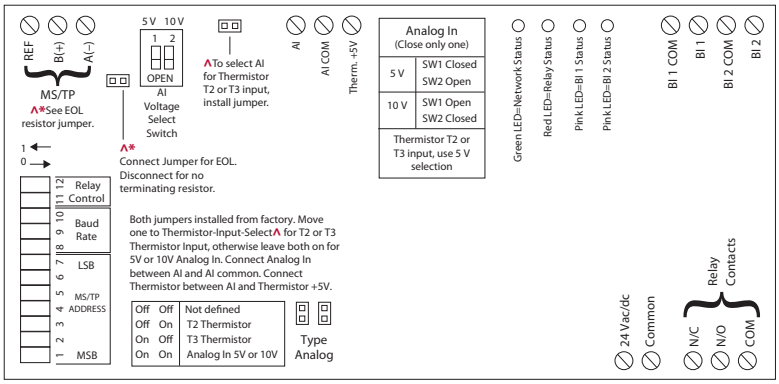


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Network Communication: Green LED
Relay Status: Red LED On = Activated
Current Sensor Status: Pink LED On = Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 6.25˝ x 2.75˝ x 1.75˝ (RIBMNW24B-BCAI)
4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple (RIBTW24B-BCAI)
Track Mount: MT212-6 Mounting Track Provided
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
Gold Flash: No
Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
81 mA @ 24 Vdc
111 mA @ 24 Vac

• PIC Statement available on website.
http://www.functionaldevices.com/pdf/datasheets/pics/BACnet-BCAI_PICS.pdf
Or scan QR code with your smart phone.

Notes:
• Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24B-BCAI-N4)
• Order with grey lid by adding "-GY" to end of model number. (RIBTW24B-BCAI-GY)
• Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTW24B-BCAI-N4-GY)
• For all versions, raw analog default settings are 0 and 1023 (real), respectively. Units default to 95 (no units).
• When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur.
Option 1: Use separate transformers for each device.
Option 2: Add diode between devices, see Option 2 note below.^^

BACnet® Details:
• MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
• Device ID will default to 277XXX where XXX is the MS/TP Address.
Examples:

MS/TP Address - 004	MS/TP Address - 121
Device ID - 277004	Device ID - 277121

• Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
• This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), BI 2 (Dry contact binary input), AI 1 (Analog input)
• Device Instance changed via Object Identifier Property of Device Object

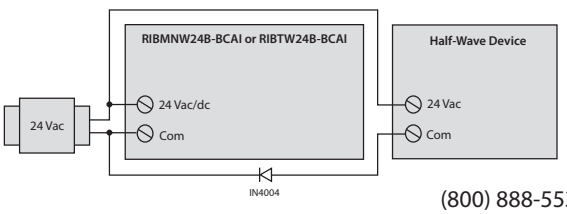
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

All other combinations=9600 baud

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
X	1	Override on
0	0	Override off

* 0 = Open ; 1 = Closed
** Device must be powered for override

• Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.



^^ Option 2:
Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

Thermistor Specifications:
• Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor Type 3 (T3) Precon 10 K @ 77°F (25°C) Model 3, (or equivalent.) Thermistor not included.
• If date code is prior to 083012, Version 1.03 or earlier:
  • For both T2 and T3, MIN_PRES_VAL must be set to -36 (real value) and MAX_PRES_VAL must be set to 987 (real value).
  • -35 to 100°C range in 1° steps.
• If date code is 083012 or later, Version 1.05:
  • For both T2 and T3, MIN_PRES_VAL must be set to -36 (real value) and MAX_PRES_VAL must be set to 66.3 (real value) for Celcius. For Fahrenheit, MIN_PRES_VAL must be set to -32.8 (real value) and MAX_PRES_VAL must be set to 151.34 (real value).
  • -35 to 10°C range in 1° steps / -31 to 50°F range in 1.8° steps
  10 to 32°C range in 0.1° steps / 50 to 90°F range in 0.18° steps
  32 to 100°C range in 1° steps / 90 to 212°F range in 1.8° steps

RIBTW24B-BCAO

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); One Analog Output (0-5 Vdc, 0-10 Vdc, or 4-20 mA), One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

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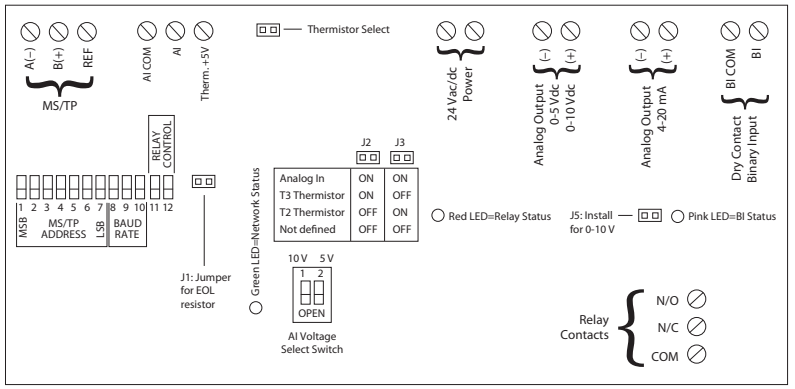
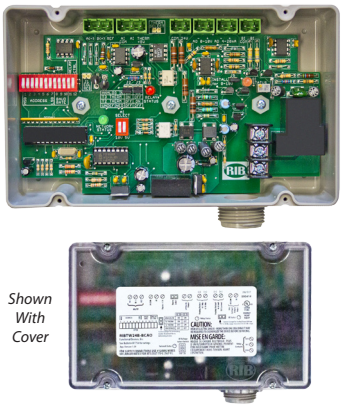




Shown With Cover

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Network Communication: Green LED
Relay Status: Red LED On = Relay Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum,
Gold Flash: No
Relay Override: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Magnetic Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
176 mA @ 24 Vac
150 mA @ 24 Vdc

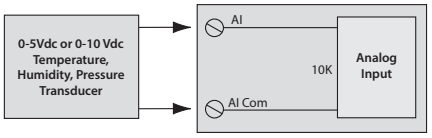
Notes:
- Use a separate 24 Vac transformer, or an isolated 24 Vdc power supply to power-up this product.
- Complete Installation Instructions: Bulletin B1756 available on website. www.functionaldevices.com/pdf/bulletins/B1756_393218.pdf
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

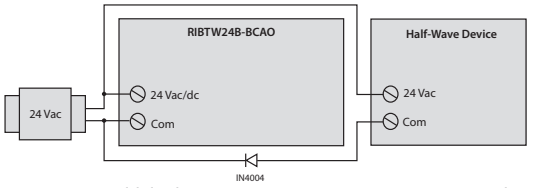
Thermistor Specifications:
- Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor Type 3 (T3) Precon 10 K @ 77°F (25°C) Model 3, (or equivalent.) Thermistor not included.
- -35 to 10°C range in 1° steps / -31 to 50°F range in 1.8° steps 10 to 32°C range in 0.1° steps / 50 to 90°F range in 0.18° steps 32 to 100°C range in 1° steps / 90 to 212°F range in 1.8° steps

BACnet® Details:
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), AI 1 (Analog input), AO 1 (Analog output)
- PIC Statement available on website. www.functionaldevices.com/pdf/datasheets/pics/RIBTW24B-BCAO_PICS_V109.pdf Or scan QR code with your smart phone.
- Addressing Specifications: Bulletin B1082 available on website. www.functionaldevices.com/pdf/bulletins/B1082_393095.pdf

	ANALOG OUTPUT ACCURACY AS A FUNCTION OF OUTPUT SPAN (USING STANDARD CONDITIONS *)		
	Span 20% - 100%	Span 10% - 100%	Span 0% - 100%
Analog Output Voltage (0-5 Vdc; 0-10 Vdc)	+/- 2% error	+/- 5% error	+/- 11% error
Analog Output Current (4-20 mA)	+/- 2% error	+/- 3% error	+/- 12% error

*** Standard Conditions:**
Power Supply Input: 22 Vac/dc to 28 Vac/dc ; **Loop Resistance (Analog Output 4-20 mA Loop):** 530 Ohms max.
Load Resistance [Analog Output Voltage (0-5 Vdc, 0-10 Vdc)]: 10 K Ohms min. ; **Ambient Temperature:** -30 to 140° F





^^ Option 2: Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

RIBMNWD12-BCDI

2.75˝ Track Mount BACnet® MS/TP Network 12 Binary Input Device; Optional End of Line Resistor (EOL) Included.

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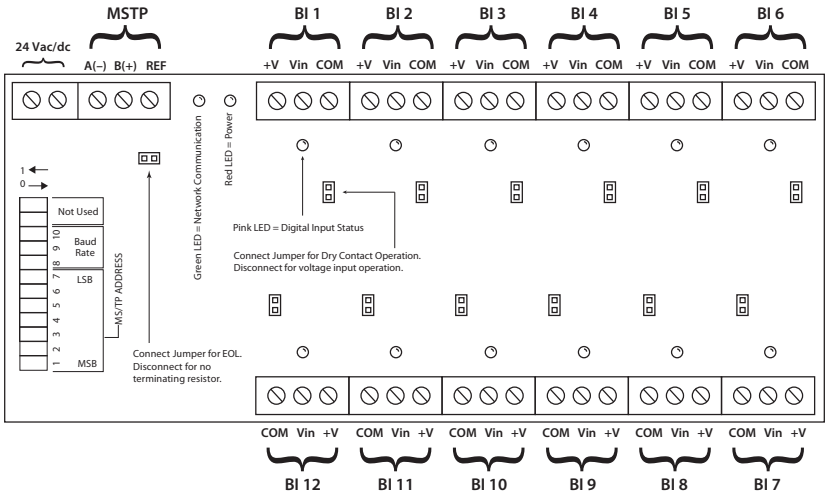
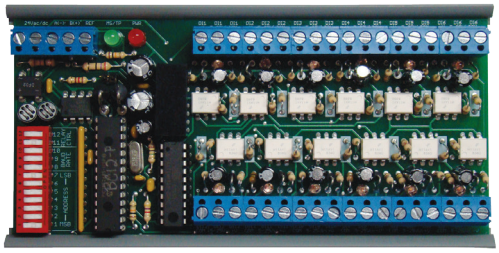




SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Green LED: Network Communication
Red LED: ON = Power Present
Dimensions: 5.85˝ x 2.75˝ x 1.75˝
Track Mount: MT212-6 Mounting Track Provided
Approvals: CE, RoHS

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Band Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Power Input Ratings:
41 mA @ 24 Vdc
53 mA @ 24 Vac

Binary Input Ratings:
Dry Contact: 3 mA @ 30 Vdc max.
Voltage Input: 12 mA @ 25 Vac/dc max.

BACnet® Details:

- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address. Examples:

MS/TP Address - 004	MS/TP Address - 121
Device ID - 277004	Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- Device Instance changed via Object Identifier Property of Device Object
- Full wave rectified

- Objects included in device are:

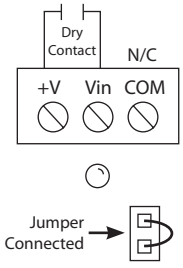
BI 1 (Binary input)	BI 7 (Binary input)
BI 2 (Binary input)	BI 8 (Binary input)
BI 3 (Binary input)	BI 9 (Binary input)
BI 4 (Binary input)	BI 10 (Binary input)
BI 5 (Binary input)	BI 11 (Binary input)
BI 6 (Binary input)	BI 12 (Binary input)

- PIC Statement available on website.
  http://www.functionaldevices.com/pdf/datasheets/pics/RIBMNWD12-BCDI_PICS.pdf
  Or scan QR code with your smart phone.

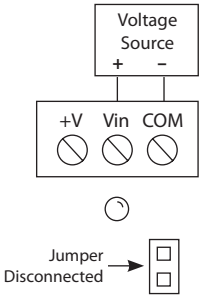
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

* 0 = Open ; 1 = Closed
All other combinations=9600 baud

Example of Dry Contact Input Operation

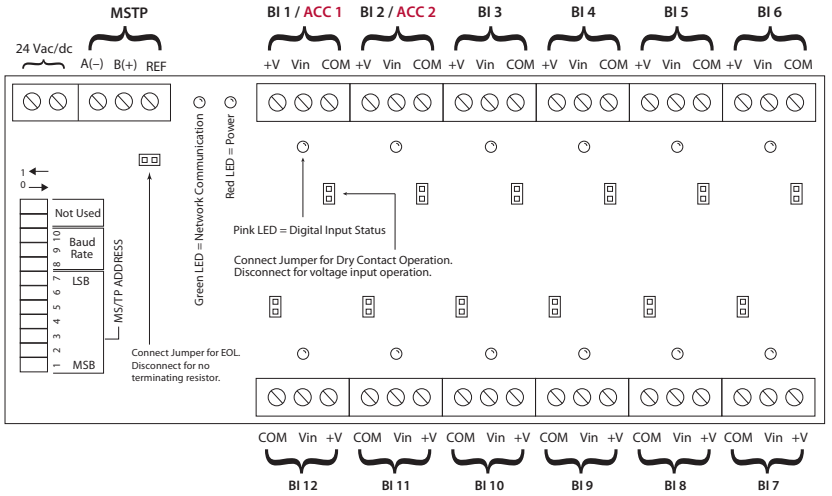


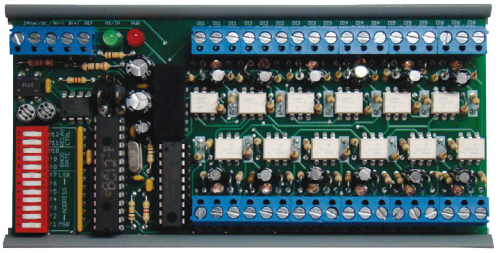
Example of Voltage Input Operation



RIBMNWD12-BC

2.75˝ Track Mount BACnet® MS/TP Network 12 Binary Input Device (With Accumulators); Optional End of Line Resistor (EOL) Included.





TWO (ACCUMULATOR) INPUTS CAN BE USED FOR POWER MONITORING OR OTHER PULSE COUNTING APPLICATION.

SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Green LED: Network Communication
Red LED: ON = Power Present
Dimensions: 5.85˝ x 2.75˝ x 1.75˝
Track Mount: MT212-6 Mounting Track Provided
Approvals: CE, RoHS

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Power Input Ratings:
41 mA @ 24 Vdc
53 mA @ 24 Vac

Max. Accumulator Frequency:
50 Hz

BACnet® Details:
- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address. Examples:

MS/TP Address - 004	MS/TP Address - 121
Device ID - 277004	Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique.)
- Device Instance changed via Object Identifier Property of Device Object

Binary Input Ratings:
Dry Contact: 3 mA @ 30 Vdc max.
Voltage Input: 12 mA @ 25 Vac/dc max.

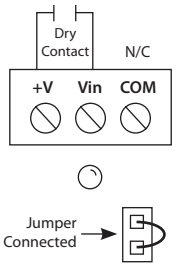
- Objects included in device are:
  - BI 1 (Binary input) } Use Same
  - ACC 1 (Accumulator) } Physical Input
  - BI 2 (Binary input) } Use Same
  - ACC 2 (Accumulator) } Physical Input
  - BI 3 (Binary input)
  - BI 4 (Binary input)
  - BI 5 (Binary input)
  - BI 6 (Binary input)
  - BI 7 (Binary input)
  - BI 8 (Binary input)
  - BI 9 (Binary input)
  - BI 10 (Binary input)
  - BI 11 (Binary input)
  - BI 12 (Binary input)
- PIC Statement available on website. http://www.functionaldevices.com/pdf/datasheets/pics/RIBMNWD12-BC_PICS.pdf

Or scan QR code with your smart phone.

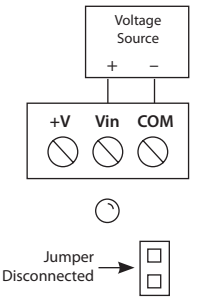
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

* 0 = Open ; 1 = Closed
All other combinations=9600 baud

Example of Dry Contact Input Operation



Example of Voltage Input Operation



RIBMW24B-44-BC

4.00˝ Track Mount BACnet® MS/TP Network Relay Device; Four Binary Outputs (20 Amp Relay SPDT + Override); Four Binary Inputs (Dry Contact Binary Inputs), 24 Vac/dc Power Input, Optional End of Line Resistor (EOL) Included.

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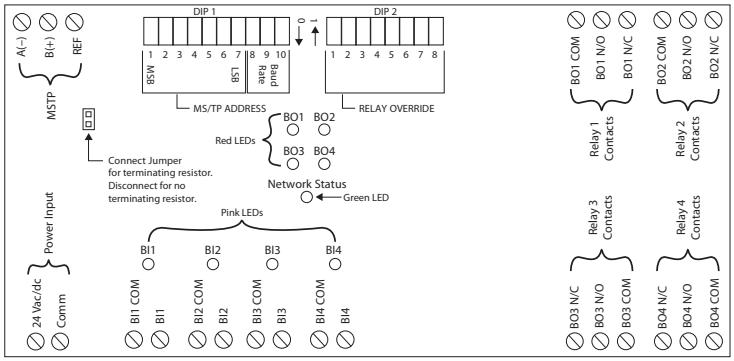
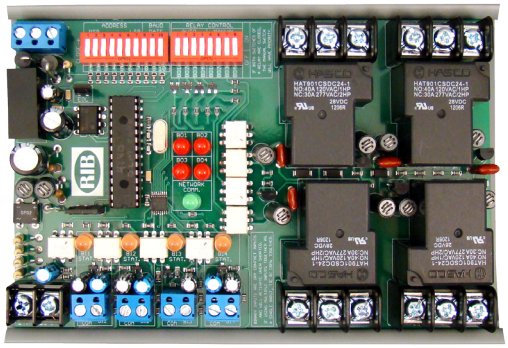




SPECIFICATIONS

 # Relays & Contact Type: Four (4) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Network Communication: Green LED
Relay Status: Red LED On = Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 6.00˝ L x 4.27˝ W x 1.34˝ H
Track Mount: MT4-6 Mounting Track Provided
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Gold Flash: No
Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (Dip Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 120/277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
24 Vac : 400 mA
24 Vdc : 190 mA

BACnet® Details:
- MS/TP Address & Baud Rate must be set prior to power up via DIP switches.
- Device ID will default to 277XXX where XXX is the MS/TP Address.
  Examples:

MS/TP Address - 004 Device ID - 277004
MS/TP Address - 121 Device ID - 277121

- Device ID can be changed via network command. Once changed, it will no longer default to 277XXX. (MS/TP Address & Device ID must be unique)
- This model utilizes: BO1, BO2, BO3, BO4, (Relay outputs), BI1, BI2, BI3, BI4 (Dry contact inputs)
- Device Instance changed via Object Identifier Property of Device Object
- Each unit is 1/8 unit load
- PIC Statement available on website.
  http://www.functionaldevices.com/pdf/datasheets/pics/RIBMW24B-44-BC_PICS.pdf
  Or scan QR code with your smart phone.

NEED AN ENCLOSURE?
ORDER MODEL MH1210 (*PAGE 142*)

NEED A POWER SUPPLY AND AN ENCLOSURE?
ORDER MODEL CTRL-PS (*PAGE 113*) & AT4-8 (*PAGE 152*)

DIP 1

DIP Switches				Baud Rate
1-7	8	9	10	
See Bulletin B1082 for full MS/TP Addressing	0	0	0	9600
	0	0	1	19200
	0	1	0	38400
	0	1	1	57600
	1	0	0	76800
	1	0	1	115200

All other combinations=9600 baud

- Dry contact digital input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to report back to the network.

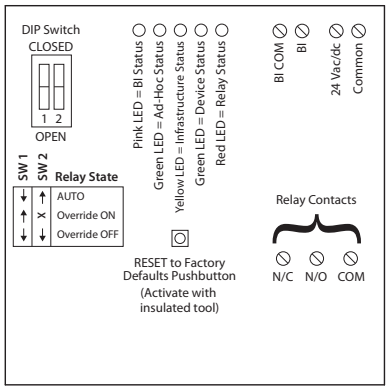
DIP 2

Relay	Relay State**	DIP Switches* 1	2	3	4	5	6	7	8
BO1	Auto	1	X	X	X	0	X	X	X
	ON	X	X	X	X	1	X	X	X
	OFF	0	X	X	X	0	X	X	X
BO2	Auto	X	1	X	X	X	0	X	X
	ON	X	X	X	X	X	1	X	X
	OFF	X	0	X	X	X	0	X	X
BO3	Auto	X	X	1	X	X	X	0	X
	ON	X	X	X	X	X	X	1	X
	OFF	X	X	0	X	X	X	0	X
BO4	Auto	X	X	X	1	X	X	X	0
	ON	X	X	X	X	X	X	X	1
	OFF	X	X	X	0	X	X	X	0

* 0 = Open ; 1 = Closed ** Device must be powered for override

RIBTW24B-WI-N4

Enclosed Wifi IEEE 802.11 b/g Network
Enclosed I/O Device: One Discrete Output
(20 Amp Relay SPDT + Override), One
Discrete Input (Dry Contact, Class 2); 24 Vac/dc



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Code Version 4.0.1

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Wi-Fi RIB™

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Operate Time: 18ms
Pink LED: Digital Input Status
Green LED: Wifi Ad-Hoc Status
Yellow LED: Wifi Infrastructure Status
Green LED: Device Status
Red LED: Relay Status
Dimensions: 4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple
Approvals: UL Listed, UL916, C-UL
FCC, CE, RoHS, Wifi Certified ASD Device
Housing Rating: UL Accepted for Use in Plenum, NEMA 4
Gold Flash: No
Relay Override Switch: DIP Switch Control
Wifi: IEEE 802.11 b/g/n Compatible, (G)
54 Mbps Data Rate
–95 dBm Min. Sensitivity
+16 dBm Max Output Power
Currently Unsecured Connection in Ad-Hoc
(WPA-PSK or WPA-2-PSK Available)
Supports PING and ARP
DSSS Modulation

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
200 mA Max @ 24 Vac
200 mA Max @ 24 Vdc

Available TCP/IP Settings:
- IP Address (Static)
- Port Number
- Subnet Mask
- Gateway Address
- Ad-Hoc mode
- Infrastructure mode
- Scan for wireless networks

Device Settings:
- Local Override
- Reset to Network Defaults Pushbutton

Power Input:
24 Vac = Terminal Strip (20 Vac min. ; 28 Vac max.)
24 Vdc = Terminal Strip (24 Vdc min. ; 28 Vdc max.)

Device Settings by Network:
- Power up default relay state
- Host name and location labels
- Relay bound to digital input

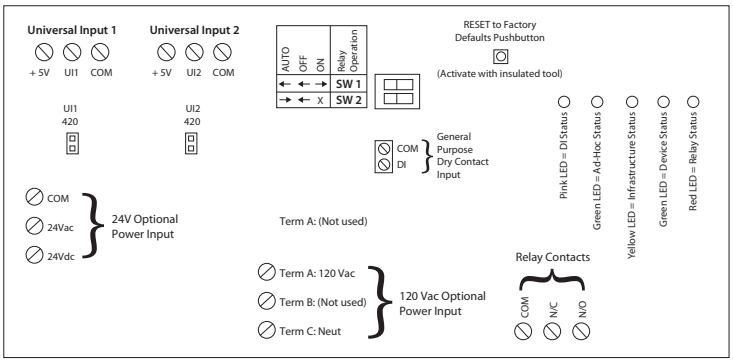
- **Setup instructions available on website.**

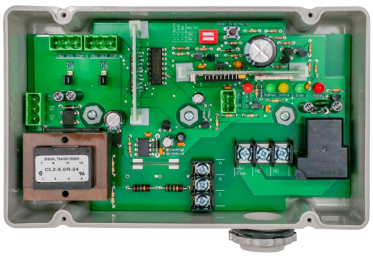
http://www.functionaldevices.com/pdf/bulletins/B1802_393224.pdf

Or scan QR code with your smart phone.

RIBTW2401B-WIUI-N4

Wifi IEEE 802.11 b/g Network Enclosed I/O Device: One Discrete Output (20 Amp Relay SPDT + Override), One Discrete Input (Dry Contact, Class 2); Two Universal Inputs; 24 Vac/dc, 120 Vac Power





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Code Version 4.3.1.1.0

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RIB™
Wi-Fi RIB™

RELAYS

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Operate Time: 18ms
Pink LED: Digital Input Status
Green LED: Wifi Ad-Hoc Status
Yellow LED: Wifi Infrastructure Status
Green LED: Device Status
Red LED: Relay Status
Dimensions: 4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple
Approvals: UL Listed, UL916, C-UL
FCC, CE, RoHS, Wifi Certified ASD Device
Housing Rating: UL Accepted for Use in Plenum, NEMA 4X
Gold Flash: No
Relay Override Switch: DIP Switch Control
Wifi: IEEE 802.11 b/g/n Compatible, (G)
54 Mbps Data Rate
–95 dBm Sensitivity
+16 dBm Output Power
(WPA-PSK or WPA-2-PSK Available)
Supports PING and ARP
DSSS Modulation
Security: Customer can choose to have Webpage and Controller Commands authentication-secured with Username and Password.

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
1 HP @ 120 Vac
2 HP @ 277 Vac

Power Input Ratings:
158 mA Max @ 24 Vac
110 mA Max @ 24 Vdc
55 mA Max @ 120 Vac

Available TCP/IP Settings:
- IP Address (Static)
- Port Number
- Subnet Mask
- Gateway Address
- Ad-Hoc mode (Default)
- Infrastructure mode
- Scan for wireless networks

Device Settings:
- Local Override
- Reset to Network Defaults Pushbutton

Power Input (Use one):
24 Vac = Terminal Strip (20 Vac min. ; 28 Vac max.)
24 Vdc = Terminal Strip (24 Vdc min. ; 28 Vdc max.)
120 Vac = Terminal Strip

Device Settings by Network:
- Power up default relay state
- Host name and location labels
- Relay bound to digital input
- Username and Password security:
  Note: There will be no security if password field is left blank. A password may be entered that will secure the webpage as well as Controller Commands. Eight alpha-numerical characters case-sensitive.

- **Setup instructions available on website.**
  http://www.functionaldevices.com/pdf/bulletins/B1783_393223.pdf

Or scan QR code with your smart phone.

CAUTION: Remove all connections to UI 1 and UI 2 when setting input.

Universal Input: Configurable by internal device web page, accessible in either Ad-Hoc or Infrastructure.

- Analog value returned, user configurable min. and max. scale, and label, 0-5 Vdc, 0-10 Vdc, or 4-20 mA*, connect between UI and Com.
- Direct temperature reading from Type T2 Thermistor. Connect between +5 Vdc and UI input.
- Digital Input, connect between +5 Vdc and UI input.

* 4-20 mA, when used, requires jumper to be installed on UI set for 4-20 mA input. Jumper MUST be removed when UI input used as anything other than 4-20 mA.

For application manual, please visit: www.functionaldevices.com

RIBMNW24B-MBAI

2.75" Track Mount Modbus® RTU Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

RIBTW24B-MBAI

Enclosed Modbus® RTU Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; Optional End of Line Resistor (EOL) Included.

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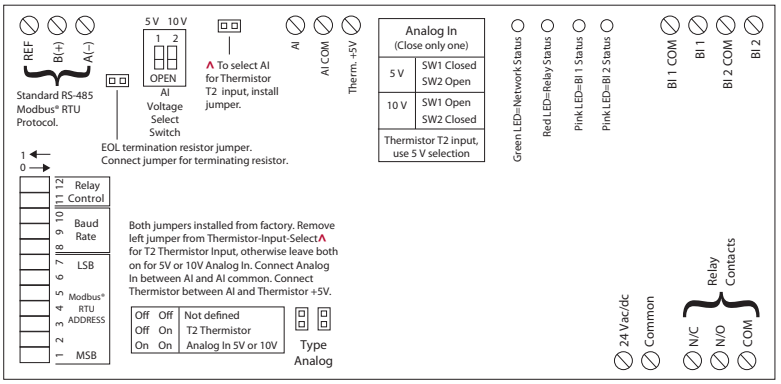


SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Network Communication: Green LED
Relay Status: Red LED On = Activated
Current Sensor Status: Pink LED On = Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 6.25˝ x 2.75˝ x 1.75˝ (RIBMNW24B-MBAI)
4.28˝ x 7.00˝ x 2.00˝
with .75˝ NPT Nipple (RIBTW24B-MBAI)
Track Mount: MT212-6 Mounting Track Provided
Approvals: CE, UL Listed, UL916, C-UL, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
Gold Flash: No
Relay Override Switch: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended, EIA/TIA-485 (standard RS485)
Terminations: Functional Devices product installed at both ends of the standard RS485 Modbus® RTU network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the Modbus® network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
81 mA @ 24 Vdc
111 mA @ 24 Vac

Notes:
- Modbus® Address & Baud Rate must be set prior to power up via DIP switches.
- Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24B-MBAI-N4)
- Order with grey lid by adding "-GY" to end of model number. (RIBTW24B-MBAI-GY)
- Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTW24B-MBAI-N4-GY)
- This model utilizes:
  Physical coil 1 (Relay output)
  Physical binary input 1 (Dry contact binary input)
  Physical binary input 2 (Dry contact binary input)
  Physical input register AI 1 (Analog input)
- Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor not included. (Range -39 to 187°F)
- For all versions, raw analog default settings are 0 and 1023 (real), respectively.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur.
  Option 1: Use separate transformers for each device.
  Option 2: Add diode between devices, see Option 2 note below.^^
- Address and Baud Rate Settings on Bulletin B1676 available on website.
  http://functionaldevices.com/pdf/bulletins/B1676_393208.pdf
  Or scan QR code with your smart phone.

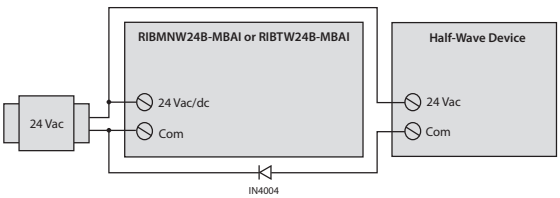
DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600

All other combinations=9600 baud

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
X	1	Override on
0	0	Override off

* 0 = Open ; 1 = Closed
** Device must be powered for override

- Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to feed back to the network.



^^ Option 2:
Add diode on 24 Vac power (Com) interconnection between devices. Band on diode faces towards RIB(s).

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SPECIALTY PERIPHERAL CONTROLS

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Fan Safety Alarm Circuits
I/O Expanders
Manual Analog Override Switch

If we do not already build a device with specifications or packaging configurations you require, we will be happy to quote and design one for you. Functional Devices, Inc. is actively involved in the development, manufacturing, and production of special peripheral devices. They are either variations of existing Functional Devices products or entirely unique devices. We will help provide you with a product to fit your specific needs. Please contact us so we may review your project and special requirements.

FAN SAFETY ALARM CIRCUITS

MODEL #	UL	POWER INPUT	ALARM CIRCUITS	CONTACTS	SWITCH	ENCLOSED	NOTES	SPEC PAGE
RIBMNLB	•	24 Vac	4					84
RIBLB	•	24 Vac	4			•		84
RIBMNLB-6	•	24 Vac	6					85
RIBMNLB-4	•	24 Vac	4					85
RIBMNLB-2	•	24 Vac	2					85
RIBMNLB-1	•	24 Vac	2				NEW	87
RIBLB-6	•	24 Vac	6			•		85
RIBLB-4	•	24 Vac	4			•		85
RIBLB-2	•	24 Vac	2			•		85
RIBMNLB-6NO	•	24 Vac	6				NEW	86
RIBMNLB-4NO	•	24 Vac	4				NEW	86
RIBMNLB-2NO	•	24 Vac	2				NEW	86

I/O EXPANDERS

(Quick reference only. See individual spec page for more information.)

MODEL #	UL[1]	POWER INPUT	RELAYS	CONTACTS	SWITCH	ENCLOSED	NOTES	SPEC PAGE
RIBMN24Q2C	•	24 Vac/dc	2	2 SPDT				88
RIBMN24Q3C	•	24 Vac/dc	3	3 SPDT				88
RIBMN24Q4C	•	24 Vac/dc	4	4 SPDT				89
RIBMN24Q4C-PX	•	24 Vac/dc	4	4 SPDT				89

MANUAL ANALOG OVERRIDE SWITCH

MODEL #	POWER INPUT	RELAYS	SWITCH	ENCLOSED	NOTES	SPEC PAGE
RIBMNA1D0	24 Vac/dc		Manual / Auto	•		90

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

UL[1] = UL Listed : UL916 Energy Management ; USA & Canada

RIBMNLB

2.75˝ Track Mount AHU Fan Safety Alarm Circuit,
24 Vac Power Input

RIBLB

Enclosed AHU Fan Safety Alarm Circuit,
24 Vac Power Input

LISTED

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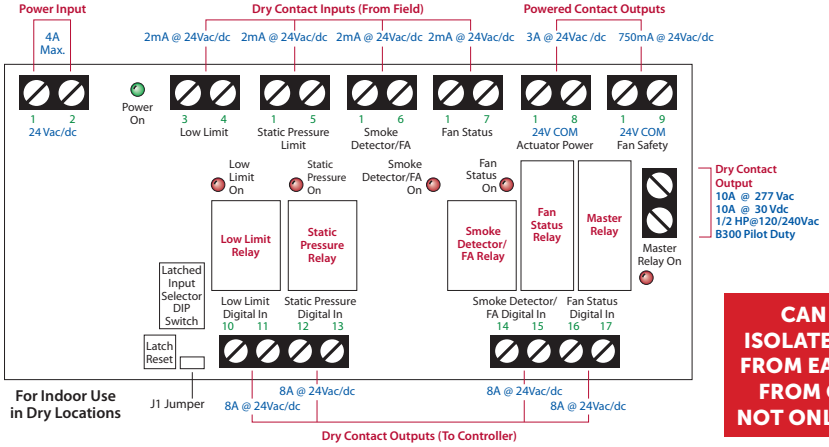
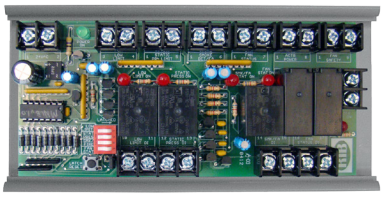
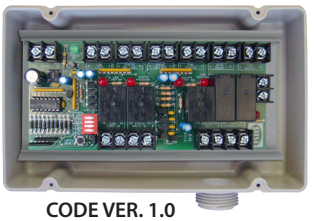




CAN BE USED TO ISOLATE FIELD DEVICES FROM EACH OTHER AND FROM CONTROLLER, NOT ONLY FAN CIRCUITS



CODE VER. 1.0

SPECIFICATIONS

Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 250ms
Power Input: 4 Amp @ 24 Vac/dc ; 50-60 Hz
Alarm Status: LED On = Activated
Dimensions: 6.000˝ x 2.750˝ x 1.200˝ (RIBMNLB)
4.28˝ x 7.00˝ x 2.00˝
with .75˝ NPT Nipple (RIBLB)
Track Mount: MT212-6 Mounting Track Provided
Approvals: UL Listed, UL864, C-UL, CE, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved
Gold Flash: No
Override Switch: No

Notes:
- RIBMNLB and RIBLB have four Alarm Inputs and one Master Alarm.

A master relay will open if any one of the normally-closed (N/C) inputs open. LED status of all outputs and the master relay is provided. The RIBMNLB is provided with mounting track for mounting in user-provided electrical enclosures. The RIBLB is enclosed in a NEMA 1, 4˝ x 7˝ enclosure with a clear lid to allow viewing of the status LEDs. The master relay has two general-purpose outputs: one 24 V output terminal and one dry contact output rated up to 10 Amp @ 277 Vac. Fan status contact controls actuator power. The most common application is an Air Handling Unit (AHU) fan-safety-shutdown where the master relay is used to shutdown the fan. Contact closure outputs are provided so that a DDC controller can determine the cause of a shutdown.

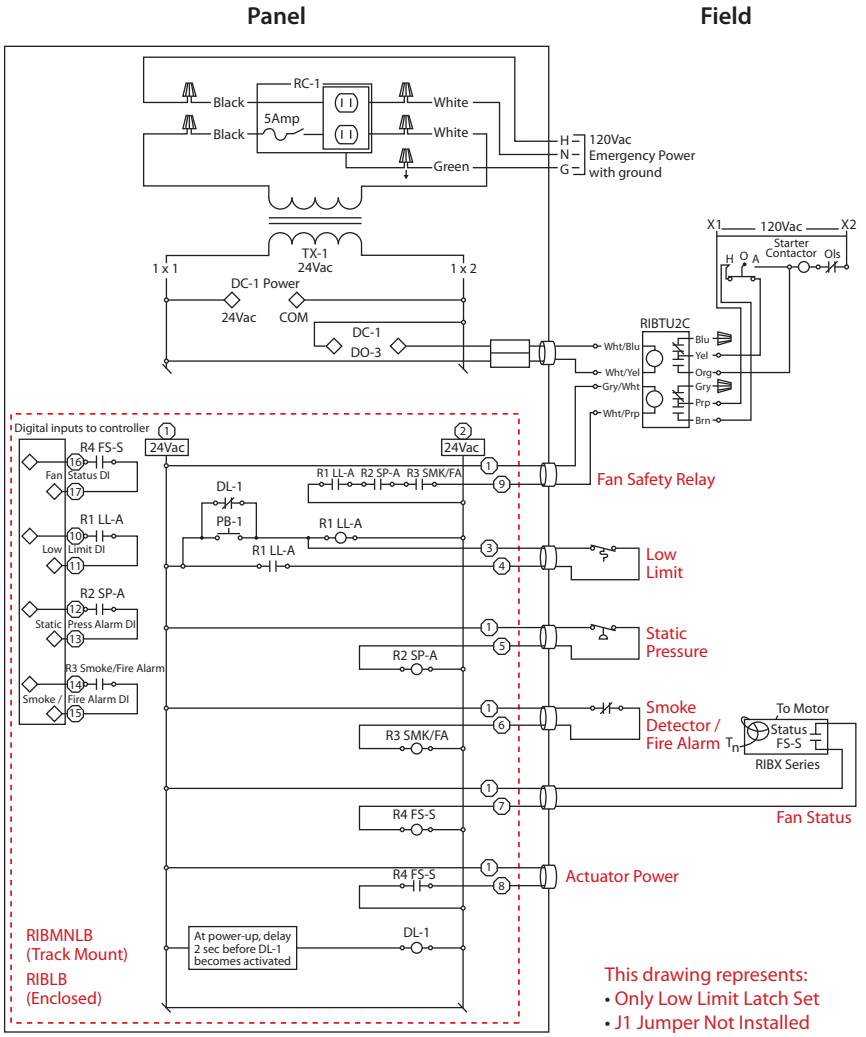
Model RIBMNLB combines all the relay logic to facilitate fan status, fan safety control, and damper actuator control. It is intended for use in a circuit that will control fan start/stop and fan safety shut-down circuit monitors three critical inputs:

- Low-limit freeze protection (to stop fan and remove power from damper actuator)
- Static pressure (to monitor for hi/low pressure condition)
- Smoke detector / fire alarm

Master relay opens to shut down AHU when any Normally Closed input opens.

Integral DIP switch allows any input to be latched. Input can be reset with push button or by cycling unit power.

Installing J1 jumper allows Fan Status input to control Master Relay, like the other 3 inputs.



This drawing represents:
- Only Low Limit Latch Set
- J1 Jumper Not Installed

RIBMNLB-6/-4/-2

2.75˝ Track Mount AHU Fan Safety Alarm and General Purpose Logic Circuit, 24 Vac/dc Power Input, 2/4/6 Outputs

RIBLB-6/-4/-2

Enclosed AHU Fan Safety Alarm and General Purpose Logic Circuit, 24 Vac/dc Power Input, 2/4/6 Outputs

c UL us LISTED

CE

RoHS

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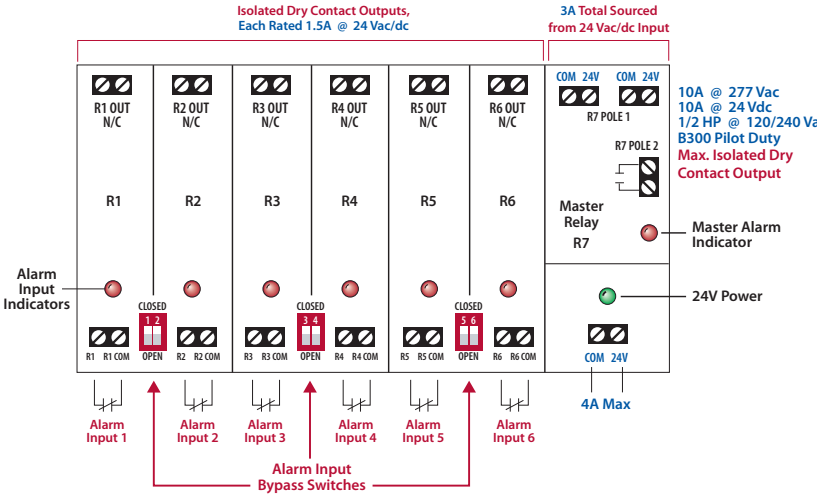
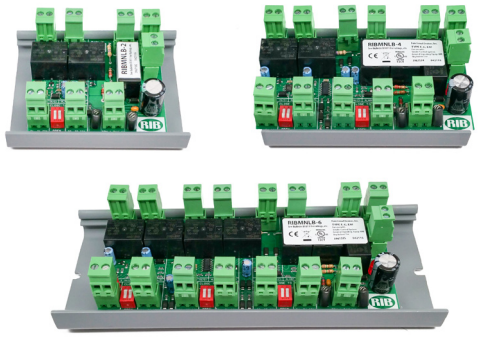




SPECIFICATIONS

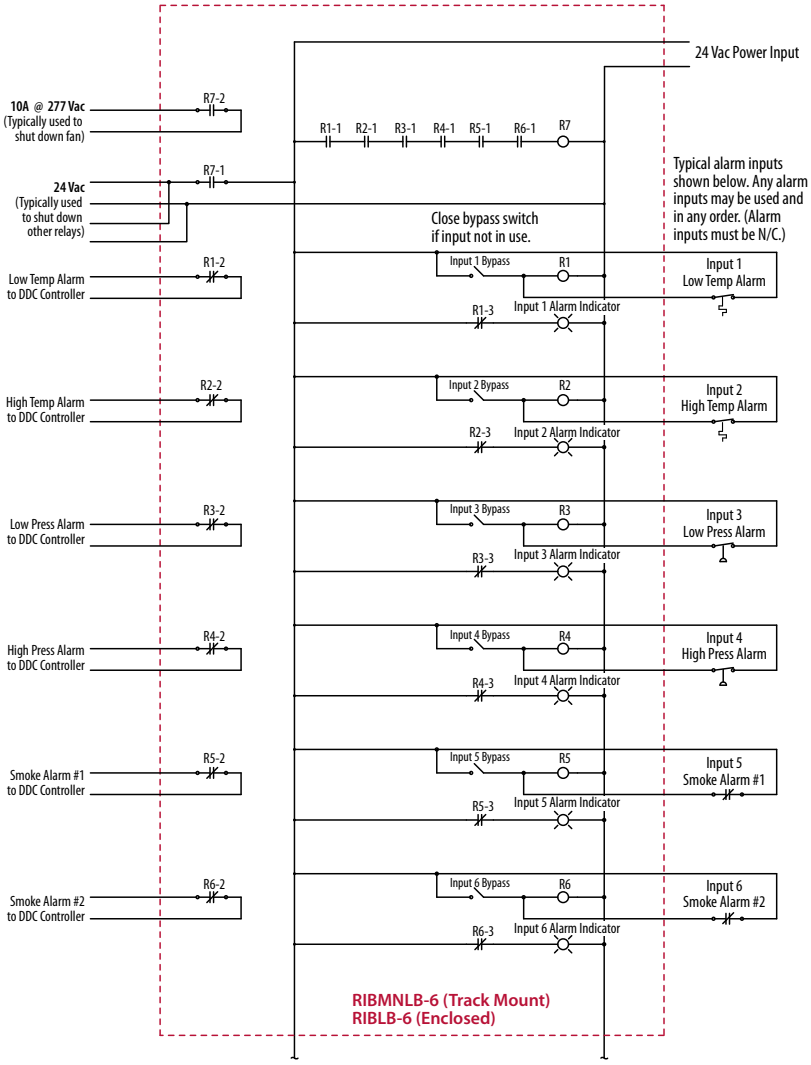
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Power Input: 4 Amp max. @ 24 Vac/dc ; 50-60 Hz
Alarm Status: LED On = Activated
Dimensions: 6.200˝ x 2.750˝ x 1.750˝ (RIBMNLB-6)
4.600˝ x 2.750˝ x 1.750˝ (RIBMNLB-4)
3.000˝ x 2.750˝ x 1.750˝ (RIBMNLB-2)
4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple (RIBLB-6/-4/-2)
Track Mount: MT212-6 Mounting Track Provided (RIBMNLB-6)
MT212-4 Mounting Track Provided (RIBMNLB-4, RIBMNLB-2)
Approvals: UL Listed, UL916, UL864, C-UL, CE, RoHS
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum
Gold Flash: No
Override Switch: No

Notes:

- Track mount models shown above.
- RIBMNLB-6 and RIBLB-6 have six Alarm Inputs and one Master Alarm. RIBMNLB-4 and RIBLB-4 have four Alarm Inputs and one Master Alarm. RIBMNLB-2 and RIBLB-2 have two Alarm Inputs and one Master Alarm.

Models RIBMNLB-6, RIBMNLB-4, and RIBMNLB-2; and RIBLB-6, RIBLB-4, and RIBLB-2 are simply devices that combine a common relay-logic function into a small, easy-to-install, and less expensive form.

A master relay will open if any one of the normally-closed (N/C) inputs open. There are six, four, or two inputs depending on the model chosen. LED status of all inputs, the master relay, and power input is provided. Bypass of un-used inputs is also provided. The RIBMNLB series is provided with mounting track for mounting in user-provided electrical enclosures. The RIBLB series is enclosed in a NEMA-1, 4˝ x 7˝ enclosure with a clear lid to allow viewing of the status LEDs. The master relay has three general-purpose outputs: two 24 V output terminals and one dry-contact output rated up to 10 Amp @ 277 Vac (terminals on RIBMNLB series, wires on RIBLB series.) The most common application is an Air Handling Unit (AHU) fan-safety-shutdown where the master relay is used to shutdown the fan. Contact closure outputs are provided so that a DDC controller can determine the cause of a shutdown.

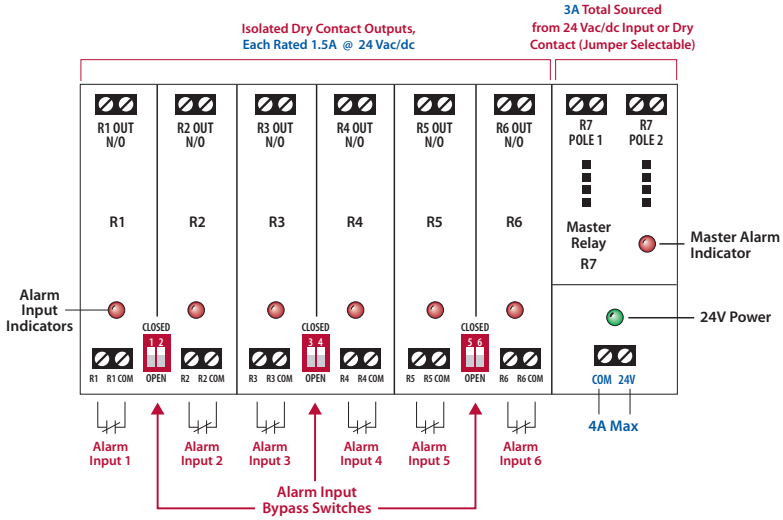


SELECTION GUIDE

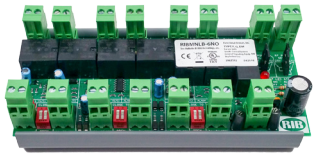
Model#	Inputs	
RIBMNLB-6	6	MT212 Mounting Track
RIBMNLB-4	4	MT212 Mounting Track
RIBMNLB-2	2	MT212 Mounting Track
RIBLB-6	6	PE6020 Enclosure
RIBLB-4	4	PE6020 Enclosure
RIBLB-2	2	PE6020 Enclosure

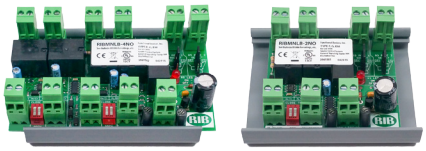
RIBMNLB-6NO/-4NO/-2NO

2.75"Track Mount AHU Fan Safety Alarm and General Purpose Logic Circuit, 24 Vac Power Input, 2/4/6 Alarm Inputs all with N/O Outputs



Legend for Jumper Selection	
Dry =	
24V =	





SPECIFICATIONS

Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Power Input: 4 Amp max. @ 24 Vac/dc ; 50-60 Hz
Alarm Status: LED On = Activated
Dimensions: 6.200˝ x 2.750˝ x 1.750˝ (RIBMNLB-6NO)
4.600˝ x 2.750˝ x 1.750˝ (RIBMNLB-4NO)
3.000˝ x 2.750˝ x 1.750˝ (RIBMNLB-2NO)
Track Mount: MT212-6 Mounting Track Provided (RIBMNLB-6NO)
MT212-4 Mounting Track Provided (RIBMNLB-4NO, RIBMNLB-2NO)
Approvals: UL Listed, UL916, UL864, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

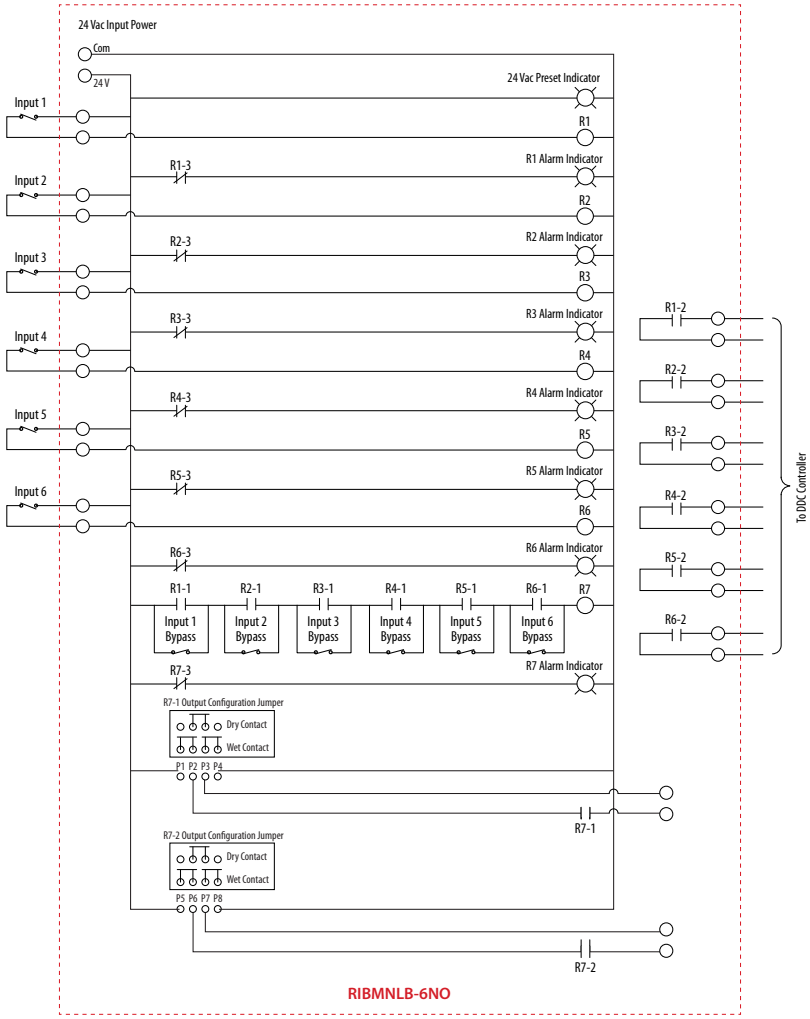
Models RIBMNLB-6NO, RIBMNLB-4NO, and RIBMNLB-2NO are simply devices that combine a common relay-logic function into a small, easy-to-install, and less expensive form.

A master relay will open if any one of the normally-closed (N/C) inputs open. There are six, four, or two inputs depending on the model chosen. LED status of all inputs, the master relay, and power input is provided. Bypass of un-used inputs is also provided. The RIBMNLB series is provided with mounting track for mounting in user-provided electrical enclosures.

The master relay has two general-purpose outputs: both can be jumper selected at 24 V (sourced from input) or dry contact. The most common application is an Air Handling Unit (AHU) fan-safety-shutdown where the master relay is used to shutdown the fan. Contact closure outputs are provided so that a DDC controller can determine the cause of a shutdown.

Notes:
- RIBMNLB-6NO has six Alarm Inputs and one Master Alarm.
- RIBMNLB-4NO has four Alarm Inputs and one Master Alarm.
- RIBMNLB-2NO has two Alarm Inputs and one Master Alarm.
- This is a half wave device. When connecting 24 Vac to both this device and a full-wave device, damage to device can occur.

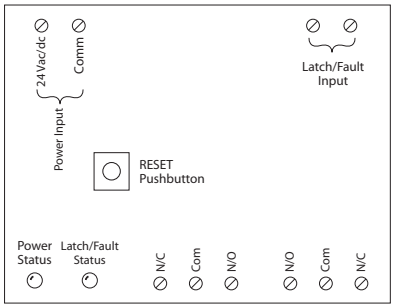
SELECTION GUIDE		
Model#	**Inputs**	
RIBMNLB-6NO	6	MT212 Mounting Track
RIBMNLB-4NO	4	MT212 Mounting Track
RIBMNLB-2NO	2	MT212 Mounting Track



RIBMNLB-6NO

RIBMNLB-1

2.75″Track Mount General Purpose Latching Logic Circuit; One Latching/Fault Input (Dry Contact, Class 2); 24 Vac/dc Power Input



- MANUAL RESET
- ONE ALARM OUTPUT
- ONE RELAY OUTPUT

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) DPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 8ms
Green LED: Power Status (ON: Power present)
Red LED: Fault Status (ON: Latched/Fault State)
Dimensions: 4.00″ x 2.75″ x 1.25″
Track Mount: MT212-4 Mounting Track Provided
Approvals: CE, UL Listed, UL864, C-UL, RoHS
Gold Flash: No
Relay Override Switch: No
Fault Reset Switch: Yes

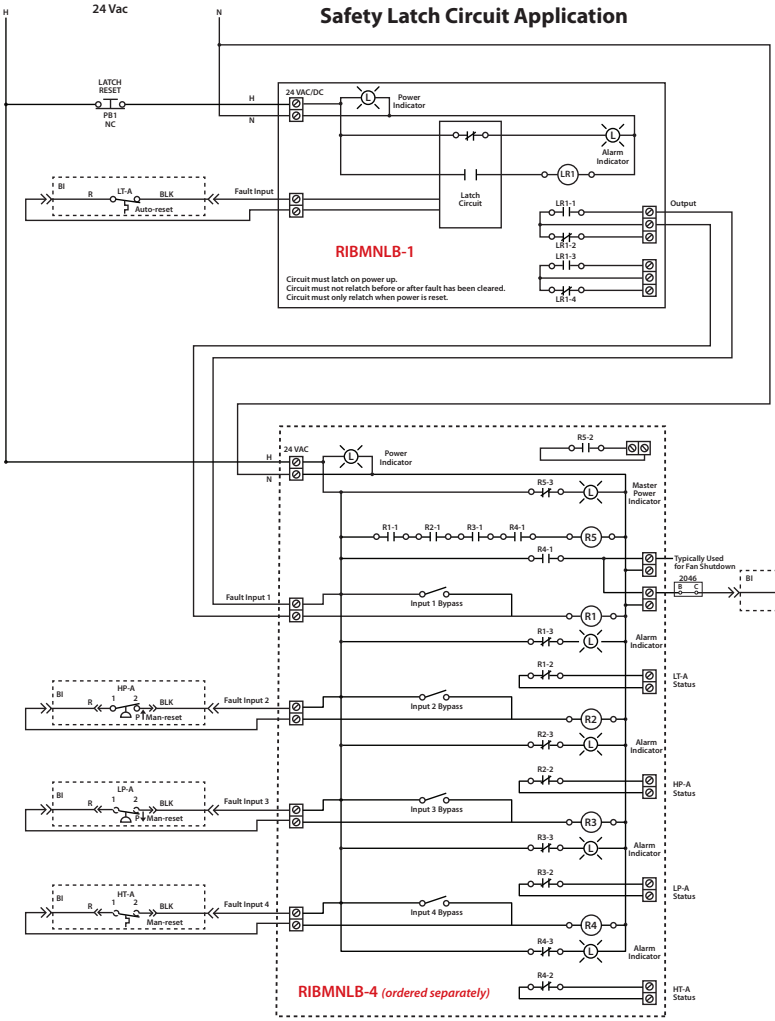
Contact Ratings:
10 Amp Resistive @ 30Vdc
10 Amp General Use @ 277Vac
1/2 HP @ 120/240Vac (N/O)
1/3 HP @ 120/240Vac (N/C)

Power Input Ratings:
53 mA @ 24Vac
25 mA @ 24Vdc
50/60 Hz

Alarm Fault Application:
When the Latch/Fault Input is Closed (Normal state), the Relay is activated, and Red LED is Off. When Latch/Fault Input Opens (Alarm state), the Relay deactivates, and Red LED turns On. Until the Latch/Fault Input is Closed AND either power is cycled or the RESET button is pressed, relay will remain in the Alarm state.

Notes:
- Fault conditions must last for at least 500 ms in order for the unit to go into Alarm state.
- Reset signal, whether via pushbutton or power cycling, must last for at least 30 ms in order to reset the device to go from Alarm state to Normal state.

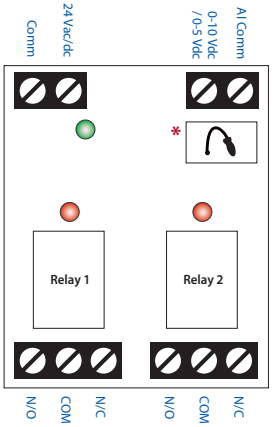
Safety Latch Circuit Application



I/O EXPANDER

RIBMN24Q2C

2.75˝ Track Mount 2 Output I/O Expander with 24 Vac/dc Power Input and 0-10 Vdc / 0-5 Vdc Control Input



0-10 VDC CONTROL VOLTAGE	0-5 VDC * CONTROL VOLTAGE	RELAY 1 STATUS	RELAY 2 STATUS
0-2.117Vdc	0-1.058Vdc	OFF	OFF
2.745-4.627Vdc	1.373-2.313Vdc	ON	OFF
5.255-7.137Vdc	2.628-3.568Vdc	OFF	ON
7.765-10.000Vdc	3.883-5.000Vdc	ON	ON

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GREAT FOR STAGING LOADS SUCH AS CHILLERS, PUMPS, ACTUATORS, OR MULTI-STAGE HEATING

SPECIFICATIONS

 # Relays & Contact Type: Two (2) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: Green LED On = Power On
Relay Status: Red LED On = Relay Activated
Dimensions: 3.100˝ x 2.750˝ x 1.750˝
Track Mount: MT212-4 Mounting Track Provided
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

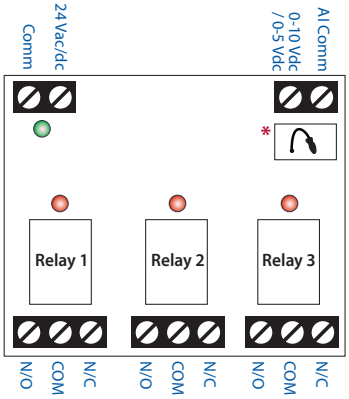
Power Input:
24 Vac/dc ; 50-60 Hz
100mA max.

Notes:
- Must clip resistor in white box for 0-5Vdc.*
- Custom Programming Available for Large Orders.

I/O EXPANDER

RIBMN24Q3C

2.75˝ Track Mount 3 Output I/O Expander with 24 Vac/dc Power Input and 0-10 Vdc / 0-5 Vdc Control Input



0-10 VDC CONTROL VOLTAGE	0-5 VDC * CONTROL VOLTAGE	RELAY 1 STATUS	RELAY 2 STATUS	RELAY 3 STATUS
0-0.988Vdc	0-0.494Vdc	OFF	OFF	OFF
1.366-2.242Vdc	0.683-1.121Vdc	ON	OFF	OFF
2.620-3.496Vdc	1.310-1.748Vdc	OFF	ON	OFF
3.876-4.752Vdc	1.938-2.376Vdc	ON	ON	OFF
5.130-6.006Vdc	2.565-3.003Vdc	OFF	OFF	ON
6.386-7.262Vdc	3.193-3.631Vdc	ON	OFF	ON
7.640-8.516Vdc	3.820-4.258Vdc	OFF	ON	ON
8.896-10.000Vdc	4.448-5.000Vdc	ON	ON	ON

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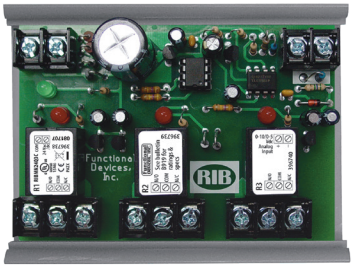


GREAT FOR STAGING LOADS SUCH AS CHILLERS, PUMPS, ACTUATORS, OR MULTI-STAGE HEATING

SPECIFICATIONS

 # Relays & Contact Type: Three (3) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: Green LED On = Power On
Relay Status: Red LED On = Relay Activated
Dimensions: 4.000˝ x 2.750˝ x 1.750˝
Track Mount: MT212-4 Mounting Track Provided
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

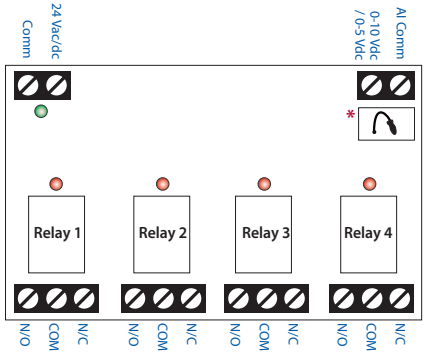
Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Power Input:
24 Vac/dc ; 50-60 Hz
150mA max.

Notes:
- Must clip resistor in white box for 0-5Vdc.*
- Custom Programming Available for Large Orders.

RIBMN24Q4C

2.75˝ Track Mount 4 Output I/O Expander with 24 Vac/dc Power Input and 0-10 Vdc / 0-5 Vdc Control Input



0-10 VDC CONTROL VOLTAGE	0-5 VDC * CONTROL VOLTAGE	RELAY 1 STATUS	RELAY 2 STATUS	RELAY 3 STATUS	RELAY 4 STATUS
0-0.372Vdc	0-0.186Vdc	OFF	OFF	OFF	OFF
0.726-1.000Vdc	0.363-0.500Vdc	ON	OFF	OFF	OFF
1.354-1.626Vdc	0.677-0.813Vdc	OFF	ON	OFF	OFF
1.982-2.254Vdc	0.991-1.127Vdc	ON	ON	OFF	OFF
2.608-2.882Vdc	1.304-1.441Vdc	OFF	OFF	ON	OFF
3.236-3.508Vdc	1.618-1.754Vdc	ON	OFF	ON	OFF
3.864-4.136Vdc	1.932-2.068Vdc	OFF	ON	ON	OFF
4.492-4.764Vdc	2.246-2.382Vdc	ON	ON	ON	OFF
5.118-5.392Vdc	2.559-2.696Vdc	OFF	OFF	OFF	ON
5.746-6.018Vdc	2.873-3.009Vdc	ON	OFF	OFF	ON
6.374-6.646Vdc	3.187-3.323Vdc	OFF	ON	OFF	ON
7.000-7.274Vdc	3.500-3.637Vdc	ON	ON	OFF	ON
7.628-7.902Vdc	3.814-3.951Vdc	OFF	OFF	ON	ON
8.256-8.528Vdc	4.128-4.264Vdc	ON	OFF	ON	ON
8.884-9.156Vdc	4.442-4.578Vdc	OFF	ON	ON	ON
9.510-10.000Vdc	4.755-5.000Vdc	ON	ON	ON	ON

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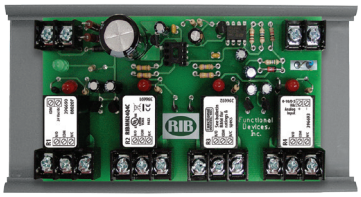


GREAT FOR STAGING LOADS SUCH AS CHILLERS, PUMPS, ACTUATORS, OR MULTI-STAGE HEATING

SPECIFICATIONS

 # Relays & Contact Type: Four (4) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: Green LED On = Power On
Relay Status: Red LED On = Relay Activated
Dimensions: 4.950˝ x 2.750˝ x 1.750˝
Track Mount: MT212-6 Mounting Track Provided
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

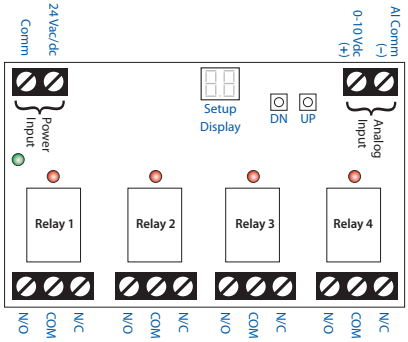
Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Power Input:
24 Vac/dc ; 50-60 Hz
200mA max.

Notes:
- Must clip resistor in white box for 0-5Vdc.*
- Custom Programming Available for Large Orders.

RIBMN24Q4C-PX

2.75˝ Track Mount 4 Output Field Adjustable Staging Threshold Relay Module with 24 Vac/dc Power and 0-10 Vdc Control Input



- **CONTROL FOUR RELAY OUTPUTS WITH ONE (0-10 VDC) ANALOG SIGNAL FROM CONTROLLER OR THERMOSTAT**
- **CAPABILITY TO SET DESIRED ON AND OFF VOLTAGES FOR EACH RELAY**
- **NO POTS TO ADJUST**
- **NO NEED FOR VOLT METER FOR SETUP**
- **ON BOARD "FIELD SELECTABLE" DIGITAL DISPLAY**

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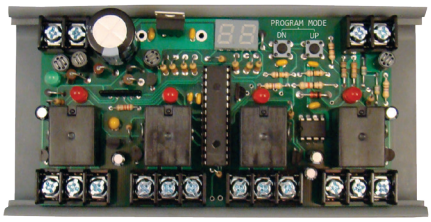


SPECIFICATIONS

 # Relays & Contact Type: Four (4) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: Green LED On = Power On
Relay Status: Red LED On = Relay Activated
Heartbeat Status: Right-most decimal point
Dimensions: 4.950˝ x 2.750˝ x 1.750˝
Track Mount: MT212-6 Mounting Track Provided
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

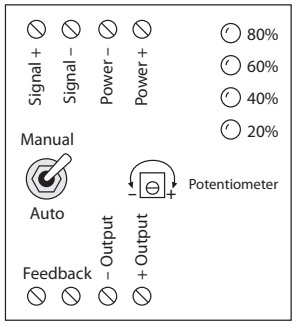
Contact Ratings:
15 Amp General Use @ 125 Vac
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Power Input:
24 Vac/dc ; 50-60 Hz
200mA max.

Notes:
- For AC applications, an isolation transformer, to be used solely for the power input, is recommended.
- Relay will activate when control signal voltage reaches or exceeds individual relay ON point. Relay will deactivate when control voltage reaches or drops below individual OFF point.
- Factory relay ON / OFF voltages: • Relay 1: 3V / 2.8V • Relay 2: 5V / 4.8V • Relay 3: 7V / 6.8V • Relay 4: 9V / 8.8 V
- Minimum ON point: 0.5V • Maximum ON point: 9.9V
- Minimum OFF point: 0.3V
- Relay number will flash 3 times when voltage exceeds setpoint.
- Pressing UP or DN button in normal run mode will display the voltage present on Analog Input.
- ON/OFF points can be changed at any time, by the user, by entering "Program Mode"
- User defined ON/OFF points will be maintained upon power loss.

RIBMNA1D0

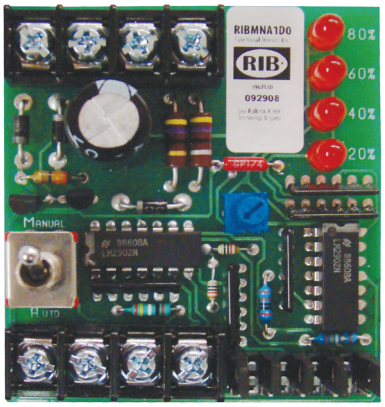
2.75˝ Track Mount Manual Analog Override Switch + Monitor with 24 Vac/dc Power Input



Legend for Selecting Output for Jumpers

Top 2 pins covered by jumper
Bottom 2 pins covered by jumper
Only 1 pin covered by jumper

5 Vdc
10 Vdc
15 Vdc
20 mA



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SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 2.450˝ x 2.750˝ x 1.270˝
Track Mount: 2.750", See MT212 Series on page 142
MT212 Mounting Track Sold Separately
Input Voltage: 24 Vac/dc
Input Current: 90mA Max.
Range/Impedance Override: 0-5 Vdc, 200 Ω Min.
0-10 Vdc, 400 Ω Min.
0-15 Vdc, 1 kΩ Min.
0-20mA dc, 500 Ω Max.
Feedback Contact: 2A Max. @ 24 Vac/dc

Notes:
- Set the jumpers according to your input signal (Analog signal from the controller.) Example: When controlling a damper with 0-10 Vdc, the jumpers need to be in position for the 0-10 Vdc override range. If the LED range does not match your analog scale, ensure the jumpers are set for the proper range.
- Feedback contact closed when switch is in Manual position, open when switch is in Auto position.

- **PROVIDES MANUAL OVERRIDE IF CONTROLLER DOES NOT SUPPORT OVERRIDE CAPABILITY**
- **ALLOWS YOU TO MANUALLY MAKE ADJUSTMENTS TO YOUR END DEVICE REMOTELY INSTEAD OF AT YOUR CONTROL PANEL**
- **SENDS OVERRIDE STATUS BACK TO CONTROLLER VIA FEEDBACK**
- **MULTI-RANGE ANALOG OUTPUT**

CURRENT SENSORS

Solid and Split Core | Enclosed | Track Mount

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Many Variations

- Miniature size
- Voltage outputs
- 4-20 mA regulation
- Adjustable or fixed
- Self-calibrating
- Relay and current sensor combinations
- Track mount styles

SOLID AND SPLIT CORE AC SENSORS

MODEL #	UL	SENSOR OUTPUT	RANGE	TYPE	THRESHOLD	NOTES	SPEC PAGE
RIBXKF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Wire Leads)	.25-150A	Solid	Fixed, .25 Amp		93
RIBXKTF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Terminals)	.25-150A	Solid	Fixed, .25 Amp		93
RIBXKA	•	Solid State Switch SPST ; 30 Vac/dc ; .8 Amps Max (Wire Leads)	.50-150A	Solid	Adjustable		93
RIBXKTA	•	Solid State Switch SPST ; 30 Vac/dc ; .8 Amps Max (Terminals)	.50-150A	Solid	Adjustable		93
RIBXGHF	•	Solid State Switch SPST ; 120Vac, 1 Amp Max (Wht/Blk 16˝ 18 AWG Wire Leads)	.50-150A	Split	Fixed, .50 Amp		93
RIBXGHTF	•	Solid State Switch SPST ; 120Vac, 1 Amp Max (Terminal Strip, Accepts #14-22 AWG Wire)	.50-150A	Split	Fixed, .50 Amp		93
RIBXGHA	•	Solid State Switch SPST ; 120Vac, 1 Amp Max (Wht/Blk 16˝ 18 AWG Wire Leads)	.75-150A	Split	Adjustable		93
RIBXGHTA	•	Solid State Switch SPST ; 120Vac, 1 Amp Max (Terminal Strip, Accepts #14-22 AWG Wire)	.75-150A	Split	Adjustable		93
RIBXGF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Wire Leads)	.35-150A	Split	Fixed, .35 Amp		94
RIBXGFL	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Wire Leads)	.75-150A	Split	Fixed, .75 Amp		94
RIBXGTF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Terminals)	.35-150A	Split	Fixed, .35 Amp		94
RIBXGTFL	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Terminals)	.75-150A	Split	Fixed, .75 Amp		94
RIBXGA	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Wire Leads)	.75-150A	Split	Adjustable		94
RIBXGTA	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Terminals)	.75-150A	Split	Adjustable		94
RIBXGA-SCAL	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Wire Leads)	3-150A	Split	Adjustable		94
RIBXGTA-SCAL	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max (Terminals)	3-150A	Split	Adjustable		94
RIBXG21F	•	Solid State Switch SPST ; 120-277Vac, 1 Amp Max (Wht/Blk 16˝ 18 AWG Wire Leads)	.50-150A	Split	Fixed, .50 Amp		95
RIBXG21TF	•	Solid State Switch SPST ; 120-277Vac, 1 Amp Max (Terminal Strip, Accepts #14-22 AWG Wire)	.50-150A	Split	Fixed, .50 Amp		95
RIBXG21A	•	Solid State Switch SPST ; 120-277Vac, 1 Amp Max (Wht/Blk 16˝ 18 AWG Wire Leads)	.75-150A	Split	Adjustable		95
RIBXG21TA	•	Solid State Switch SPST ; 120-277Vac, 1 Amp Max (Terminal Strip, Accepts #14-22 AWG Wire)	.75-150A	Split	Adjustable		95
RIBXKTV5-10	•	0-5 Vdc Voltage Output (Terminals)	0-10A	Solid	Analog		95
RIBXKTV5-20	•	0-5 Vdc Voltage Output (Terminals)	0-20A	Solid	Analog		95
RIBXKTV5-50	•	0-5 Vdc Voltage Output (Terminals)	0-50A	Solid	Analog		95
RIBXKTV5-100	•	0-5 Vdc Voltage Output (Terminals)	0-100A	Solid	Analog		95
RIBXK420-20	•	Loop Powered 4-20mA Transmitter Output (Wire Leads)	0-20A	Solid	Analog		96
RIBXK420-50	•	Loop Powered 4-20mA Transmitter Output (Wire Leads)	0-50A	Solid	Analog		96
RIBXK420-100	•	Loop Powered 4-20mA Transmitter Output (Wire Leads)	0-100A	Solid	Analog		96
RIBXGTV10	•	0-10 Vdc Voltage Output (Terminals)	0-20A, 0-50A, 0-100A	Split	Analog		96
RIBXG420-20	•	Loop Powered 4-20 mA Transmitter (Wire Leads)	0-20A	Split	Analog		97
RIBXG420-50	•	Loop Powered 4-20 mA Transmitter (Wire Leads)	0-50A	Split	Analog		97
RIBXG420-100	•	Loop Powered 4-20 mA Transmitter (Wire Leads)	0-100A	Split	Analog		97

T STYLE AC SENSORS

MODEL #	UL	SENSOR OUTPUT	RANGE	TYPE	THRESHOLD	NOTES	SPEC PAGE
RIBXF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	.50-30A	Internal	Fixed, .50 Amp		98
RIBXA	•	Solid State Switch SPST ; 30 Vac/dc-; .4 Amps Max	.50-30A	Internal	Adjustable		98
RIBXV	•	0-5 Vdc / 0-10 Vdc Voltage Output	0-30A	Internal	Analog		98
RIBXRF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	1.25-150A	Solid	Fixed, 1.25 Amp		98
RIBXRA	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	1.25-150A	Solid	Adjustable		98
RIBXJF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	3-150A	Split	Fixed, 3 Amp		99
RIBXJA	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	3-150A	Split	Adjustable		99

TRACK MOUNT AC SENSORS

MODEL #	UL	SENSOR OUTPUT	RANGE	TYPE	THRESHOLD	NOTES	SPEC PAGE
RIBMXV	•	0-5 Vdc / 0-10 Vdc Voltage Output	0-20A	Internal	Analog		99
RIBMXRF	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	3-150A	Solid	Fixed, 3 Amp		99
RIBMXRA	•	Solid State Switch SPST ; 30 Vac/dc ; .4 Amps Max	3-150A	Solid	Adjustable		99

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

CURRENT SENSOR & RELAY COMBINATIONS

Enclosed | Track Mount

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

ENCLOSED AC SENSORS WITH RELAYS

MODEL #	UL	AC/DC	RELAYS	CONTACTS	OVERRIDE SWITCH	SENSOR RANGE	SENSOR TYPE	SENSOR THRESHOLD	SPEC PAGE
RIBHX24BF	•	24	1	SPST-N/O		.25-20A	Internal	Fixed, .25 Amp	100
RIBXLCF	•	10-30	1	SPDT		.50-10A	Internal	Fixed, .50 Amp	101
RIBXLCA	•	10-30	1	SPDT		.50-10A	Internal	Adjustable	101
RIBXLCV	•	10-30	1	SPDT		0 - 10A	Internal	Analog	101
RIBXLCEA	•	10-30	1	SPDT		.125 - 5A	Internal	Adjustable	101
RIBXLCEV	•	10-30	1	SPDT		0 - 5A	Internal	Analog	101
RIBXLCRF	•	10-30	1	SPDT		1.25-150A	Solid	Fixed, 1.25 Amp	101
RIBXLCRA	•	10-30	1	SPDT		1.25-150A	Solid	Adjustable	101
RIBXLCJF	•	10-30	1	SPDT		3-150A	Split	Fixed, 3 Amp	101
RIBXLCJA	•	10-30	1	SPDT		3-150A	Split	Adjustable	101
RIBXLSF	•	10-30	1	SPST	1	.50-10A	Internal	Fixed, .50 Amp	102
RIBXLSA	•	10-30	1	SPST	1	.50-10A	Internal	Adjustable	102
RIBXLSV	•	10-30	1	SPST	1	0 - 10A	Internal	Analog	102
RIBXLSEA	•	10-30	1	SPST	1	.125 - 5A	Internal	Adjustable	102
RIBXLSEV	•	10-30	1	SPST	1	0 - 5A	Internal	Analog	102
RIBXLSRF	•	10-30	1	SPST	1	1.25-150A	Solid	Fixed, 1.25 Amp	102
RIBXLSRA	•	10-30	1	SPST	1	1.25-150A	Solid	Adjustable	102
RIBXLSJF	•	10-30	1	SPST	1	3-150A	Split	Fixed, 3 Amp	102
RIBXLSJA	•	10-30	1	SPST	1	3-150A	Split	Adjustable	102
RIBX24BF	•	24	1	SPDT		.50-20A	Internal	Fixed, .50 Amp	103
RIBX24BA	•	24	1	SPDT		.50-20A	Internal	Adjustable	103
RIBX24BV	•	24	1	SPDT		0 - 20A	Internal	Analog	103
RIBX24SBF	•	24	1	SPST	1	.50-20A	Internal	Fixed, .50 Amp	103
RIBX24SBA	•	24	1	SPST	1	.50-20A	Internal	Adjustable	103
RIBX24SBV	•	24	1	SPST	1	0 - 20A	Internal	Analog	103
RIBX243PF	• [1]	24	1	3PST		.50-20A	Internal	Fixed, .50 Amp	104
RIBX243PA	• [1]	24	1	3PST		.50-20A	Internal	Adjustable	104
RIBX243PV	• [1]	24	1	3PST		0 - 20A	Internal	Analog	104

TRACK MOUNT AC SENSORS WITH RELAYS

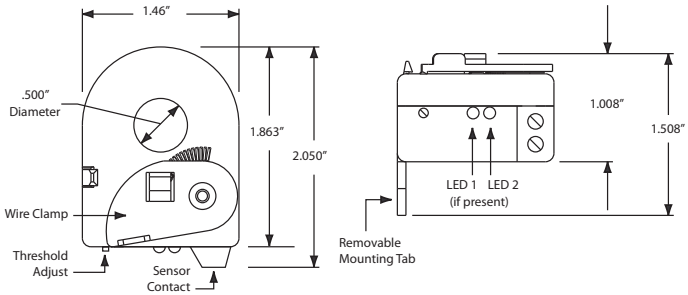
MODEL #	UL	AC/DC	RELAYS	CONTACTS	OVERRIDE SWITCH	SENSOR RANGE	SENSOR TYPE	SENSOR THRESHOLD	SPEC PAGE
RIBMX24BF	•	24	1	SPDT		.50-20A	Internal	Fixed, .50 Amp	105
RIBMX24BA	•	24	1	SPDT		.50-20A	Internal	Adjustable	105
RIBMX24BV	•	24	1	SPDT		0 - 20A	Internal	Analog	105
RIBMX24SBF	•	24	1	SPST	1	.50-20A	Internal	Fixed, .50 Amp	105
RIBMX24SBA	•	24	1	SPST	1	.50-20A	Internal	Adjustable	105
RIBMX24SBV	•	24	1	SPST	1	0 - 20A	Internal	Analog	105

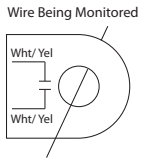
UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

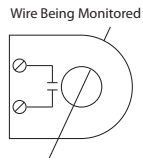
1 = UL Listed : UL916 Energy Management ; USA & Canada

RIBXK Series

Enclosed Self-Powered Solid Core AC Sensors







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Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Max Sense Voltage: 600 Vac
Approvals: UL Listed, UL916, UL864, C-UL, California State Fire Marshal, CE, RoHS
Mounting/Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.
Sensor Contact Output: Current below threshold: Open ; Current above threshold: Closed

Sensor Contact:
- Solid State Contact
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop
  < .3 Vac/dc @ .1 Amp
  < 1.6 Vac/dc @ .4 Amp

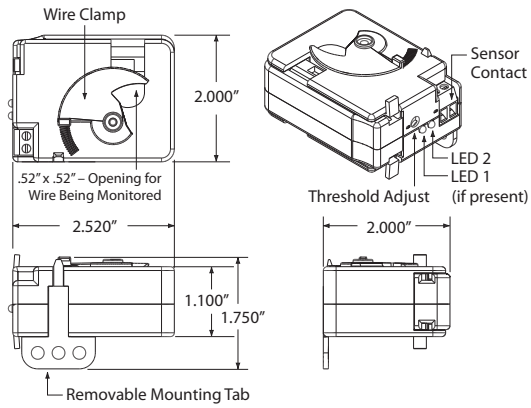
CURRENT SENSORS

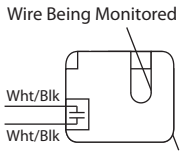
RIBXK SERIES SELECTION GUIDE

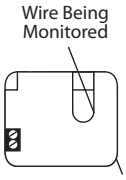
Model#	Sensing Range	Type	Threshold	Sensor Contact Type	Switching Voltage Range	Maximum Switching Current	Sensor Contact Termination	LED 1	LED 2
RIBXKF	.25-150 Amp	Solid Core	Fixed, .25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16″ 18 AWG Wire Leads		
RIBXKTF	.25-150 Amp	Solid Core	Fixed, .25 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		
RIBXKA	.50-150 Amp	Solid Core	Adjustable	Solid State Switch SPST	30 Vac/dc	.8 Amps Max	Wht/Yel 16″ 18 AWG Wire Leads	Over Trip Point	Under Trip Point
RIBXKTA	.50-150 Amp	Solid Core	Adjustable	Solid State Switch SPST	30 Vac/dc	.8 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire	Over Trip Point	Under Trip Point

RIBXGH Series

Enclosed Self-Powered Split Core 120 Vac Switching AC Current Sensors







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SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Temperature Derating: 1 Amp up to 50° C, 0.5 Amp up to 60° C
Max Sense Voltage: 600 Vac
Sensor Contact Status: Current below threshold: Open
Current above threshold: Closed

Approvals: UL Listed, UL916, C-UL, CE, RoHS [1]
Mounting/ Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.

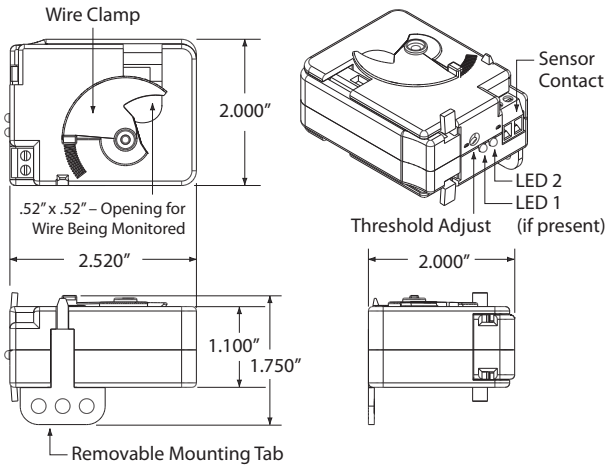
Notes:
- Use Sensor Contact to switch 120 Vac loads only.
- For testing purposes, Sensor Contact will measure approximately 250 Ω when closed and > 10 MΩ when open.
- The Sensor Contact is a Solid State Contact.

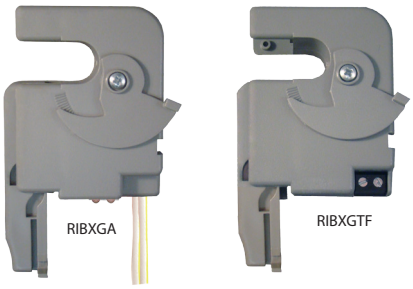
RIBXGH SERIES SELECTION GUIDE

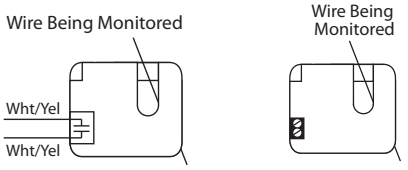
Model#	Sensing Range	Type	Threshold	Sensor Contact Type	Switching Voltage Range	Maximum Switching Current	Sensor Contact Termination	LED 1	LED 2
RIBXGHF	.50-150 Amp	Split Core	Fixed, .50 Amp	Solid State Switch SPST	120 Vac Only	1 Amp Max	Wht/Blk 16″ 18 AWG Wire Leads		
RIBXGHTF	.50-150 Amp	Split Core	Fixed, .50 Amp	Solid State Switch SPST	120 Vac Only	1 Amp Max	Terminal Strip, Accepts #14-22 AWG Wire		
RIBXGHA	.75-150 Amp	Split Core	Adjustable	Solid State Switch SPST	120 Vac Only	1 Amp Max	Wht/Blk 16″ 18 AWG Wire Leads	Over Trip Point	Under Trip Point
RIBXGHTA	.75-150 Amp	Split Core	Adjustable	Solid State Switch SPST	120 Vac Only	1 Amp Max	Terminal Strip, Accepts #14-22 AWG Wire	Over Trip Point	Under Trip Point

RIBXG Series

Enclosed Self-Powered Split Core AC Sensors







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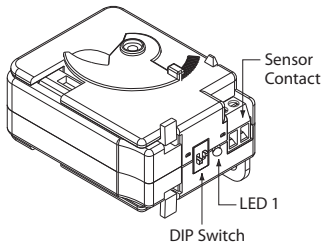
SPECIFICATIONS

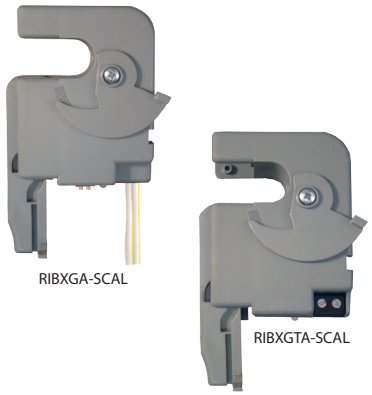
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Max Sense Voltage: 600 Vac
Approvals: UL Listed, UL916, UL864, C-UL, California State Fire Marshal, CE, RoHS
Mounting/Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.
Sensor Contact Status: Current below threshold: Open
Current above threshold: Closed

Sensor Contact:
- Solid State Contact
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop
  < .3 Vac/dc @ .1 Amp
  < 1.6 Vac/dc @ .4 Amp

SELF-CALIBRATING AC SWITCHES (Models with -SCAL Suffix)



-SCAL LED TABLE	
LED Off	No Current
Two Winks	Current Below Range
Three Winks	Current In Range
Four Winks	Current Above Range
Continuous Winks	Calibration in Progress



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The SCAL unit begins the 30 second self-calibration process the first time current is applied in the operating range. The threshold is then set. Subsequent calibrations may be performed by moving SW1 to the position opposite of its current position with or without current applied (hands can be safely away from live voltage). Once current begins flowing, or if it already is, the calibration process will begin. At the end of the 30 seconds, amperage will be read and set as the threshold. SW2 in the ON position provides a 15% (+/-3%) differential. In the OFF position, it provides a 25% (+/-3%) differential. SW2 can be selected at anytime and does not affect the threshold setting. Current in-range closes the sensor contact. Current above or below range opens the sensor contact.

Example: With a current of 10 amps set as the threshold and a 15% differential, sensor contact will be closed between 8.5 amps and 11.5 amps and open outside of this range. A small amount of hysteresis is provided to prevent dithering near the differential limits.

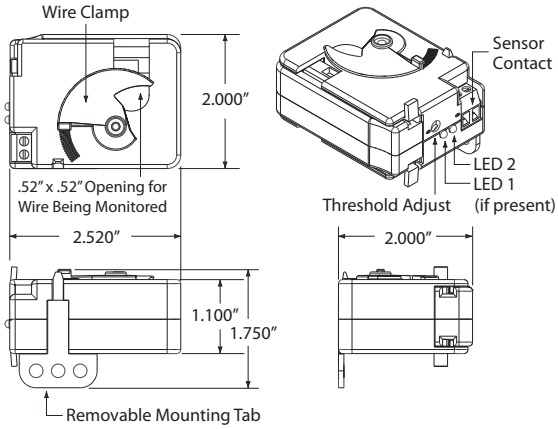
RIBXG SERIES SELECTION GUIDE

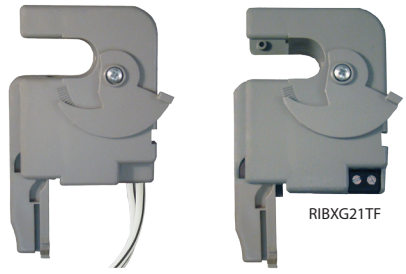
Model#	Sensing Range	Type	Threshold	Sensor Contact Type	Switching Voltage Range	Maximum Switching Current	Sensor Contact Termination	LED 1	LED 2
RIBXGF	.35-150 Amp	Split Core	Fixed, .35 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16˝ 18 AWG Wire Leads		
RIBXGFL*	.75-150 Amp	Split Core	Fixed, .75 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16˝ 18 AWG Wire Leads	Over Trip Point	
RIBXGTF	.35-150 Amp	Split Core	Fixed, .35 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire		
RIBXGTFL*	.75-150 Amp	Split Core	Fixed, .75 Amp	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire	Over Trip Point	
RIBXGA	.75-150 Amp	Split Core	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16˝ 18 AWG Wire Leads	Over Trip Point	Under Trip Point
RIBXGTA	.75-150 Amp	Split Core	Adjustable	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire	Over Trip Point	Under Trip Point
RIBXGA-SCAL	3-150 Amp	Split Core	Self-Cal.	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Wht/Yel 16˝ 18 AWG Wire Leads	See -SCAL Table	
RIBXGTA-SCAL	3-150 Amp	Split Core	Self-Cal.	Solid State Switch SPST	30 Vac/dc	.4 Amps Max	Terminal Strip, Accepts #14-22 AWG Wire	See -SCAL Table	

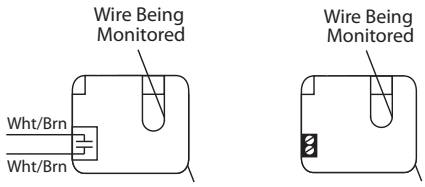
* = Not approved by California State Fire Marshal

RIBXG21 Series

Enclosed Self-Powered Split Core 120-277 Vac Switching AC Current Sensors







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CURRENT SENSORS

SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
* **Temperature Derating:** 1 Amp up to 50° C, 0.5 Amp up to 60° C
Max Sense Voltage: 600 Vac
Sensor Contact Status: Monitored current below threshold: Open
Monitored current above threshold: Closed

Approvals: UL Listed, UL916, C-UL, CE, RoHS
Mounting/ Installation: Unit can be secured using the supplied Mounting Tab, the adjustable Wire Clamp, or both.

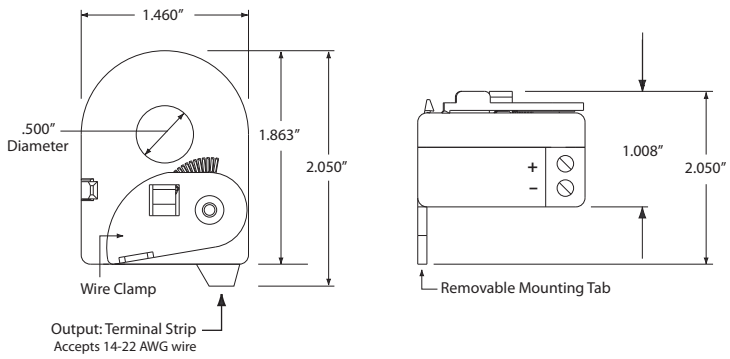
Notes:
- Use Sensor Contact to switch 120-277 Vac loads only.
- For testing purposes, Sensor Contact will measure approximately 250 Ω when closed and > 10 MΩ when open.
- The Sensor Contact is a Solid State Contact.

RIBXG21 SERIES SELECTION GUIDE

Model#	Sensing Range	Type	Threshold	Sensor Contact Type	Switching Voltage Range	Maximum Switching Current	Sensor Contact Termination	LED 1	LED 2
RIBXG21F	.50-150 Amps AC	Split Core	Fixed, .50 Amp AC	Solid State Switch SPST	120-277 Vac	1 Amp AC *	Wht/Blk 16″ 18 AWG Wire Leads		
RIBXG21TF	.50-150 Amps AC	Split Core	Fixed, .50 Amp AC	Solid State Switch SPST	120-277 Vac	1 Amp AC *	Terminal Strip, Accepts #14-22 AWG Wire		
RIBXG21A	.75-150 Amps AC	Split Core	Adjustable	Solid State Switch SPST	120-277 Vac	1 Amp AC *	Wht/Blk 16″ 18 AWG Wire Leads	Over Threshold	Under Threshold
RIBXG21TA	.75-150 Amps AC	Split Core	Adjustable	Solid State Switch SPST	120-277 Vac	1 Amp AC *	Terminal Strip, Accepts #14-22 AWG Wire	Over Threshold	Under Threshold

RIBXKTV Series

Enclosed Self-Powered Solid Core Current to DC Transducers



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Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

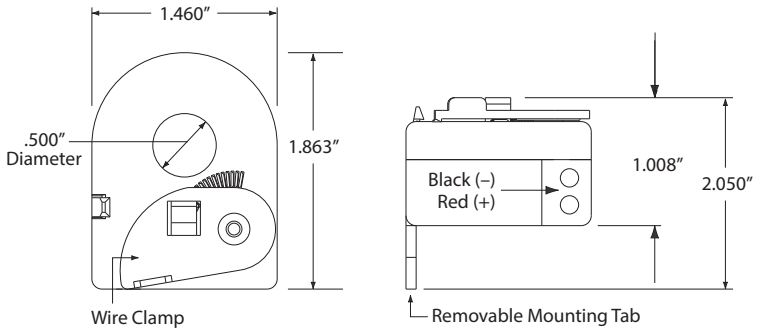
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Accuracy: 96.8% Full Scale
Loading: RIBXKTV5-10, 1% Error @ 180 kΩ
RIBXKTV5-20, 1% Error @ 90 kΩ
RIBXKTV5-50, 1% Error @ 40 kΩ
RIBXKTV5-100, 1% Error @ 15 kΩ
Max Sense Voltage: 600 Vac
Approvals: UL Listed, UL916, UL864, California State Fire Marshal, C-UL, CE, RoHS
Mounting/Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.
Sensor Type: Solid core with voltage output

RIBXKTV SERIES SELECTION GUIDE

Model#	Sensing Range	Sensor Output
RIBXKTV5-10	0-10 Amp	0-5 Vdc (Terminal Strip, Accepts #14-22 AWG Wire)
RIBXKTV5-20	0-20 Amp	0-5 Vdc (Terminal Strip, Accepts #14-22 AWG Wire)
RIBXKTV5-50	0-50 Amp	0-5 Vdc (Terminal Strip, Accepts #14-22 AWG Wire)
RIBXKTV5-100	0-100 Amp	0-5 Vdc (Terminal Strip, Accepts #14-22 AWG Wire)

RIBXK420 Series

Enclosed Self-Powered Solid Core 20, 50, and 100 Amp Current Transducers with Loop Powered 4-20 mA Output (Pre-Wired)



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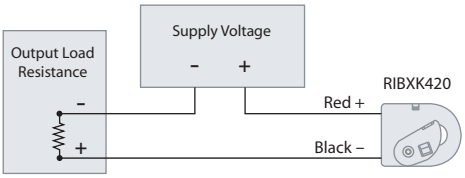
SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Wires: Red (positive) & Black (negative), 16˝, 18 AWG, 600V Rated
Sensor Type: Internal, with 4-20 mA Transmitter Output
Sensor Range: 0-20 Amps, 0-50 Amps, or 0-100 Amps (See Selection Guide Below)
Accuracy: 96.4% FS
Linearity: 99% FS (25%-100% Span)
Max Output Current: 30 mA
Max Sense Voltage: 600 Vac
Approvals: UL Listed, UL916, UL864, C-UL, California State Fire Marshal, CE, RoHS
Mounting/Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.



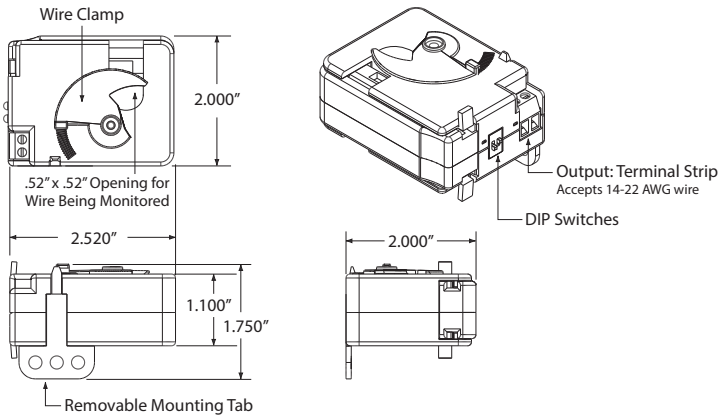
OUTPUT LOAD RESISTANCE	SUPPLY VOLTAGE	
Maximum	Minimum	Maximum
700 ohms	26 Vdc	35 Vdc
600 ohms	24 Vdc	35 Vdc
500 ohms	21 Vdc	35 Vdc
400 ohms	19 Vdc	30 Vdc
300 ohms	17 Vdc	30 Vdc
250 ohms	16 Vdc	28 Vdc
200 ohms	14 Vdc	28 Vdc
100 ohms	12 Vdc	28 Vdc
50 ohms	11 Vdc	28 Vdc

RIBXKTV SERIES SELECTION GUIDE

Model#	Sensing Range	Sensor Output
RIBXK420-20	0-20 Amps	Loop Powered 4-20 mA Transmitter (Pre-Wired)
RIBXK420-50	0-50 Amps	Loop Powered 4-20 mA Transmitter (Pre-Wired)
RIBXK420-100	0-100 Amps	Loop Powered 4-20 mA Transmitter (Pre-Wired)

RIBXGTV10

Enclosed Self-Powered Spilt Core Multi-Range (0-20A, 50A, or 100A) AC Transducer with 0-10Vdc Terminal Output



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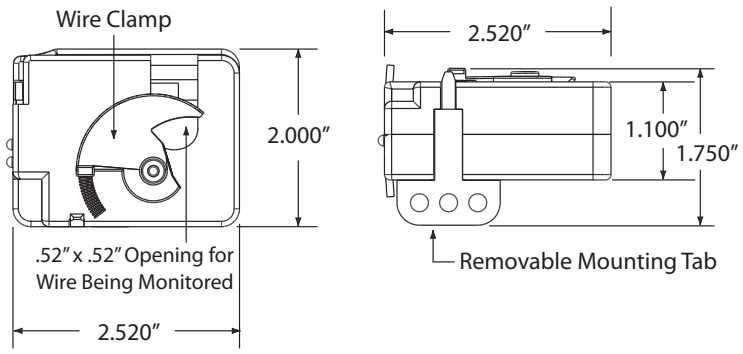
SPECIFICATIONS

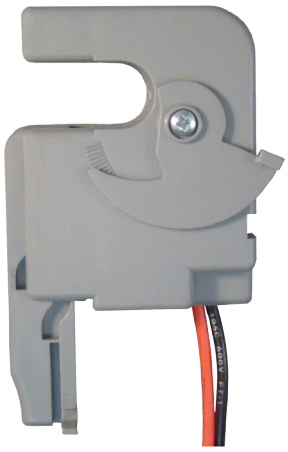
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Accuracy: 96.8% Full Scale
Max Sense Voltage: 600 Vac
Approvals: UL Listed, UL916, UL864, California State Fire Marshal, C-UL, CE, RoHS
Mounting/Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.
Sensor Type: Split core with voltage output

DIP SWITCH		
1	2	Sensing Range
OFF	OFF	0-20 Amp
OFF	ON	0-50 Amp
ON	OFF	0-100 Amp

RIBXG420 Series

Enclosed Self-Powered Split Core 20, 50, and 100 Amp Current Transducers with Loop Powered 4-20 mA Output (Pre-Wired)





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SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Wires: Red (positive) & Black (negative), 16˝, 18 AWG, 600V Rated
Sensor Type: Internal, with 4-20 mA Transmitter Output
Sensor Range: 0-20 Amps, 0-50 Amps, or 0-100 Amps (See Selection Guide Below)
Accuracy: Refer to chart below.
Linearity: 99% FS (20%-100% Span)
Max Output Current: 30 mA
Max Sense Voltage: 600 Vac
Approvals: UL Listed, UL864, UL508, C-UL, California State Fire Marshal, CE, RoHS
Mounting/Installation: Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.

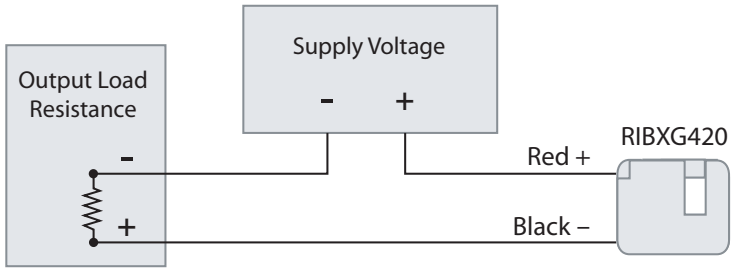
OUTPUT LOAD RESISTANCE	SUPPLY VOLTAGE	
Maximum	Minimum	Maximum
800 ohms	24 Vdc	35 Vdc
500 ohms	18 Vdc	35 Vdc
350 ohms	15 Vdc	35 Vdc
250 ohms	13 Vdc	35 Vdc
200 ohms	12 Vdc	35 Vdc
100 ohms	10 Vdc	35 Vdc
50 ohms	9 Vdc	35 Vdc

RIBXG420 SERIES SELECTION GUIDE			ACCURACY		
Model#	Sensing Range	Sensor Output	Span 20% – 100%	Span 10% – 100%	Span 0% – 100%
RIBXG420-20	0-20 Amps	Loop Powered 4-20 mA Transmitter (Pre-Wired)	99%	99%	95%
RIBXG420-50	0-50 Amps	Loop Powered 4-20 mA Transmitter (Pre-Wired)	99%	97.5%	92%
RIBXG420-100	0-100 Amps	Loop Powered 4-20 mA Transmitter (Pre-Wired)	99%	97%	91%

- **Accuracy charts are available on data sheet on website.**

http://www.functionaldevices.com/pdf/datasheets/RIBXG420_SERIES.pdf

Or scan QR code with your smart phone.

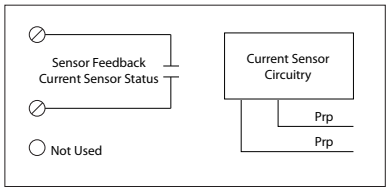


CURRENT SENSORS

AC CURRENT SWITCHES

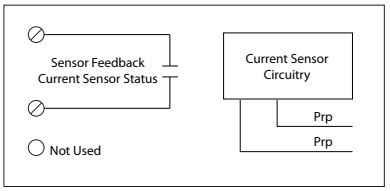
RIBXF

Enclosed Self-Powered Internal Fixed
0.50-30 Amp AC Sensor



RIBXA

Enclosed Self-Powered Internal Adjustable
0.50-30 Amp AC Sensor



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SPECIFICATIONS

Operating Temperature: -30 to 140˚ F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1

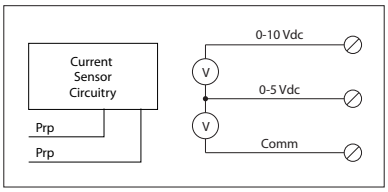
Sensor Type: Internal, with contact status
Sensor Threshold: Fixed, .5 Amps (RIBXF) Adjustable, .50-30 Amps (RIBXA)
Sensor Range: .50-30 Amps
Max Sense Voltage: 600 Vac
Sensor Contact Status: Current below threshold: Open / LED OFF Current above threshold: Closed / LED ON

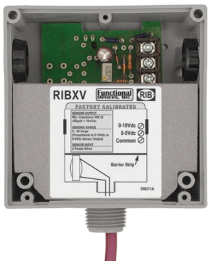
Sensor Contact:
- Solid State Contact
- 30 Vac/dc, .4 Amp Max.
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop < .3 Vac/dc @ .1 Amp < 1.6 Vac/dc @ .4 Amp

AC TRANSDUCER

RIBXV

Enclosed Self-Powered Internal 0-30 Amp to 0-5 Vdc / 0-10 Vdc AC Transducer





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SPECIFICATIONS

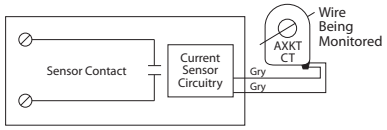
Operating Temperature: -30 to 140˚ F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Sensor Type: Internal, with voltage output
Sensor Range: 0-30 Amps
Max Sense Voltage: 600 Vac

Sensor Output:
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 3% full scale
- Vripple < 10m Vac

AC CURRENT SWITCHES

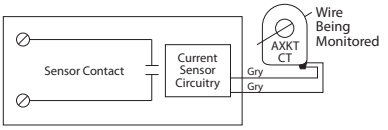
RIBXRF

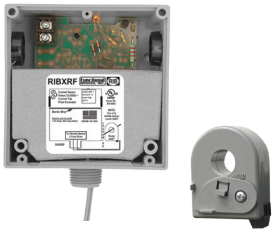
Enclosed Self-Powered Solid Ring Remote
Fixed 1.25-150 Amp AC Sensor



RIBXRA

Enclosed Self-Powered Solid Ring Remote
Adjustable 1.25-150 Amp AC Sensor





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SPECIFICATIONS

Operating Temperature: -30 to 140˚ F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Remote Dimensions: 1.863˝ x 1.460˝, .500˝ Inside Diameter
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL, California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1

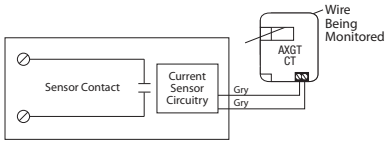
Sensor Type: External, with contact status
Sensor Threshold: Fixed, 1.25 Amps (RIBXRF) Adjustable, 1.25-150 Amps (RIBXRA)
Sensor Range: 1.25-150 Amps
Max Sense Voltage: 600 Vac
Sensor Contact Status: Current below threshold: Open / LED OFF Current above threshold: Closed / LED ON

Sensor Contact:
- Solid State Contact
- 30 Vac/dc, .4 Amp Max.
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop < .3 Vac/dc @ .1 Amp < 1.6 Vac/dc @ .4 Amp

AC CURRENT SWITCHES

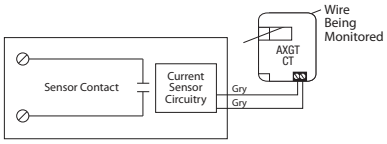
RIBXJF

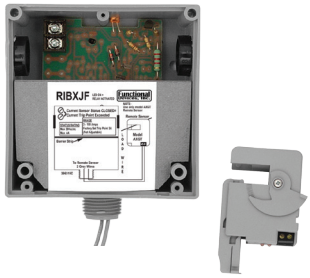
Enclosed Self-Powered Split Ring Remote
Fixed 3-150 Amp AC Sensor



RIBXJA

Enclosed Self-Powered Split Ring Remote
Adjustable 3-150 Amp AC Sensor





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SPECIFICATIONS

Operating Temperature: -30 to 140˚ F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Remote Dimensions: (Outside) 2.52˝ x 2.00˝, (Inside) .52˝ x .52˝
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1

Sensor Type: External, with contact status
Sensor Threshold: Fixed, 3 Amps (RIBXJF).
Adjustable, 3-150 Amps (RIBXJA)
Sensor Range: 3-150 Amps
Max Sense Voltage: 600 Vac
Sensor Contact Status: Current below threshold: Open / LED OFF
Current above threshold: Closed / LED ON

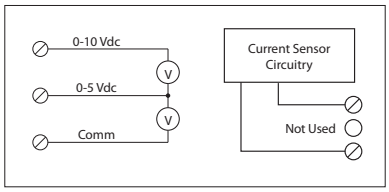
Sensor Contact:
- Solid State Contact
- 30 Vac/dc, .4 Amp Max.
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop
< .3 Vac/dc @ .1 Amp
< 1.6 Vac/dc @ .4 Amp

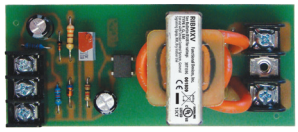
CURRENT SENSORS

AC TRANSDUCER

RIBMXV

4.00˝ Track Mount Internal 0-20 Amp to 0-5 Vdc /
0-10 Vdc Self-Powered AC Transducer





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SPECIFICATIONS

Operating Temperature: -30 to 140˚ F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 1.700˝ x 4.000˝ x 1.250˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS

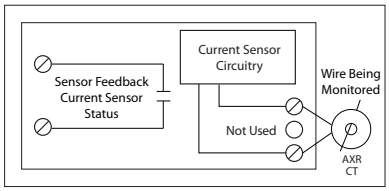
Sensor Type: Internal, with voltage output
Sensor Range: 0-20 Amps
Max Sense Voltage: 300 Vac

Sensor Output:
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 1% full scale
- Vripple < 10m Vac

AC CURRENT SWITCHES

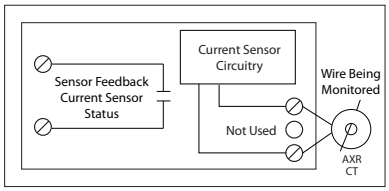
RIBMXRF

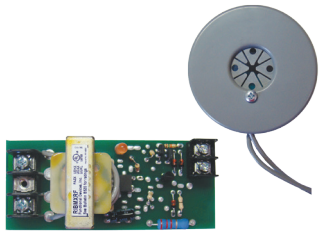
4.00˝ Track Mount Solid Ring Remote Fixed
3-150 Amp AC Sensor, Self-Powered



RIBMXRA

4.00˝ Track Mount Solid Ring Remote Adjustable
3-150 Amp AC Sensor, Self-Powered





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SPECIFICATIONS

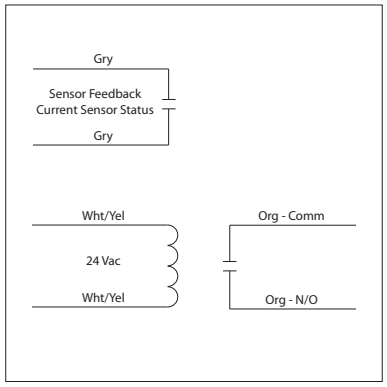
Operating Temperature: -30 to 140˚ F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 1.700˝ x 4.000˝ x 1.250˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS

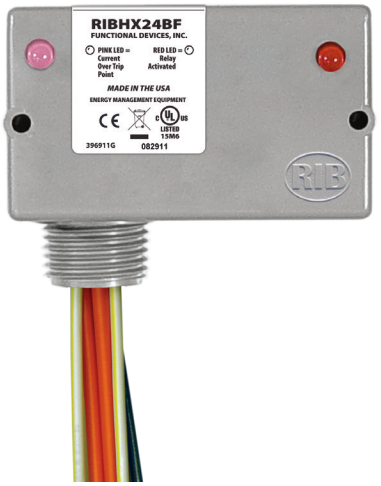
Sensor Type: External, with contact status
Inside Diameter: .75˝
Outside Diameter: 2.28˝
Sensor Threshold: Fixed, 3 Amps (RIBMXRF)
Adjustable, 3-150 Amps (RIBMXRA)
Sensor Range: 3-150 Amps
Max Sense Voltage: 600 Vac
Sensor Contact Status: Current below threshold: Open / LED OFF
Current above threshold: Closed / LED ON

Sensor Contact:
- Solid State Contact
- 30 Vac/dc, .4 Amp Max.
- When sensor contact is off (open), leakage <30 uA @ 30Vac/dc
- When sensor contact is on (closed), voltage drop
< .3 Vac/dc @ .1 Amp
< 1.6 Vac/dc @ .4 Amp

RIBHX24BF

Enclosed 20 Amp SPST-N/O Relay/AC Sensor Combination, with 24 Vac Coil





RIBHX24BF-RD
- Red housing

RIBHX24BF-N4
- NEMA 4X housing, UL508 only

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CE

RoHS

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SPECIFICATIONS

Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Current Sensor Status Pink LED On = Current Over Trip Point (0.25 Amp)
Dimensions: 1.70˝ x 2.80˝ x 1.50˝ with .50˝ NPT nipple
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No

Sensor Type: Internal, with contact status
Sensor Threshold: Fixed, .25 Amp
Sensor Range: .25-20 Amps
Sensor Feedback Output: Solid State Contact 30 Vac/dc, 100 mA

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1,110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Current:
128 mA @ 24 Vac
71 mA @ 30 Vdc

Coil Voltage Input:
24 Vac ; 50-60 Hz
Drop Out = 3 Vac
Pull In = 18 Vac

Sensor Contact:
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp < 1.6 Vac/dc @ .4 Amp

RIBXLC Series

Enclosed Relay/AC Sensor Combinations, SPDT with 10-30 Vac/dc Coil

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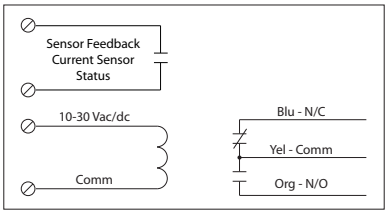
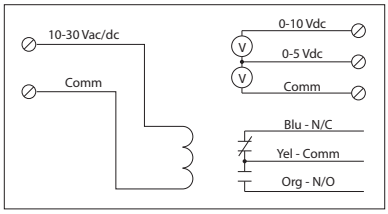
RIBXLCA, RIBXLCF, RIBXLCEA+

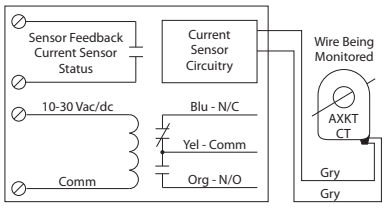


RIBXLCV, RIBXLCEV^

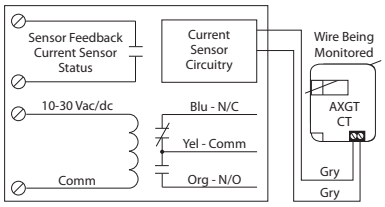


RIBXLCA

RIBXLCRA, RIBXLCRF+



RIBXLCJA, RIBXLCJF+



SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: No

Coil Current:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

Coil Voltage Input:
10-30 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

+ Sensor Contact:
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp < 1.6 Vac/dc @ .4 Amp

^ Sensor Feedback Output:
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 3% full scale
- Vripple < 10m Vac

Notes:
- Models AXKT and AXGT CT remotes do not have contact closure circuitry and only work in conjunction with RIBXLCR and RIBXLCJ models, respectively.

RIBXLC SERIES SELECTION GUIDE

Model#	Sensing Range	Type *	Threshold	Sensor Output	Remote Style	Resistive	Contact Ratings
RIBXLCF	.50-10 Amps	Internal w/ contact status	Fixed, .50 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp		10 Amp	10 Amp Resistive @ 120-277 Vac 10 Amp Resistive @ 28 Vdc 480 VA Pilot Duty @ 240-277 Vac 480 VA Ballast @ 277 Vac *Not rated for Electronic Ballast* 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)
RIBXLCA	.50-10 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp		10 Amp	
RIBXLCV	0-10 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc		10 Amp	
RIBXLCRF	1.25-150 Amps	External w/ contact status	Fixed, 1.25 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXKT: (Solid Core Remote CT)	10 Amp	
RIBXLCRA	1.25-150 Amps	External w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXKT: (Solid Core Remote CT)	10 Amp	
RIBXLCJF	3-150 Amps	External w/ contact status	Fixed, 3 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXGT: (Split Core Remote CT)	10 Amp	
RIBXLCJA	3-150 Amps	External w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXGT: (Split Core Remote CT)	10 Amp	
RIBXLCEA	.125-5 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp		5 Amp	5 Amp Resistive @ 277 Vac 345 VA Pilot Duty @ 120/240 Vac (N/O) 268 VA Pilot Duty @ 277 Vac (N/O) 211 VA Pilot Duty @ 120/240 Vac (N/C) 175 VA Pilot Duty @ 277 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)
RIBXLCEV	0-5 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc		5 Amp	

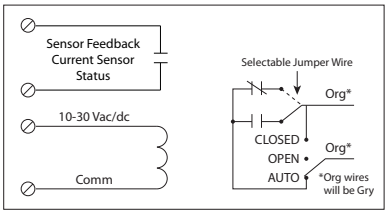
* = Internal current sensor monitors current through common contact of relay.

RIBXLS Series

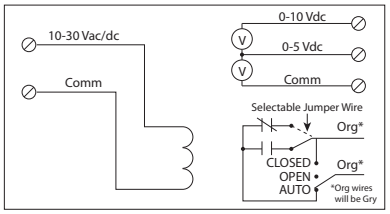
Enclosed Relay/AC Sensor Combinations, SPST + Override with 10-30 Vac/dc Coil

Made in USA
Meets "Buy American" of ARRA 2009

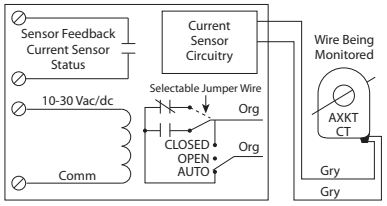
RIBXLSA, RIBXLSF, (RIBXLSEA*)+



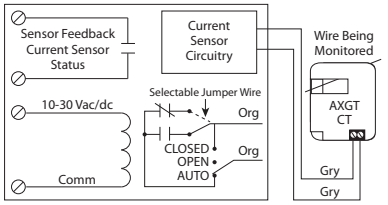
RIBXLSV, (RIBXLSEV*)^



RIBXLSRA, RIBXLSRF+



RIBXLSJA, RIBXLSJF+



RIBXLSA

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: Yes
Override Switch: Yes

Coil Current:
33 mA @ 10 Vac
35 mA @ 12 Vac
46 mA @ 24 Vac
55 mA @ 30 Vac
13 mA @ 10 Vdc
15 mA @ 12 Vdc
18 mA @ 24 Vdc
20 mA @ 30 Vdc

Coil Voltage Input:
10-30 Vac/dc ; 50-60 Hz
Drop Out = 2.1 Vac / 2.8 Vdc
Pull In = 9 Vac / 10 Vdc

+ Sensor Contact:
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp < 1.6 Vac/dc @ .4 Amp

^ Sensor Feedback Output:
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 3% full scale
- Vripple < 10m Vac

Notes:
- Normally Open or Normally Closed selected by yellow jumper wire
- Models AXKT and AXGT CT remotes do not have contact closure circuitry and only work in conjunction with RIBXLSR and RIBXLSJ models, respectively.

RIBXLS SERIES SELECTION GUIDE

Model#	Sensing Range	Type *	Threshold	Sensor Output	Remote Style	Resistive	Contact Ratings
RIBXLSF	.50-10 Amps	Internal w/ contact status	Fixed, .50 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp		10 Amp	10 Amp Resistive @ 277 Vac 480 VA Pilot Duty @ 277 Vac 480 VA Ballast @ 277 Vac *Not rated for Electronic Ballast* 600 Watt Tungsten @ 120 Vac (N/O) 240 Watt Tungsten @ 120 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)
RIBXLSA	.50-10 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp		10 Amp	
RIBXLSV	0-10 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc		10 Amp	
RIBXLSRF	1.25-150 Amps	External w/ contact status	Fixed, 1.25 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXKT: (Solid Core Remote)	10 Amp	
RIBXLSRA	1.25-150 Amps	External w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXKT: (Solid Core Remote)	10 Amp	
RIBXLSJF	3-150 Amps	External w/ contact status	Fixed, 3 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXGT: (Split Core Remote)	10 Amp	
RIBXLSJA	3-150 Amps	External w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	Model AXGT: (Split Core Remote)	10 Amp	
RIBXLSEA	.125-5 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp		5 Amp	5 Amp Resistive @ 277 Vac 345 VA Pilot Duty @ 120/240 Vac (N/O) 268 VA Pilot Duty @ 277 Vac (N/O) 211 VA Pilot Duty @ 120/240 Vac (N/C) 175 VA Pilot Duty @ 277 Vac (N/C) 1/3 HP @ 120-240 Vac (N/O) 1/6 HP @ 120-240 Vac (N/C) 1/4 HP @ 277 Vac (N/O) 1/8 HP @ 277 Vac (N/C)
RIBXLSEV	0-5 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc		5 Amp	

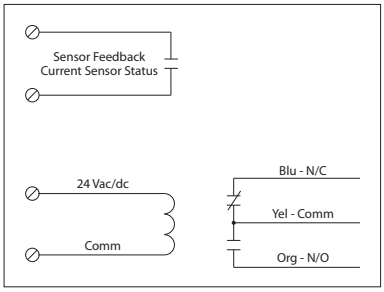
* = Internal current sensor monitors current through common contact of relay.

RIBX24 Series

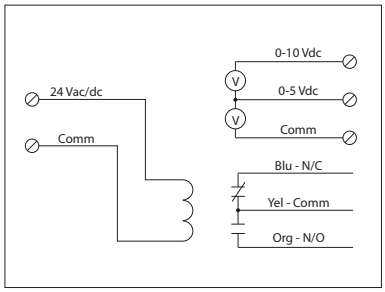
Enclosed 20 Amp Relay/AC Sensor Combinations, with 24 Vac/dc Coil

Made in USA
Meets
"Buy American"
of ARRA 2009

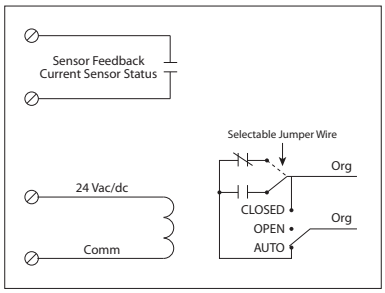
RIBX24BA, RIBX24BF+



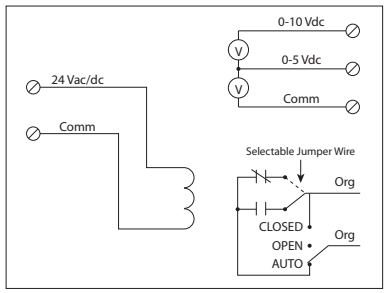
RIBX24BV^

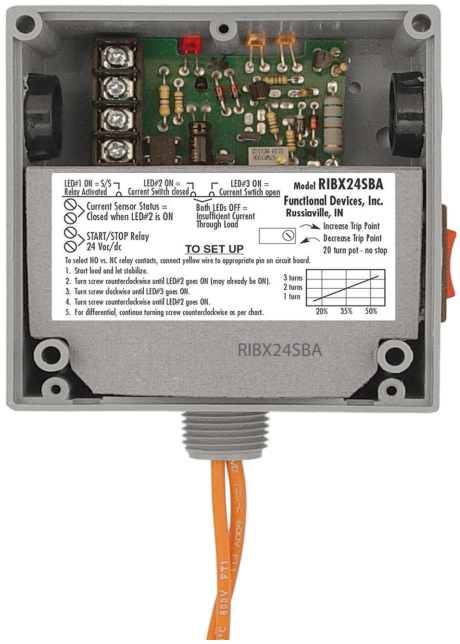


RIBX24SBA, RIBX24SBF+



RIBX24SBV^





CURRENT SENSORS

SPECIFICATIONS

Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Dimensions: 4.00˝ x 4.00˝ x 1.80˝ with .50˝ NPT Nipple
Wire Length: 16˝, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No

Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

Sensor Contact: +
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp
  < 1.6 Vac/dc @ .4 Amp

Sensor Feedback Output: ^
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 1% full scale
- Vripple < 10m Vac

RIBX24 SERIES SELECTION GUIDE

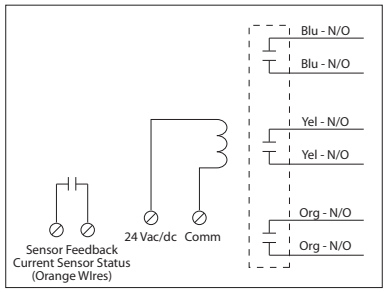
Model#	Sensing Range	Type *	Threshold	Sensor Output	Resistive	Override Switch	Contact Ratings	Notes
RIBX24BF	.50-20 Amps	Internal w/ contact status	Fixed, .50 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	No	20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1,110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac	
RIBX24BA	.50-20 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	No		
RIBX24BV	0-20 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc	20 Amp	No		
RIBX24SBF	.50-20 Amps	Internal w/ contact status	Fixed, .50 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	Yes	20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/O) 1,110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac	• Normally Open or Normally Closed selected by yellow jumper wire
RIBX24SBA	.50-20 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	Yes		
RIBX24SBV	0-20 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc	20 Amp	Yes		

* = Internal current sensor monitors current through common contact of relay.

RELAY & AC CURRENT SWITCH COMBOS

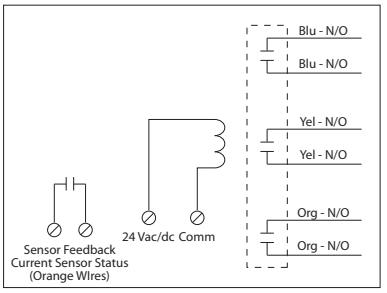
RIBX243PF

Enclosed Internal Fixed .50-20 Amp AC Sensor + Relay 20 Amp 3PST-N/O with 24 Vac/dc Coil



RIBX243PA

Enclosed Internal Adjustable .50-20 Amp AC Sensor + Relay 20 Amp 3PST-N/O with 24 Vac/dc Coil



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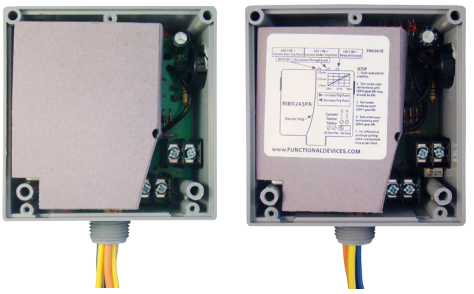


SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wire Length: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Coil Current:
210 mA @ 24 Vac
154 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 22 Vdc

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Sensor Type: Internal, with contact status
Current sensing on orange wires
Sensor Threshold: Fixed, .5 Amps (RIBX243PF)
Adjustable, .50-20 Amps (RIBX243PA)
Sensor Range: .50-20 Amps

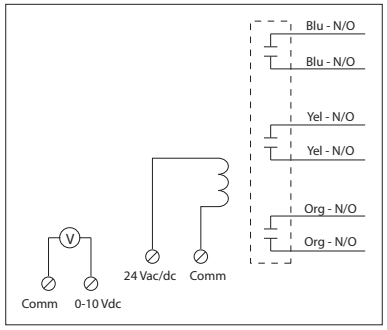
Sensor Contact:
- Solid State Contact
- 30 Vac/dc, .4 Amp Max.
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop
  < .3 Vac/dc @ .1 Amp
  < 1.6 Vac/dc @ .4 Amp

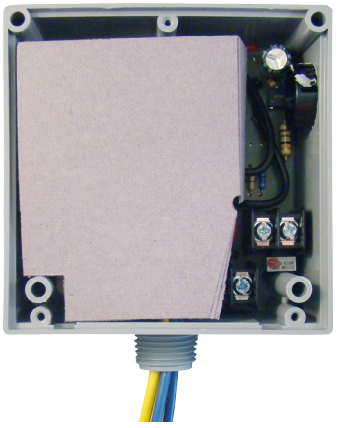
Notes:
- Order Normally Closed by adding "-NC" to end of model number

RELAY & AC TRANSDUCER COMBO

RIBX243PV

Enclosed Internal 0-20 Amp to 0-10 Vdc DC Transducer + Relay 20 Amp 3PST with 24 Vac/dc Coil





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of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) 3PST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 20ms
Relay Status: Red LED On = Activated
Dimensions: 4.00″ x 4.00″ x 1.80″ with .50″ NPT Nipple
Wire Length: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL
California State Fire Marshal, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Coil Current:
210 mA @ 24 Vac
154 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 20 Vac / 22 Vdc

Contact Ratings:
20 Amp Resistive @ 300 Vac, 28 Vdc
20 Amp Ballast @ 277-480 Vac
Not rated for Electronic Ballast
15 Amp Resistive @ 600 Vac
770 VA Pilot Duty @ 120 Vac, 1 Phase
1158 VA Pilot Duty @ 240 Vac, 1 Phase
1110 VA Pilot Duty @ 277 Vac, 1 Phase
1640 VA Pilot Duty @ 480 Vac, 1 Phase
1466 VA Pilot Duty @ 240 Vac, 3 Phase
2112 VA Pilot Duty @ 480 Vac, 3 Phase
Heavy Pilot Duty @ 600 Vac
7.5 HP @ 480 Vac, 3 Phase
5 HP @ 240 Vac, 3 Phase
3 HP @ 480-600 Vac, 1 Phase
2 HP @ 240-277 Vac, 1 Phase
1 HP @ 120 Vac, 1 Phase

Sensor Type: Internal, with voltage output. Current sensing on orange wires
Sensor Range: 0-20 Amps

Sensor Feedback Output:
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 1% full scale
- Vripple < 10m Vac

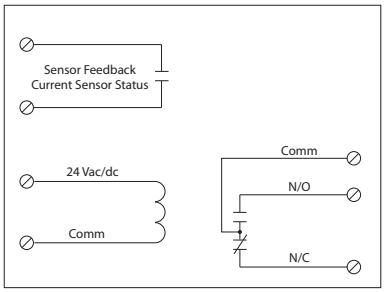
Notes:
- Order Normally Closed by adding "-NC" to end of model number
- Can be ordered with 0-5 Vdc voltage output - Consult factory.

RIBMX24 Series

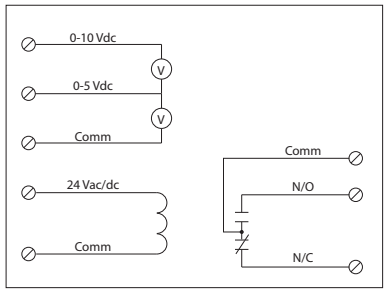
4.00″ Track Mount 20 Amp Relay/AC Sensor Combinations, with 24 Vac/dc Coil

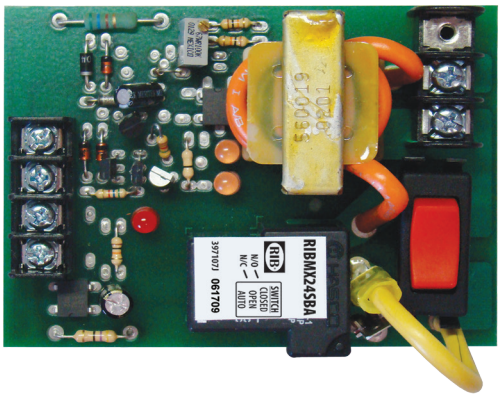
Made in USA
Meets "Buy American" of ARRA 2009

RIBMX24BA, RIBMX24BF+

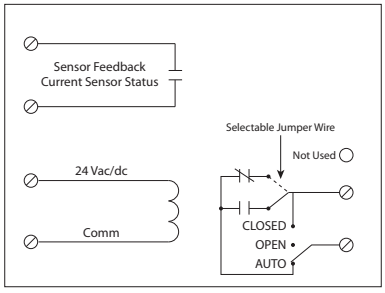


RIBMX24BV^

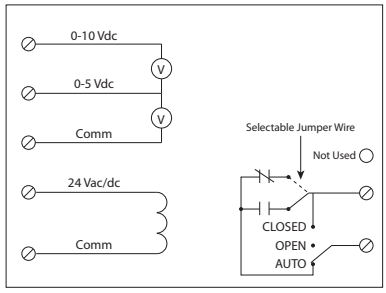




RIBMX24SBA, RIBMX24SBF+



RIBMX24SBV^



CURRENT SENSORS

SPECIFICATIONS

FUNCTIONAL DEVICES CERTIFIED FOR USE WITH **ECMs**

Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: Red LED On = Activated
Dimensions: 2.95″ x 4.00″ x 1.25″
Track Mount: 4.000″, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Approvals: UL Listed, UL916, UL864, C-UL
California State Fire Marshal, CE, RoHS
Gold Flash: No

Coil Current:
50 mA @ 18 Vac
83 mA @ 24 Vac
33 mA @ 22 Vdc
35 mA @ 24 Vdc
47 mA @ 30 Vdc

Coil Voltage Input:
24 Vac/dc ; 50-60 Hz
Drop Out = 3 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

Sensor Contact: +
- When current sensor status is off (open), leakage <30 uA @ 30Vac/dc
- When current sensor status is on (closed), voltage drop < .3 Vac/dc @ .1 Amp < 1.6 Vac/dc @ .4 Amp

Sensor Feedback Output: ^
- Voltage output is proportional to current sensor range.
- Min. Input Impedance = 30K ohms
- Accuracy +/– 1% full scale
- Vripple < 10m Vac

RIBMX24 SERIES SELECTION GUIDE

Model#	Sensing Range	Type	Threshold	Sensor Output	Resistive	Override Switch	Contact Type	Contact Ratings	Notes
RIBMX24BF ECMs	.50-20 Amps	Internal w/ contact status	Fixed, .50 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	No	SPDT	20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac (N/O) 10 Amp Tungsten @ 120 Vac (N/O) 1,110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac	
RIBMX24BA ECMs	.50-20 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	No	SPDT		
RIBMX24BV	0-20 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc	20 Amp	No	SPDT		
RIBMX24SBF ECMs	.50-20 Amps	Internal w/ contact status	Fixed, .50 Amp	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	Yes	SPST	20 Amp Resistive @ 277 Vac 20 Amp Ballast @ 277 Vac (N/O) 10 Amp Ballast @ 277 Vac (N/C) *Not rated for Electronic Ballast* 10 Amp Tungsten @ 120 Vac (N/O) 1,110 VA Pilot Duty @ 277 Vac 770 VA Pilot Duty @ 120 Vac 240 Watt Tungsten @ 120 Vac (N/C) 2 HP @ 277 Vac 1 HP @ 120 Vac	• Normally Open or Normally Closed selected by yellow jumper wire
RIBMX24SBA ECMs	.50-20 Amps	Internal w/ contact status	Adjustable	Solid State Contact 30 Vac/dc, 0.4 Amp	20 Amp	Yes	SPST		
RIBMX24SBV	0-20 Amps	Internal w/ voltage output	Analog	0-5 Vdc 0-10 Vdc	20 Amp	Yes	SPST		

ECMs = FDI Certified for use with electronically commutated motors

POWER SUPPLIES

AC | DC

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

- Class 2
- On/off control
- Overcurrent protection
- LED power indicator
- High/low voltage separation
- 120Vac convenience outlets

Perfect for VAV Applications: PSH500A and PSH300A

- 5 or 3 isolated 100 VA outputs
- On/Off circuit breaker switch for each output
- UL Listed Class 2
- Fully enclosed – perfect for central location

AC POWER SUPPLIES

MODEL #	UL	TRANSFORMER(S)	INPUT POWER	HEIGHT	WIDTH	DEPTH	WEIGHT	NOTES	SPEC PAGE
PSC40AB10	• 1	40 VA	120 Vac	6.250″	5.620″	4.250″	4.40 lbs.		108
PSC100AB10	• 1	100 VA	120 Vac	6.250″	5.620″	4.250″	5.80 lbs.		108
PSH40A Series	• 1	40 VA	120 Vac	4.500″	5.438″	4.500″	3.10 lbs.		108
PSH75A Series	•	75 VA	Multi-Tap 2	4.500″	5.438″	4.500″	4.50 lbs.		109
PSH100A Series	• 1	100 VA	120 Vac	4.500″	5.438″	4.500″	4.60 lbs.		109
PSH40AB10-EXT2	• 1	40 VA	120 Vac	4.500″	5.438″	4.500″	4.00 lbs.		110
PSH100AB10-EXT2	• 1	100 VA	120 Vac	4.500″	5.438″	4.500″	4.00 lbs.		110
PSH40A40A Series	• 1	40 VA, 40 VA	120 Vac, 120 Vac	4.500″	8.625″	4.500″	5.40 lbs.		110
PSH40A75A Series	•	40 VA, 75 VA	120 Vac, Multi-Tap 2	4.500″	8.625″	4.500″	6.80 lbs.		111
PSH40A100A Series	• 1	40 VA, 100 VA	120 Vac, 120 Vac	4.500″	8.625″	4.500″	6.90 lbs.		111
PSH75A75A Series	•	75 VA, 75 VA	Multi-Tap, Multi-Tap 2	4.500″	8.625″	4.500″	8.40 lbs.		112
PSH75A100A Series	•	75 VA, 100 VA	Multi-Tap 2, 120 Vac	4.500″	8.625″	4.500″	8.50 lbs.		112
PSH100A100A Series	• 1	100VA, 100VA	120 Vac, 120 Vac	4.500″	8.625″	4.500″	8.60 lbs.		113
CTRL-PS	• 1	40 VA	120 Vac	14.500″	7.700″	3.900″	7.28 lbs.		113
MHP3903100AB10	•	100 VA	120 Vac	24.500″	12.500″	6.500″	30.65 lbs.	NEW	114
MHP3903100A100AB10	•	100VA, 100VA	120 Vac	24.500″	12.500″	6.500″	33.05 lbs.	NEW	115
PSH500A	• 1	500 VA w/ five 100 VA Outputs	480/277/240/120 Vac	12.125″	12.125″	6.000″	30.16 lbs.		116
PSH300A	• 1	300 VA w/ three 100 VA Outputs	480/277/240/120 Vac	12.125″	12.125″	6.000″	18.08 lbs.		117
PSH200A	•	200 VA w/ five 40 VA Outputs	480/347/277/240/120 Vac	12.125″	12.125″	6.000″	18.60 lbs.		118
PSMN500A	• 1	500 VA w/ five 100 VA Outputs	480/277/240/120 Vac	11.330″	11.400″	5.000″	20.60 lbs.		116
PSMN300A	• 1	300 VA w/ three 100 VA Outputs	480/277/240/120 Vac	11.330″	11.400″	4.500″	12.38 lbs.		117
PSMN200A	•	200 VA w/ five 40 VA Outputs	480/347/277/240/120 Vac	11.330″	11.400″	5.000″	8.00 lbs.		118
PSH500A-LVC 3	• 1	500 VA w/ five 100 VA Outputs	480/277/240/120 Vac	12.125″	12.125″	6.000″	32.30 lbs.		119
PSH300A-LVC 3	• 1	300 VA w/ three 100 VA Outputs	480/277/240/120 Vac	11.330″	11.400″	4.500″	22.46 lbs.	NEW	120
PSH200A-LVC 3	•	200 VA w/ five 40 VA Outputs	480/347/277/240/120 Vac	11.330″	11.400″	5.000″	20.30 lbs.	NEW	120
PSH500AB10-LVC 3	• 1	500 VA w/ five 100 VA Outputs	480/277/240/120 Vac	12.125″	12.125″	6.000″	32.30 lbs.	NEW	121
PSH300AB10-LVC 3	• 1	300 VA w/ three 100 VA Outputs	480/277/240/120 Vac	11.330″	11.400″	4.500″	22.12 lbs.	NEW	122
PSH200AB10-LVC 3	•	200 VA w/ five 40 VA Outputs	480/347/277/240/120 Vac	11.330″	11.400″	5.000″	20.30 lbs.	NEW	123
PSB40AB10	• 1	40 VA	120 Vac	5.200″	5.250″	3.750″	2.18 lbs.		124
PSB100AB10	• 1	100 VA	120 Vac	5.200″	5.250″	3.750″	3.58 lbs.		124
PSMN40AS	• 1	40 VA	120 Vac	3.250″	2.750″	2.000″	1.60 lbs.		124
PSMN40A	• 1	40 VA	120 Vac	3.250″	2.750″	2.000″	1.60 lbs.		124

UL = Class 2 (UL Approved UL5085-3) : UL916 Energy Management USA & Canada 1 = UL508 Available 2 = 480/277/240/208/120 Vac 3 = High / Low Voltage Separation

DC POWER SUPPLIES

MODEL #	UL	VOLTAGE INPUT	VOLTAGE OUTPUT	OUTPUT CURRENT	ON/OFF SWITCH	HEIGHT	WIDTH	DEPTH	WEIGHT	NOTES	SPEC PAGE
PSP24DA	•	24 Vac	Adjustable 1.5-28 Vdc ; Non-Isolated	300 mA		2.300″	3.200″	1.800″	.30 lbs.		125
PSH24DWB10		120 Vac	Fixed 24 Vdc ; Isolated	2.5 Amp	•	4.000″	5.438″	4.500″	2.98 lbs.		125
PSH100A24DWB10		120 Vac	Fixed 24 Vdc ; Isolated + 100 VA, 24 Vac	2.5 Amp	•	4.000″	5.438″	4.500″	5.60 lbs.		126
PSMN24DA	•	24 Vac	Adjustable 1.5-28 Vdc ; Non-Isolated	300 mA		1.750″	2.750″	1.500″	.20 lbs.		126
PSMN24DAS	•	24 Vac	Adjustable 1.5-28 Vdc ; Non-Isolated	300 mA	•	1.750″	2.750″	1.500″	.20 lbs.		126
PSM20A12DAS	•	24 Vac	Adjustable 1.5-12 Vdc ; Isolated	300 mA	•	4.000″	2.750″	1.625″	1.10 lbs.		127
PSM24A24DAS	•	24 Vac	Adjustable 1.5-28 Vdc ; Isolated	300 mA	•	4.000″	2.750″	1.625″	1.10 lbs.		127
PSM19A24DAS	•	120 Vac	Adjustable 1.5-28 Vdc ; Isolated	300 mA	•	4.000″	2.750″	1.625″	1.10 lbs.		127
PSMN40A24DS	•	120 Vac	Fixed 24 Vdc ; Isolated	1 Amp	•	5.000″	2.750″	2.000″	1.50 lbs.		128

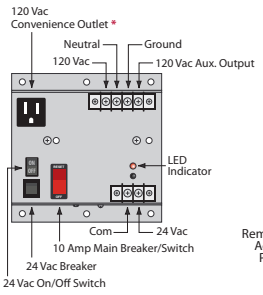
UL = Class 2 (UL Approved UL5085-3) : UL916 Energy Management USA & Canada

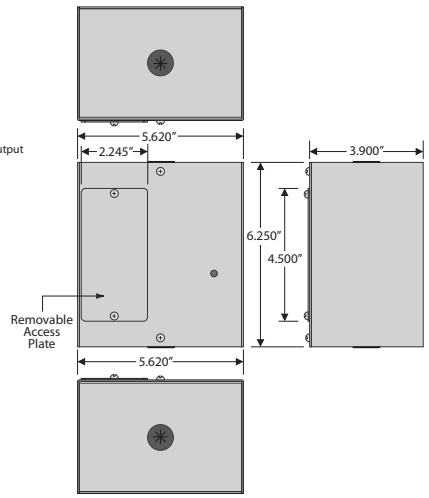
PSC40AB10

Enclosed Single 40 VA Power Supply, 120 to 24 Vac

PSC100AB10

Enclosed Single 100 VA Power Supply, 120 to 24 Vac





* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.

Shown Without Cover

Shown With Cover

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CE

RoHS

Made in USA
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of ARRA 2009

SPECIFICATIONS

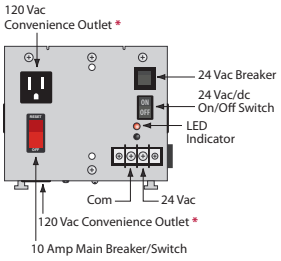
Transformer: One 40 VA Split-Bobbin, Inherently Limited (PSC40AB10) One 100 VA Split-Bobbin, Circuit Breaker (PSC100AB10)
Primary: 120 Vac
Secondary: 24 Vac, w/ LED Indicator
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker

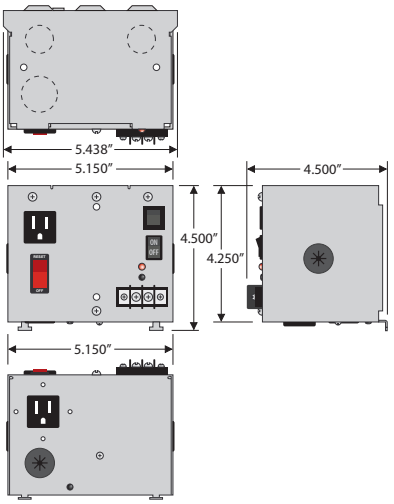
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Mounting: Mounting plate included (as shown)
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS
Dimensions: 6.250″ x 5.620″ x 4.250″
Weight: 4.40 lbs. (PSC40AB10) 5.80 lbs. (PSC100AB10)

Notes:
- To order without enclosure, see PSB40AB10 & PSB100AB10.
- To order UL508, add "-IC" to end of model number.

PSH40A Series

Enclosed Single 40 VA Power Supplies, 120 to 24 Vac





* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.

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RoHS

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PSH40A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH40A	•			External Terminal Strip
PSH40AN				External Terminal Strip
PSH40ANW				Internal Wires
PSH40AW	•			Internal Wires
PSH40AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH40ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH40ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH40AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: One 40 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS, ^ Special Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500″ x 5.438″ x 4.500″
Weight: 4.00 lbs.

Input Wires: "B10" Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires
BLK: 120 Vac
WHT: Common

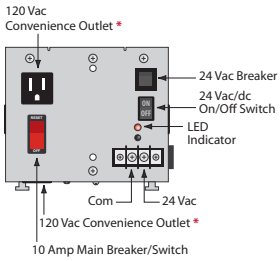
Output Wires: "B10" Models Only
Auxiliary Output
BLU: 120 Vac

"W" Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

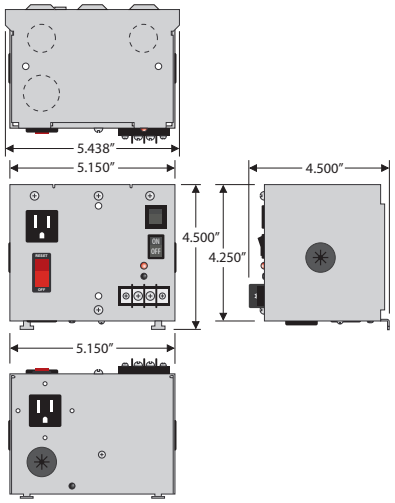
Notes:
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- To order UL508, add "-IC" to end of model number.
- Design is in accordance with ASCE 7-05 Chapter 13: ^
  www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

PSH75A Series

Enclosed Single 75 VA Power Supplies, 480/277/240/208/120 to 24 Vac



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



LISTED Class 2

Made in USA Meets "Buy American" of ARRA 2009

PSH75A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH75A	•			External Terminal Strip
PSH75AN				External Terminal Strip
PSH75ANW				Internal Wires
PSH75AW	•			Internal Wires
PSH75AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH75ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH75ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH75AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: One 75 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500" x 5.438" x 4.500"
Weight: 4.500 lbs.

Input Wires: "B10" Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires**
GRY: 480 Vac
BRN: 277 Vac
ORG: 240 Vac
RED: 208 Vac
WHT: 120 Vac
BLK: Common

Output Wires: "B10" Models Only
Auxiliary Output
BLU: 120 Vac

"W" Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

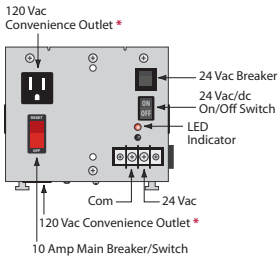
Notes:
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf
- All primary voltages other than 120 Vac will result in the disabling of convenience outlets.**

POWER SUPPLIES

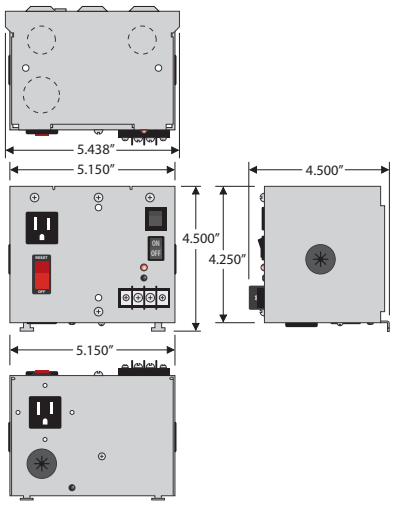
AC POWER SUPPLY

PSH100A Series

Enclosed Single 100 VA Power Supplies, 120 to 24 Vac



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



LISTED Class 2

Made in USA Meets "Buy American" of ARRA 2009

PSH100A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH100A	•			External Terminal Strip
PSH100AN				External Terminal Strip
PSH100ANW				Internal Wires
PSH100AW	•			Internal Wires
PSH100AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH100ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH100ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH100AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: One 100 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500" x 5.438" x 4.500"
Weight: 4.600 lbs.

Input Wires: "B10" Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires
BLK: 120 Vac
WHT: Common

Output Wires: "B10" Models Only
Auxiliary Output
BLU: 120 Vac

"W" Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

Notes:
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- To order UL508, add "-IC" to end of model number.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

PSH40AB10-EXT2

Enclosed Single 40 VA Power Supply, 120 to 24 Vac, with Three Foot Extension Cord

PSH100AB10-EXT2

Enclosed Single 100 VA Power Supply, 120 to 24 Vac, with Three Foot Extension Cord

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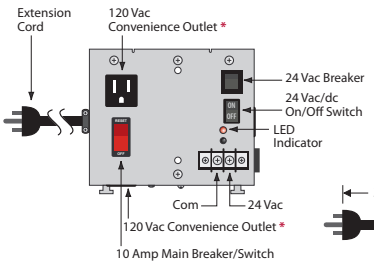
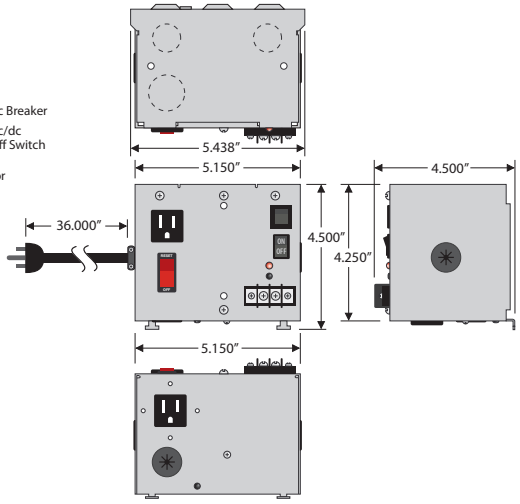




* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.

PLUGS DIRECTLY INTO WIRED OUTLET BOX FOR USE ABOVE FALSE CEILINGS OR IN CONTROL PANELS

POWER SUPPLIES

SPECIFICATIONS

Transformer: One 40 VA (PSH40AB10-EXT2) or One 100 VA (PSH100AB10-EXT2)
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS
Dimensions: 4.500″ x 5.438″ x 4.500″
Weight: 4.00 lbs.

Input Wires: Powercord
BLK: 120 Vac
WHT: Neutral
GRN: Ground

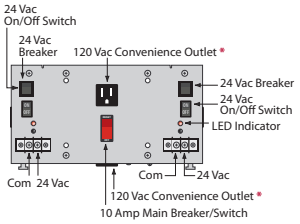
Output Wire: Auxiliary Load Output
BLU: 120 Vac
9 Amp, max.

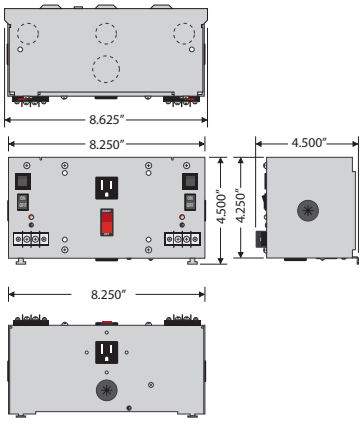
Notes:
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.

AC POWER SUPPLY

PSH40A40A Series

Enclosed Dual 40 VA Power Supplies, 120 to 24 Vac





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* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.

PSH40A40A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH40A40A	•			External Terminal Strip
PSH40A40AN				External Terminal Strip
PSH40A40ANW				Internal Wires
PSH40A40AW	•			Internal Wires
PSH40A40AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH40A40ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH40A40ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH40A40AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: Two 40 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500″ x 8.625″ x 4.500″
Weight: 5.400 lbs.

Input Wires: "B10″ Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires
BLK: 120 Vac
WHT: Common

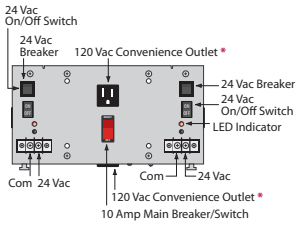
Output Wires: "B10″ Models Only
Auxiliary Output
BLU: 120 Vac

"W″ Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

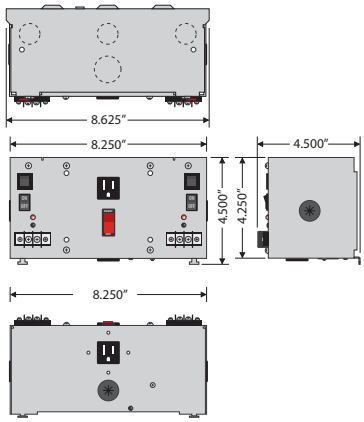
Notes:
- All dual models: Model number denotes location of transformer within enclosure.
  PSH40A40A
  Left side Right side
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- To order UL508, add "-IC" to end of model number.
- Design is in accordance with ASCE 7-05 Chapter 13: ^
  www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

PSH40A75A Series

Enclosed 40 VA (120 to 24 Vac) and 75 VA (Multi-Tap to 24 Vac) Power Supplies



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



c UL us LISTED Class 2 — RoHS — CE — Made in USA Meets "Buy American" of ARRA 2009

PSH40A75A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH40A75A	•			External Terminal Strip
PSH40A75AN				External Terminal Strip
PSH40A75ANW				Internal Wires
PSH40A75AW	•			Internal Wires
PSH40A75AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH40A75ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH40A75ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH40A75AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: One 40 VA and One 75 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500˝ x 8.625˝ x 4.500˝
Weight: 6.800 lbs.

Input Wires: "B10˝ Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
40 VA Primary Wires
BLK: 120 Vac
WHT: Common
75 VA Primary Wires**
GRY: 480 Vac
BRN: 277 Vac
ORG: 240 Vac
RED: 208 Vac
WHT: 120 Vac
BLK: Common

Output Wires: "B10˝ Models Only
Auxiliary Output
BLU: 120 Vac

"W˝ Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

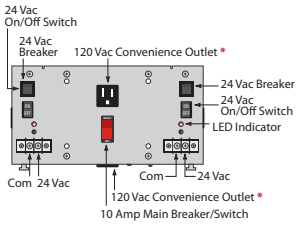
Notes:
- All dual models: Model number denotes location of transformer within enclosure.
  PSH40A75A
  Left side Right side
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13: ^
  www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf
- All primary voltages other than 120 Vac will result in the disabling of convenience outlets.**

POWER SUPPLIES

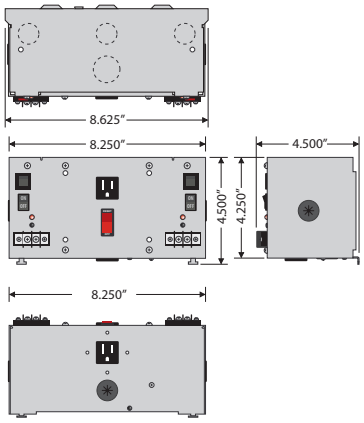
AC POWER SUPPLY

PSH40A100A Series

Enclosed 40 VA and 100 VA Power Supplies, 120 to 24 Vac



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



c UL us LISTED Class 2 — RoHS — CE — Made in USA Meets "Buy American" of ARRA 2009

PSH40A100A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH40A100A	•			External Terminal Strip
PSH40A100AN				External Terminal Strip
PSH40A100ANW				Internal Wires
PSH40A100AW	•			Internal Wires
PSH40A100AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH40A100ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH40A100ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH40A100AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: One 40 VA and One 100 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500˝ x 8.625˝ x 4.500˝
Weight: 6.900 lbs.

Input Wires: "B10˝ Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires
BLK: 120 Vac
WHT: Common

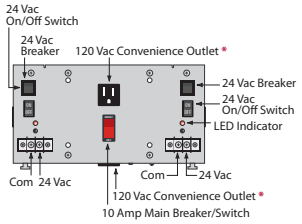
Output Wires: "B10˝ Models Only
Auxiliary Output
BLU: 120 Vac

"W˝ Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

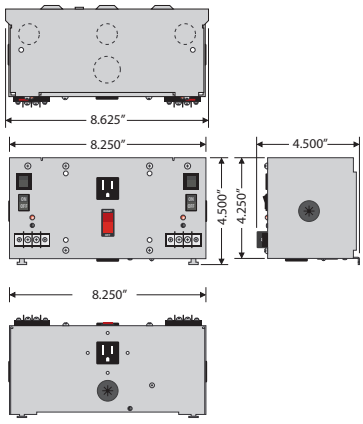
Notes:
- All dual models: Model number denotes location of transformer within enclosure.
  PSH40A100A
  Left side Right side
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- To order UL508, add "-IC" to end of model number.
- Design is in accordance with ASCE 7-05 Chapter 13: ^
  www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

PSH75A75A Series

Enclosed Dual 75 VA Power Supplies, 480/277/240/208/120 to 24 Vac



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



LISTED Class 2

Made in USA Meets "Buy American" of ARRA 2009

PSH75A75A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH75A75A	•			External Terminal Strip
PSH75A75AN				External Terminal Strip
PSH75A75ANW				Internal Wires
PSH75A75AW	•			Internal Wires
PSH75A75AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH75A75ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH75A75ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH75A75AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: Two 75 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500˝ x 8.625˝ x 4.500˝
Weight: 8.400 lbs.

Input Wires: "B10˝ Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires**
GRY: 480 Vac
BRN: 277 Vac
ORG: 240 Vac
RED: 208 Vac
WHT: 120 Vac
BLK: Common

Output Wires: "B10˝ Models Only
Auxiliary Output
BLU: 120 Vac

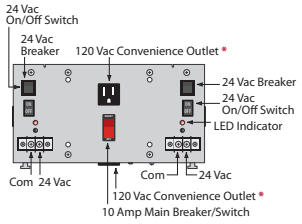
"W˝ Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

Notes:
- All dual models: Model number denotes location of transformer within enclosure.
  PSH75A75A
  Left side | Right side
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf
- All primary voltages other than 120 Vac will result in the disabling of convenience outlets.**

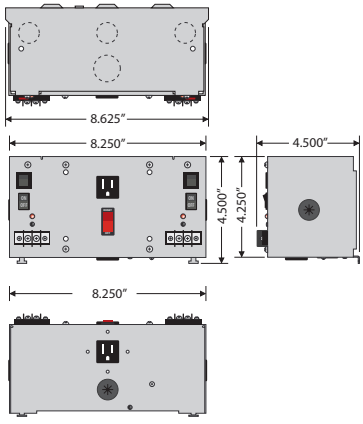
AC POWER SUPPLY

PSH75A100A Series

Enclosed 75 VA (Multi-Tap to 24 Vac) and 100 VA (120 to 24 Vac) Power Supplies



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



LISTED Class 2

Made in USA Meets "Buy American" of ARRA 2009

PSH75A100A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH75A100A	•			External Terminal Strip
PSH75A100AN				External Terminal Strip
PSH75A100ANW				Internal Wires
PSH75A100AW	•			Internal Wires
PSH75A100AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH75A100ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH75A100ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH75A100AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: One 75 VA and One 100 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500˝ x 8.625˝ x 4.500˝
Weight: 8.500 lbs.

Input Wires: "B10˝ Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
75 VA Primary Wires**
GRY: 480 Vac
BRN: 277 Vac
ORG: 240 Vac
RED: 208 Vac
WHT: 120 Vac
BLK: Common
100 VA Primary Wires
BLK: 120 Vac
WHT: Common

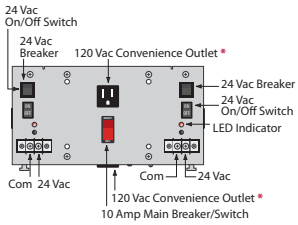
Output Wires: "B10˝ Models Only
Auxiliary Output
BLU: 120 Vac

"W˝ Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

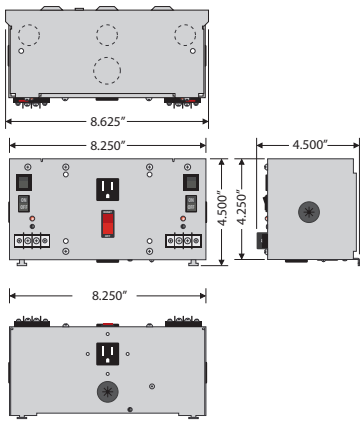
Notes:
- All dual models: Model number denotes location of transformer within enclosure.
  PSH75A100A
  Left side | Right side
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf
- All primary voltages other than 120 Vac will result in the disabling of convenience outlets.**

PSH100A100A Series

Enclosed Dual 100 VA Power Supplies, 120 to 24 Vac



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



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CE

RoHS

Made in USA Meets "Buy American" of ARRA 2009

PSH100A100A SERIES SELECTION GUIDE

Model #	120 Vac Outlets	Aux Output Wire	Main Breaker on Input Power	Secondary Configuration
PSH100A100A	•			External Terminal Strip
PSH100A100AN				External Terminal Strip
PSH100A100ANW				Internal Wires
PSH100A100AW	•			Internal Wires
PSH100A100AB10*	•	•	10 Amp Switch / Breaker	External Terminal Strip
PSH100A100ANB10*		•	10 Amp Switch / Breaker	External Terminal Strip
PSH100A100ANWB10*		•	10 Amp Switch / Breaker	Internal Wires
PSH100A100AWB10*	•	•	10 Amp Switch / Breaker	Internal Wires

SPECIFICATIONS

Transformer: Two 100 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: Outlets, Aux. Output, & Transformer)* Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 4.500˝ x 8.625˝ x 4.500˝
Weight: 8.600 lbs.

Input Wires: "B10˝ Models Only
Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

All Other Models
Primary Wires
BLK: 120 Vac
WHT: Common

Output Wires: "B10˝ Models Only
Auxiliary Output
BLU: 120 Vac

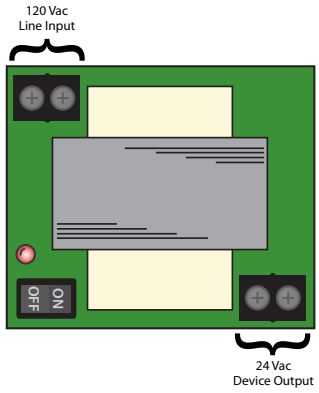
"W˝ Models Only
Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: Common

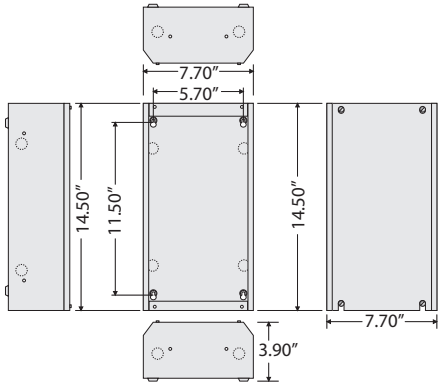
Notes:
- All dual models: Model number denotes location of transformer within enclosure.
  PSH100A100A
  Left side Right side
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- To order UL508, add "-IC" to end of model number.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

POWER SUPPLIES

CTRL-PS

Kit Consisting of Model PSMN40AS and a Metal Enclosure





RoHS

Made in USA Meets "Buy American" of ARRA 2009

Shown With Cover

SPECIFICATIONS

Transformer: One 40 VA
Primary: 120 Vac
Secondary: 24 Vac, isolated
Frequency: 50/60 Hz
Overload Protection: Inherently Limited
Status: LED On = Activated
ON/OFF Switch: 2 Position
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS (PSMN40AS) UL916, C-UL, CE, RoHS (MH1000 Series)
Dimensions: 14.50˝ x 7.70˝ x 3.90˝
Weight: 7.28 lbs.
Housing: NEMA 1 Metal Enclosure with screw cover

Notes:
- Track mounted power supply may be ordered separately as model PSMN40AS.
- 40 VA power supply mounted in MT212-4 track, high/low voltage barrier and 8.75˝ of 35 mm top hat DIN rail for mounting of desired controller in one metal enclosure.
- Controller must be 9.50˝ x 6.75˝ x 3.50˝ or smaller with DIN rail mounting capability, or 9.50˝ x 6.75˝ x 3.125˝ without DIN rail mounting capability.
- Controller not included.

GREAT FOR ZONE & NETWORK CONTROLLERS

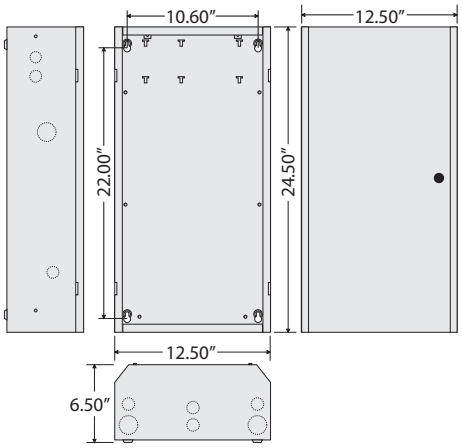
MHP3903100AB10

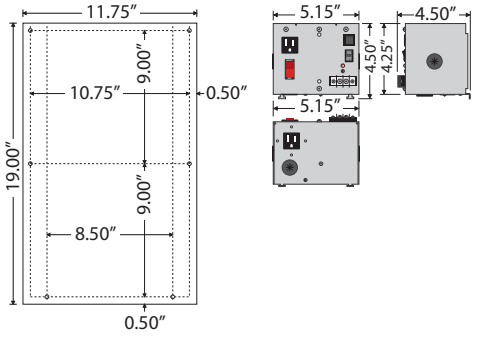
Enclosed Single100 VA Power Supply with Subpanel:
Models MH3900 + SP3803S + PS100AB10

MHP3904100AB10

Enclosed Single100 VA Power Supply with Subpanel:
Models MH3900 + SP3804S + PS100AB10

cULus LISTED Class 2 | CE | RoHS | Made in USA Meets "Buy American" of ARRA 2009





POWER SUPPLY (PS100AB10)

Transformer: One 100 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
(Kills power to entire unit: Outlets, Aux. Output, & Transformer)*
Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS
Dimensions: 4.500″ x 8.625″ x 4.500″
Weight: 4.600 lbs.

Input Wires: Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Output Wires: Auxiliary Output
BLU: 120 Vac

Notes:
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13

SELECTION GUIDE

Model #	Sub-Panel
MHP3903100AB10	Polymetal
MHP3904100AB10	Perforated Steel

POLYMETAL SUB-PANEL (SP3803S)

Mounting Area: 223.25″ square
Approvals: Plenum Rated
Dimensions: 19.00″ x 11.75″
Weight: 1.705 lbs.

PERFORATED STEEL SUB-PANEL (SP3804S)

Mounting Area: 223.25″ square
Approvals: Plenum Rated
Dimensions: 19.00″ x 11.75″
Weight: 2.94 lbs.

METAL HOUSING (MH3900)

Construction: 14 Gauge Steel
Cover Type: Reversible Hook Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS
Dimensions: 12.50″ (W) x 24.50″ (H) x 6.50″ (D)
Weight: 24.30 lbs.

MHP3903100A100AB10

Enclosed Dual 100 VA Power Supplies with Subpanel:
Models MH3900 + SP3803S + PS100A100AB10

MHP3904100A100AB10

Enclosed Dual 100 VA Power Supplies with Subpanel:
Models MH3900 + SP3804S + PS100A100AB10

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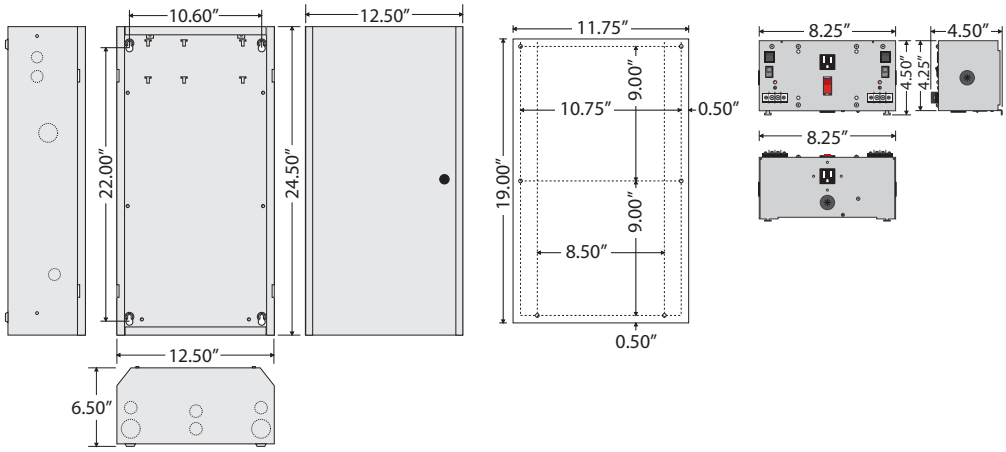


POWER SUPPLY (PS100A100AB10)

Transformer: Two 100 VA Split-Bobbin
Over Current Protection: Circuit Breaker
Frequency: 50/60 Hz
24 Vac ON/OFF: On / Off Switch & Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
(Kills power to entire unit: Outlets, Aux. Output, & Transformer)*
Total Combined Output 9A
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS
Dimensions: 4.500″ x 8.625″ x 4.500″
Weight: 7.000 lbs.

Input Wires: Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Outlet Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Output Wires: Auxiliary Output
BLU: 120 Vac

Notes:
- Output derating may exceed 20% due to elevated ambient temperature or heat buildup in device over time.
- Design is in accordance with ASCE 7-05 Chapter 13

SELECTION GUIDE

Model #	Sub-Panel
MHP3903100A100AB10	Polymetal
MHP3904100A100AB10	Perforated Steel

POLYMETAL SUB-PANEL (SP3803S)

Mounting Area: 223.25″ square
Approvals: Plenum Rated
Dimensions: 19.00″ x 11.75″
Weight: 1.705 lbs.

PERFORATED STEEL SUB-PANEL (SP3804S)

Mounting Area: 223.25″ square
Approvals: Plenum Rated
Dimensions: 19.00″ x 11.75″
Weight: 2.94 lbs.

METAL HOUSING (MH3900)

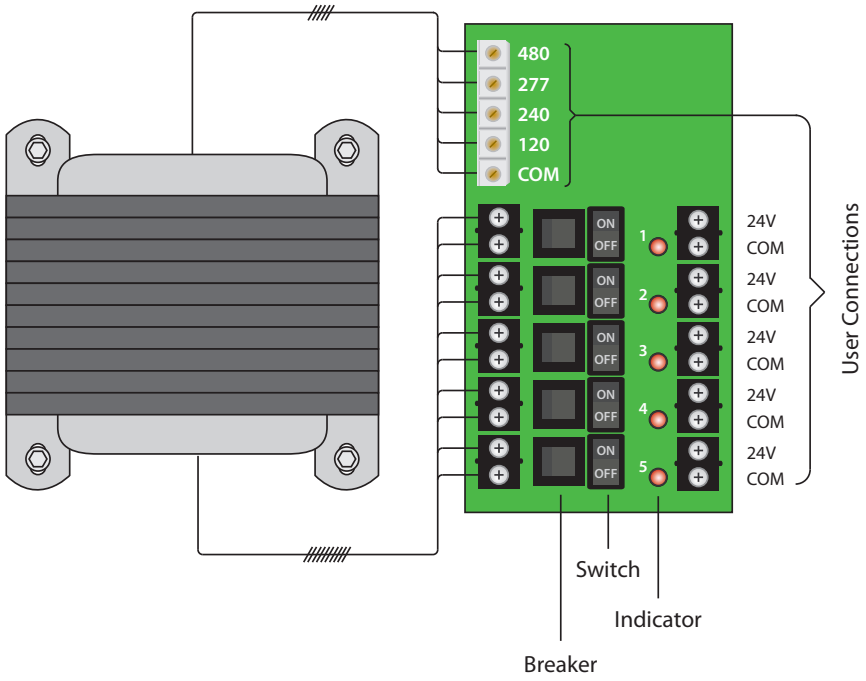
Construction: 14 Gauge Steel
Cover Type: Reversible Hook Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS
Dimensions: 12.50″ (W) x 24.50″ (H) x 6.50″ (D)
Weight: 24.30 lbs.

PSH500A

Enclosed 500VA Power Supply with Five 100VA Class 2 Outputs, 480/277/240/120 Vac to 24 Vac

PSMN500A

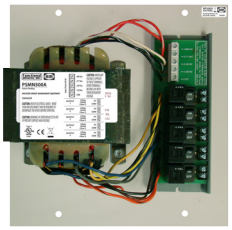
Open Style 500VA Power Supply with Five 100VA Class 2 Outputs, 480/277/240/120 Vac to 24 Vac



PSH500A Shown With Cover

PSH500A Shown Without Cover

PSMN500A



LISTED Class 2

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Transformer: One (1) 500 VA
Over Current Protection: Circuit Breaker
Primary: 480/277/240/120 Vac
Frequency: 50/60 Hz
Dimensions: 12.125˝ x 12.125˝ x 6.000˝ (PSH500A)
11.330˝ x 11.400˝ x 5.000˝ (PSMN500A)
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Sub-Panel: Plenum Rated Polymetal Sub-Panel (PSMN500A)
Housing: NEMA1 Metal Enclosure (PSH500A)
Weight: 30.16 lbs. (PSH500A)
20.60 lbs. (PSMN500A)

5 Secondaries:
24 Vac, with LED Indicators
4 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
480/277/240/120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
5 Ungrounded, Isolated, 100 VA, Class 2, 24 Vac Outputs. Terminals accept 12-26 AWG wire.

Ambient Temperature Derating:
4A up to 40˚ C ; 3A up to 50˚ C ; 2A up to 55˚ C
(When All 5 Outputs Operated Simultaneously)

Notes:
- To order UL508, add "-IC" to end of model number.
- Open style (PSMN500A) is mounted to sub-panel SP3303 for shipping. Sub-panel may be removed to suit application.
- Primary voltage terminal cover available. See model APS53-TC on page 141.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

Standby Wattage:
48.515 W @ 120 Vac
48.699 W @ 240 Vac
49.564 W @ 277 Vac
48.255 W @ 480 Vac

Full Load Primary Current:
4.66 A @ 120 Vac
2.41 A @ 240 Vac
2.06 A @ 277 Vac
1.17 A @ 480 Vac

Secondary Output Voltage vs. Load:
24.0 V @ 1 Amp
23.0 V @ 2 Amp
21.8 V @ 3 Amp
21.1 V @ 4 Amp

- With 240 Vac primary input voltage
- When all 5 outputs operated simultaneously, at room temperature

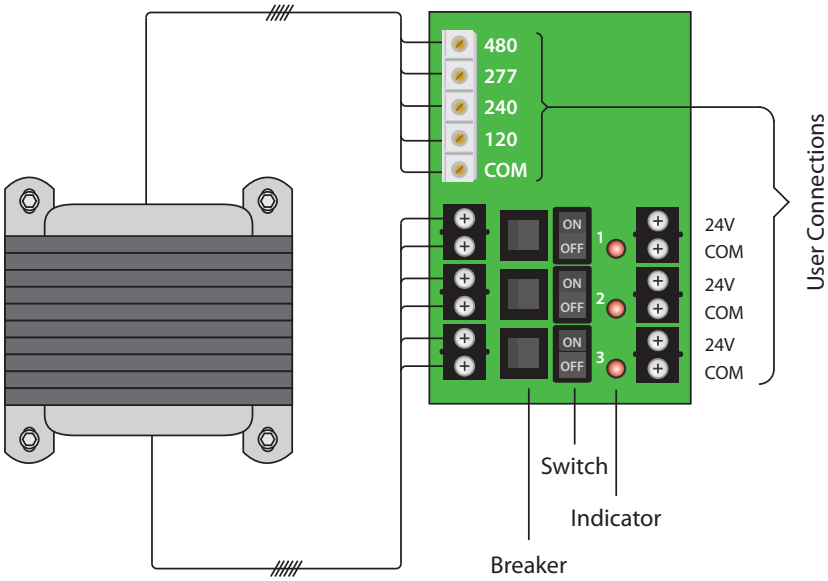
GREAT FOR VAV APPLICATIONS

PSH300A

Enclosed 300VA Power Supply with Three 100VA Class 2 Outputs, 480/277/240/120 Vac to 24 Vac

PSMN300A

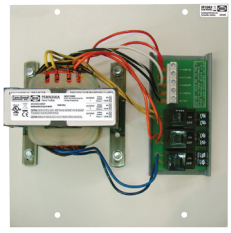
Open Style 300VA Power Supply with Three 100VA Class 2 Outputs, 480/277/240/120 Vac to 24 Vac



PSH300A Shown With Cover

PSH300A Shown Without Cover

PSMN300A



LISTED Class 2

Made in USA Meets "Buy American" of ARRA 2009

POWER SUPPLIES

SPECIFICATIONS

Transformer: One (1) 300 VA
Over Current Protection: Circuit Breaker
Primary: 480/277/240/120 Vac
Frequency: 50/60 Hz
Dimensions: 12.125˝ x 12.125˝ x 6.000˝ (PSH300A)
11.330˝ x 11.400˝ x 4.500˝ (PSMN300A)
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Sub-Panel: Plenum Rated Polymetal Sub-Panel (PSMN300A)
Housing: NEMA1 Metal Enclosure (PSH300A)
Weight: 20.00 lbs. (PSH300A)
11.00 lbs. (PSMN300A)

3 Secondaries:
24 Vac, with LED Indicators
4 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
480/277/240/120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
3 Ungrounded, Isolated, 100 VA, Class 2, 24 Vac Outputs. Terminals accept 12-26 AWG wire.

Ambient Temperature Derating:
4A up to 40˚ C ; 3A up to 50˚ C ; 2A up to 55˚ C
(When All 3 Outputs Operated Simultaneously)

Notes:
- To order UL508, add "-IC" to end of model number.
- Open style (PSMN300A) is mounted to sub-panel SP3303 for shipping. Sub-panel may be removed to suit application.
- Primary voltage terminal cover available. See model APS53-TC on page 141.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

Standby Wattage:
16.61 W @ 120 Vac
17.70 W @ 240 Vac
16.26 W @ 277 Vac
19.20 W @ 480 Vac

Full Load Primary Current:
2.66 A @ 120 Vac
1.36 A @ 240 Vac
1.18 A @ 277 Vac
0.68 A @ 480 Vac

Secondary Output Voltage vs. Load:
24.5 V @ 1 Amp
23.5 V @ 2 Amp
22.8 V @ 3 Amp
22.3 V @ 4 Amp

- With 120 Vac primary input voltage
- When all 3 outputs operated simultaneously, at room temperature

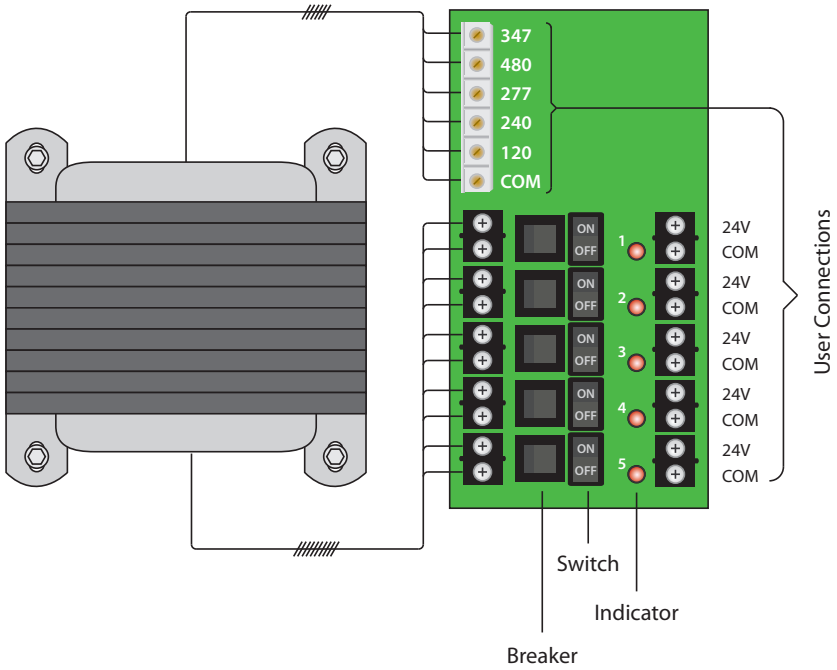
GREAT FOR VAV APPLICATIONS

PSH200A

Enclosed 200VA Power Supply with Five 40VA Class 2 Outputs, 480/347/277/240/120 Vac to 24 Vac

PSMN200A

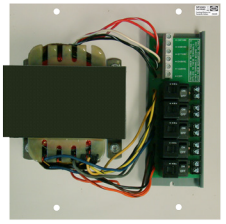
Open Style 200VA Power Supply with Five 40VA Class 2 Outputs, 480/347/277/240/120 Vac to 24 Vac



PSH200A Shown With Cover

PSH200A Shown Without Cover

PSMN200A



c UL us LISTED Class 2

CE

RoHS

Made in USA
Meets "Buy American" of ARRA 2009

POWER SUPPLIES

SPECIFICATIONS

Transformer: One (1) 200 VA
Over Current Protection: Circuit Breaker
Primary: 480/347/277/240/120 Vac
Frequency: 50/60 Hz
Dimensions: 12.125˝ x 12.125˝ x 6.000˝ (PSH200A)
11.330˝ x 11.400˝ x 5.000˝ (PSMN200A)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Sub-Panel: Plenum Rated Polymetal Sub-Panel (PSMN200A)
Housing: NEMA1 Metal Enclosure (PSH200A)
Weight: 18.60 lbs. (PSH200A)
8.00 lbs. (PSMN200A)

5 Secondaries:
24 Vac, with LED Indicators

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
480/347/277/240/120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
5 Ungrounded, Isolated, 40 VA, Class 2, 24 Vac Outputs. Terminals accept 12-26 AWG wire.

Ambient Temperature Derating:
1.6A up to 40˚ C ; 1.2A up to 60˚ C
(When All 5 Outputs Operated Simultaneously)

Notes:
- Open style (PSMN200A) is mounted to sub-panel SP3303 for shipping. Sub-panel may be removed to suit application.
- Primary voltage terminal cover available. See model APS53-TC on page 141.
- Design is in accordance with ASCE 7-05 Chapter 13: ^ www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

Standby Wattage:
18.93 W @ 120 Vac
22.08 W @ 240 Vac
22.33 W @ 277 Vac
23.11 W @ 347 Vac
25.24 W @ 480 Vac

Full Load Primary Current:
2.57 A @ 120 Vac
1.44 A @ 240 Vac
1.17 A @ 277 Vac
0.95 A @ 347 Vac
0.73 A @ 480 Vac

Secondary Output Voltage vs. Load:
24.9 V @ 0.5 Amp
24.0 V @ 1.0 Amp
23.9 V @ 1.4 Amp
23.7 V @ 1.6 Amp

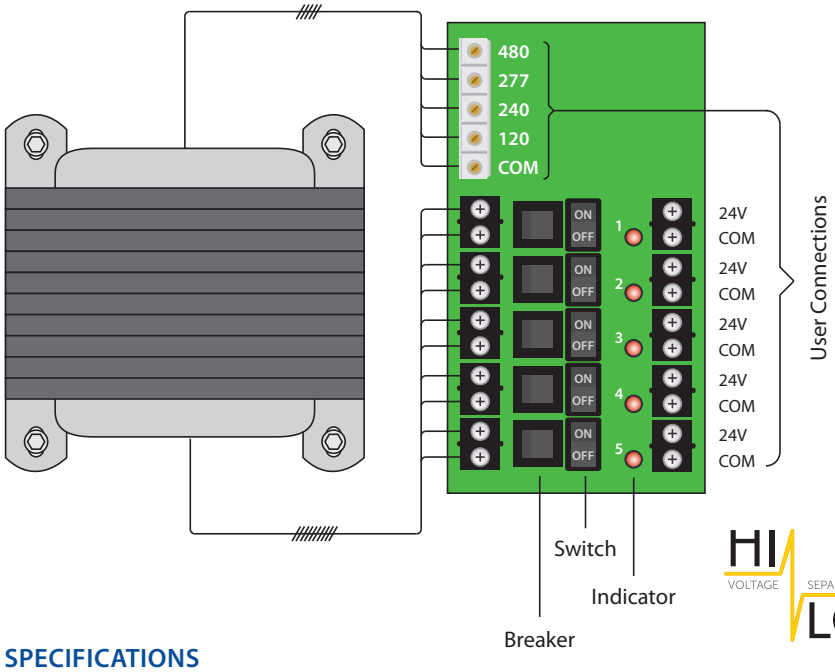
- With 120 Vac primary input voltage
- When all 5 outputs operated simultaneously, at room temperature

347 VAC INPUT VOLTAGE PROVIDES DIRECT CONVERSION FROM MANY CANADIAN SYSTEMS TO CLASS 2 OUTPUTS

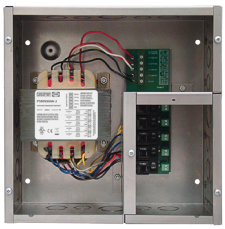
PERFECT FOR ISOLATING UP TO FIVE ZONE CONTROLLERS

PSH500A-LVC

Enclosed 500VA Power Supply, High/Low Voltage Separation with Five 100VA Class 2 Outputs, 480/277/240/120 Vac to 24 Vac



PSH500A-LVC
Shown Without High Voltage Cover & Low Voltage Access Plate



PSH500A-LVC
Shown Without Low Voltage Access Plate

PSH500A-LVC
Shown With Full Cover & Access Plate

c UL us LISTED Class 2

CE

RoHS

Made in USA
Meets "Buy American" of ARRA 2009

POWER SUPPLIES

SPECIFICATIONS

Transformer: One (1) 500 VA
Over Current Protection: Circuit Breaker
Primary: 480/277/240/120 Vac
Frequency: 50/60 Hz
Dimensions: 12.125˝ x 12.125˝ x 6.000˝
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Housing: NEMA1 Metal Enclosure with high/low separation
Weight: 32.30 lbs.

5 Secondaries:
24 Vac, with LED Indicators
4 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
480/277/240/120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
5 Ungrounded, Isolated, 100 VA Class 2, 24 Vac Outputs.
Removable Terminals accept16-22 AWG wire.

Ambient Temperature Derating:
4A up to 40˚ C ; 3A up to 50˚ C ; 2A up to 55˚ C
(When All 5 Outputs Operated Simultaneously)

Notes:
^Design is in accordance with ASCE 7-05 Chapter 13: www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

Standby Wattage:
48.515 W @ 120 Vac
48.699 W @ 240 Vac
49.564 W @ 277 Vac
48.255 W @ 480 Vac

Full Load Primary Current:
4.66 A @ 120 Vac
2.41 A @ 240 Vac
2.06 A @ 277 Vac
1.17 A @ 480 Vac

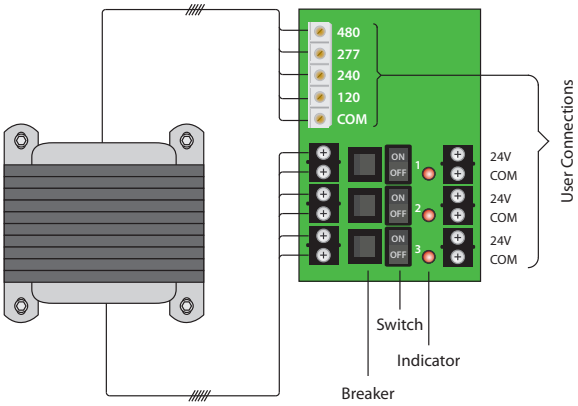
Secondary Output Voltage vs. Load:
24.0 V @ 1 Amp
23.0 V @ 2 Amp
21.8 V @ 3 Amp
21.1 V @ 4 Amp

- With 240 Vac primary input voltage
- When all 5 outputs operated simultaneously, at room temperature

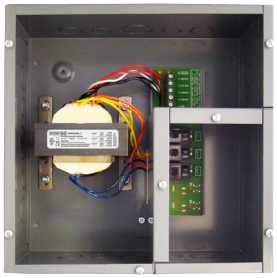
AC POWER SUPPLY

PSH300A-LVC

Enclosed 300VA Power Supply with Three 100VA Class 2 Outputs,
480/277/240/120 Vac to 24 Vac



HI VOLTAGE SEPARATION LO™



PSH300A-LVC
Shown Without High Voltage Cover & Low Voltage Access Plate

PSH300A-LVC
Shown Without Low Voltage Access Plate

PSH300A-LVC
Shown With Full Cover & Access Plate

c UL us LISTED Class 2

CE

RoHS

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Transformer: One (1) 300 VA
Over Current Protection: Circuit Breaker
Primary: 480/277/240/120 Vac
Frequency: 50/60 Hz
Dimensions: 12.125˝ x 12.125˝ x 6.000˝
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Housing: NEMA1 Metal Enclosure
Weight: 22.46 lbs.

Notes:
^ Design is in accordance with ASCE 7-05 Chapter 13: www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

3 Secondaries:
24 Vac, with LED Indicators
4 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
480/277/240/120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
3 Ungrounded, Isolated, 100 VA, Class 2, 24 Vac Outputs. Terminals accept 12-26 AWG wire.

Ambient Temperature Derating:
4A up to 40˚ C ; 3A up to 50˚ C ; 2A up to 55˚ C
(When All 3 Outputs Operated Simultaneously)

Standby Wattage:
16.61 W @ 120 Vac
17.70 W @ 240 Vac
16.26 W @ 277 Vac
19.20 W @ 480 Vac

Full Load Primary Current:
2.66 A @ 120 Vac
1.36 A @ 240 Vac
1.18 A @ 277 Vac
0.68 A @ 480 Vac

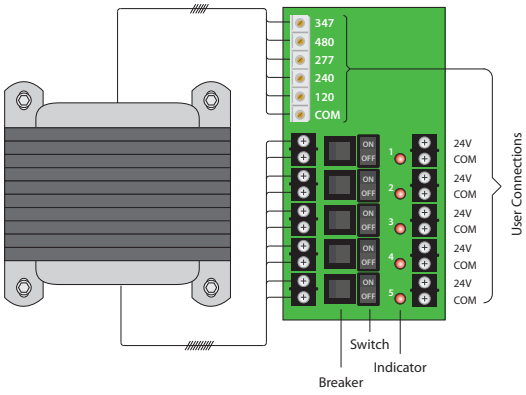
Secondary Output Voltage vs. Load:
24.5 V @ 1 Amp
23.5 V @ 2 Amp
22.8 V @ 3 Amp
22.3 V @ 4 Amp

- With 120 Vac primary input voltage
- When all 3 outputs operated simultaneously, at room temperature

AC POWER SUPPLY

PSH200A-LVC

Enclosed 200VA Power Supply with Five 40VA Class 2 Outputs,
480/347/277/240/120 Vac to 24 Vac



HI VOLTAGE SEPARATION LO™

PSH200A-LVC
Shown Without High Voltage Cover & Low Voltage Access Plate

PSH200A-LVC
Shown Without Low Voltage Access Plate

PSH200A-LVC
Shown With Full Cover & Access Plate

c UL us LISTED Class 2

CE

RoHS

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Transformer: One (1) 200 VA
Over Current Protection: Circuit Breaker
Primary: 480/347/277/240/120 Vac
Frequency: 50/60 Hz
Dimensions: 12.125˝ x 12.125˝ x 6.000˝
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Housing: NEMA1 Metal Enclosure
Weight: 20.30 lbs.

Notes:
^ Design is in accordance with ASCE 7-05 Chapter 13: www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

5 Secondaries:
24 Vac, with LED Indicators

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
480/347/277/240/120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
5 Ungrounded, Isolated, 40 VA, Class 2, 24 Vac Outputs. Terminals accept 12-26 AWG wire.

Ambient Temperature Derating:
1.6A up to 40˚ C ; 1.2A up to 60˚ C
(When All 5 Outputs Operated Simultaneously)

Standby Wattage:
18.93 W @ 120 Vac
22.08 W @ 240 Vac
22.33 W @ 277 Vac
23.11 W @ 347 Vac
25.24 W @ 480 Vac

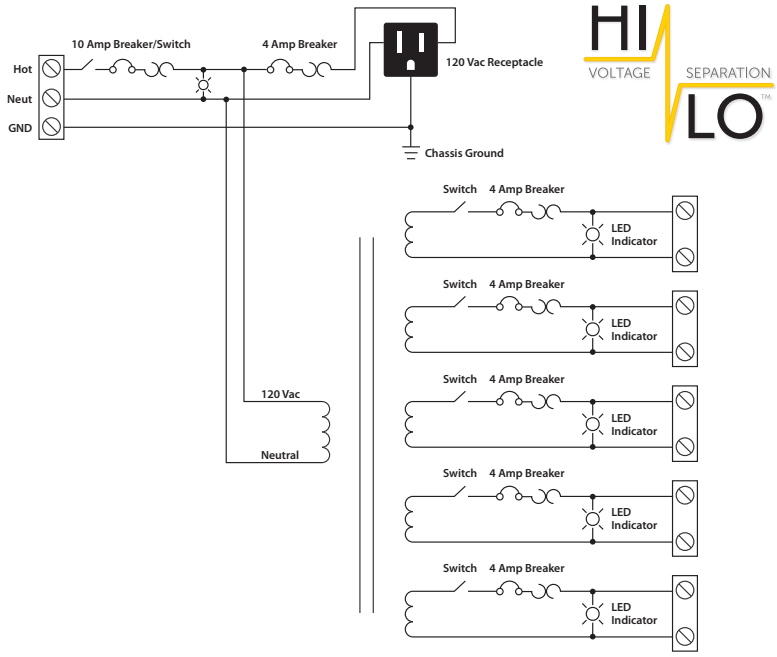
Full Load Primary Current:
2.57 A @ 120 Vac
1.44 A @ 240 Vac
1.17 A @ 277 Vac
0.95 A @ 347 Vac
0.73 A @ 480 Vac

Secondary Output Voltage vs. Load:
24.9 V @ 0.5 Amp
24.0 V @ 1.0 Amp
23.9 V @ 1.4 Amp
23.7 V @ 1.6 Amp

- With 120 Vac primary input voltage
- When all 5 outputs operated simultaneously, at room temperature

PSH500AB10-LVC

Enclosed 500VA Power Supply, High/Low Voltage Separation with Five 100VA Class 2 Outputs, 120 Vac to 24 Vac with 120 Vac Receptacle



PSH500AB10-LVC
Shown With High Voltage Cover & Low Voltage Access Plate

SPECIFICATIONS

Transformer: One (1) 500 VA
Over Current Protection: Circuit Breaker
Primary: 120 Vac
Frequency: 50/60 Hz
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: 1 Outlet & Transformer)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 12.125˝ x 12.125˝ x 6.000˝
Housing: NEMA1 Metal Enclosure with high/low separation
Weight: 32.30 lbs.

5 Secondaries:
24 Vac, with LED Indicators
4 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
5 Ungrounded, Isolated, 100 VA Class 2, 24 Vac Outputs. Removable Terminals accept16-22 AWG wire.

Ambient Temperature Derating:
4A up to 40˚ C ; 3A up to 50˚ C ; 2A up to 55˚ C (When All 5 Outputs Operated Simultaneously)

Standby Wattage:
48.515 W @ 120 Vac

Full Load Primary Current:
4.66 A @ 120 Vac

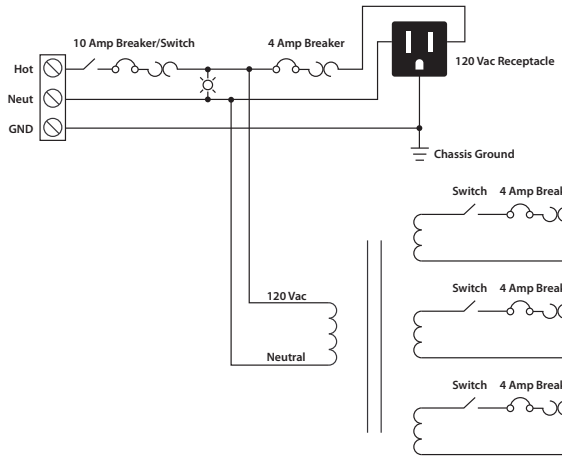
Secondary Output Voltage vs. Load:
24.0 V @ 1 Amp
23.0 V @ 2 Amp
21.8 V @ 3 Amp
21.1 V @ 4 Amp

- When all 5 outputs operated simultaneously, at room temperature

Notes:
^Design is in accordance with ASCE 7-05 Chapter 13:
www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf
- 4A (Breaker protected) Convenience Receptacle Provided

PSH300AB10-LVC

Enclosed 300VA Power Supply, High/Low Voltage Separation with Three 100VA Class 2 Outputs, 120 Vac to 24 Vac with 120 Vac Receptacle



HI VOLTAGE SEPARATION LO™

PSH300AB10-LVC
Shown With High Voltage Cover & Low Voltage Access Plate

c UL us LISTED Class 2

CE

RoHS

SPECIFICATIONS

Transformer: One (1) 300 VA
Over Current Protection: Circuit Breaker
Primary: 120 Vac
Frequency: 50/60 Hz
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: 1 Outlet & Transformer)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 12.125˝ x 12.125˝ x 6.000˝
Housing: NEMA1 Metal Enclosure with high/low separation
Weight: 22.12 lbs.

3 Secondaries:
24 Vac, with LED Indicators
4 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
3 Ungrounded, Isolated, 100 VA Class 2, 24 Vac Outputs. Removable Terminals accept16-22 AWG wire.

Ambient Temperature Derating:
4A up to 40˚ C ; 3A up to 50˚ C ; 2A up to 55˚ C
(When All 5 Outputs Operated Simultaneously)

Standby Wattage:
16.61 W @ 120 Vac

Full Load Primary Current:
2.66 A @ 120 Vac

Secondary Output Voltage vs. Load:
24.5 V @ 1 Amp
23.5 V @ 2 Amp
22.8 V @ 3 Amp
22.3 V @ 4 Amp

- When all 5 outputs operated simultaneously, at room temperature

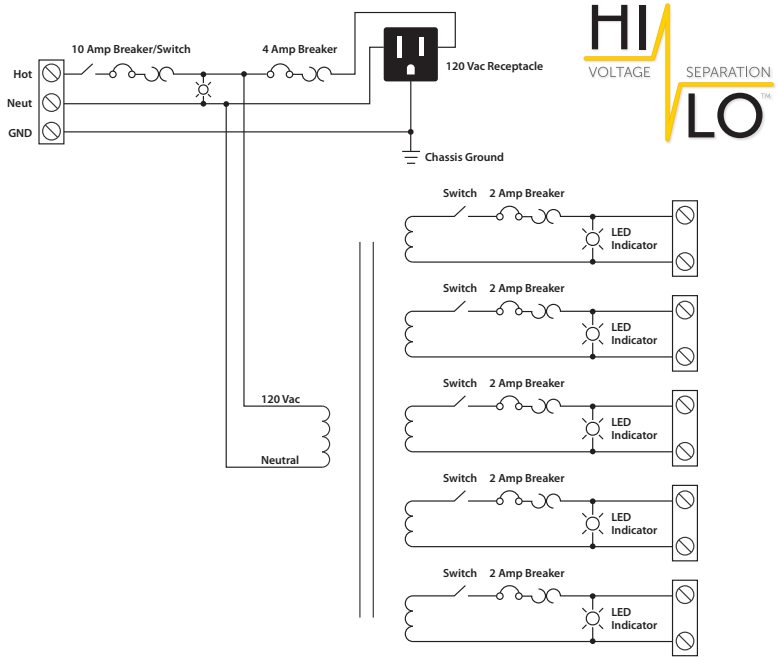
Notes:

^Design is in accordance with ASCE 7-05 Chapter 13:
www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

- 4A (Breaker protected) Convenience Receptacle Provided

PSH200AB10-LVC

Enclosed 200VA Power Supply, High/Low Voltage Separation with Five 40VA Class 2 Outputs, 120 Vac to 24 Vac with 120 Vac Receptacle



HI VOLTAGE SEPARATION LO™

PSH200AB10-LVC
Shown With High Voltage Cover & Low Voltage Access Plate

c UL us LISTED Class 2

CE

RoHS

POWER SUPPLIES

SPECIFICATIONS

Transformer: One (1) 200 VA
Over Current Protection: Circuit Breaker
Primary: 120 Vac
Frequency: 50/60 Hz
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit: 1 Outlet & Transformer)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS, Special ^ Seismic Certification of Equipment and Components: OSP-0201-10
Dimensions: 12.125˝ x 12.125˝ x 6.000˝
Housing: NEMA1 Metal Enclosure with high/low separation
Weight: 20.30 lbs.

5 Secondaries:
24 Vac, with LED Indicators
2 Amp breaker for each output

24 Vac ON/OFF:
On / Off Switch & Breaker

Input:
120 Vac Finger-Safe Terminals, 8-18 AWG

Output:
5 Ungrounded, Isolated, 40 VA Class 2, 24 Vac Outputs. Removable Terminals accept16-22 AWG wire.

Ambient Temperature Derating:
1.6A up to 40˚ C ; 1.2A up to 60˚ C
(When All 5 Outputs Operated Simultaneously)

Standby Wattage:
18.93 W @ 120 Vac

Full Load Primary Current:
2.57 A @ 120 Vac

Secondary Output Voltage vs. Load:
24.9 V @ 0.5 Amp
24.0 V @ 1.0 Amp
23.9 V @ 1.4 Amp
23.7 V @ 1.6 Amp

- When all 5 outputs operated simultaneously, at room temperature

Notes:

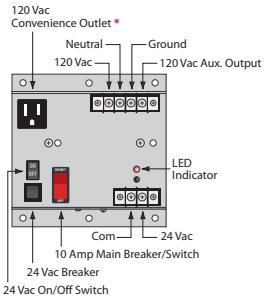
^Design is in accordance with ASCE 7-05 Chapter 13:
www.oshpd.ca.gov/FDD/Pre-Approval/OSP-0201-10.pdf

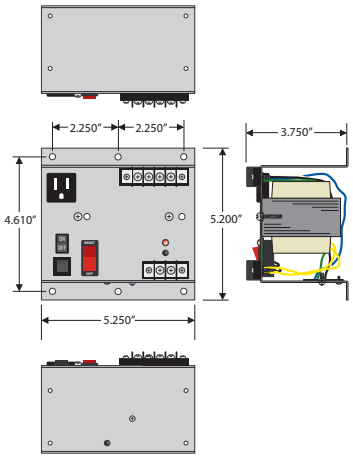
- 4A (Breaker protected) Convenience Receptacle Provided

AC POWER SUPPLY: 120 VAC TO 24 VAC

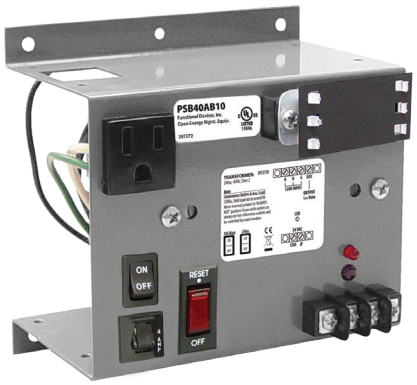
PSB40AB10
Panel Mount 40 VA Power Supply, 120 to 24 Vac

PSB100AB10
Panel Mount 100 VA Power Supply, 120 to 24 Vac





* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.



LISTED Class 2

RoHS

Made in USA
Meets "Buy American" of ARRA 2009

REMOVABLE TERMINAL COVER PROVIDED

POWER SUPPLIES

SPECIFICATIONS

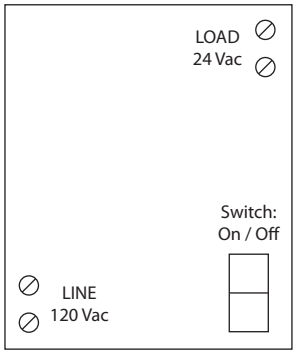
Transformer: One 40 VA Split-Bobbin (PSB40AB10)
One 100 VA Split-Bobbin (PSB100AB10)
Primary: 120 Vac
Secondary: 24 Vac, w/ LED Indicator
Frequency: 50/60 Hz
Over Current Protection: Inherently Limited + Circuit Breaker (PSB40AB10)
Circuit Breaker (PSB100AB10)
24 Vac ON/OFF: On / Off Switch
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
(Kills power to entire unit:
Outlets, Aux. Output, & Transformer)*
Total Combined Output 9A

Mounting: Panel mount
Approvals: Class 2 (UL Approved UL5085-3), UL916, UL508, C-UL, CE, RoHS
Dimensions: 5.200″ x 5.250″ x 3.750″
Weight: 2.18 lbs. (PSB40AB10)
3.58 lbs. (PSB100AB10)

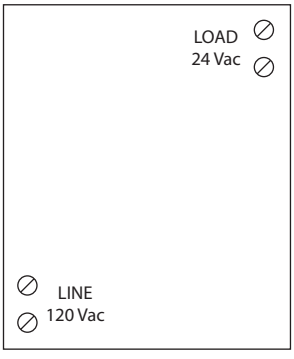
Notes:
- To order UL508, add "-IC" to end of model number.

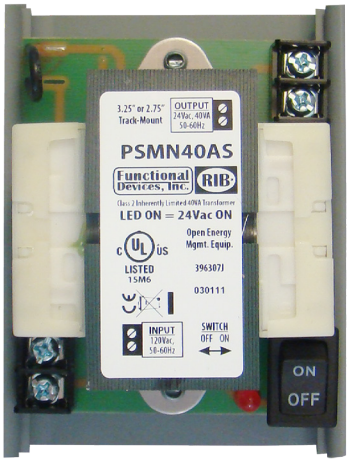
AC POWER SUPPLY: 120 VAC TO 24 VAC

PSMN40AS
2.75″ Track Mount 40 VA Power Supply, 120 Vac to 24 Vac, with Switch



PSMN40A
2.75″ Track Mount 40 VA Power Supply, 120 Vac to 24 Vac





LISTED Class 2

RoHS

Made in USA
Meets "Buy American" of ARRA 2009

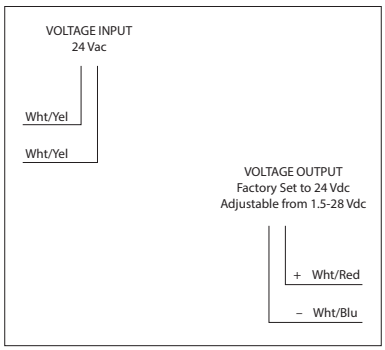
SPECIFICATIONS

Transformers: One 40 VA
Primary: 120 Vac
Secondary: 24 Vac, isolated
Frequency: 50/60 Hz
Overload Protection: Inherently limited
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: LED On = Secondary Voltage Present
Dimensions: 2.000″ x 2.750″ x 3.250″
Track Mount: MT212-4 Mounting Track Supplied
Weight: 1.60 lbs.
ON/OFF Switch: 2 Position (PSMN40AS)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

DC POWER SUPPLY: 24 VAC TO 1.5 - 28 VDC

PSP24DA

Enclosed Non-Isolated Linear DC Power Supply,
24 Vac to 1.5-28 Vdc Adjustable Output



c UL us LISTED Class 2

CE

RoHS

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

Voltage Input: 24 Vac, full-wave rectified
Voltage Output: 1.5 - 28 Vdc non-isolated
Frequency: 50/60 Hz
Overload Protection: Electrical and Thermal, Auto-Reset
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT nipple
Wires: 16″, 600V Rated
Weight: .30 lbs.
ON/OFF Switch: None
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1

Output Current Ratings:
116 mA @ 10 Vdc
125 mA @ 12 Vdc
300 mA @ 24 Vdc

Input Current Rating:
550 mA Maximum

Percent Ripple:
0.0016%, 24 Vdc @ 300 mA

Regulation:
Load: 0.04% No Load to Full Load
Line: 0.0125 V/V

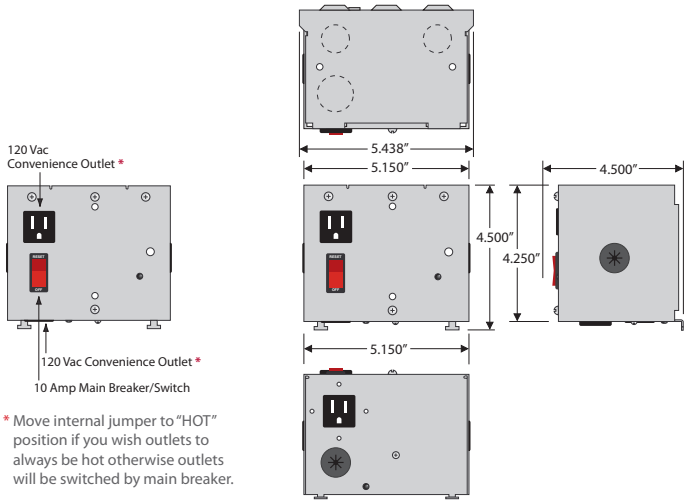
Notes:
- Requires a separate ungrounded transformer when used in conjunction with 1/2 wave rectified power supplies, grounded 24 Vac transformers, or when 24 Vac and 24 Vdc are connected in common.

POWER SUPPLIES

DC POWER SUPPLY: 120 VAC TO 24 VDC

PSH24DWB10

Enclosed Single Switching DC Power Supply 120 to 24 Vdc @ 2.5 Amp



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

Input Voltage: 120 Vac
Frequency: 50/60 Hz
DC Output: 24 Vdc @ 2.5 Amp
Over Current Protection: Circuit Breaker
Main Breaker ON/OFF: Switch / Breaker (10 Amp) (Kills power to entire unit)*
Total Combined Output 9A
Operating Temperature: 32 to 122˚F
Dimensions: 4.500″ x 5.438″ x 4.500″
Weight: 2.980 lbs.

Input Wires: Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Notes:
- This device is not certified for use as a Class 2 power source.

Output Wires: DC Supply Output
WHT/RED: 24 Vdc
WHT/BLU: 24 Vdc COM

Auxiliary Output
BLU: 120 Vac

AC & DC POWER SUPPLY: 120 VAC TO 24 VAC AND 24 VDC

PSH100A24DWB10

Enclosed Power Supply, 100 VA (120 to 24 Vac) and Switching 120 to 24Vdc @ 2.5 Amp

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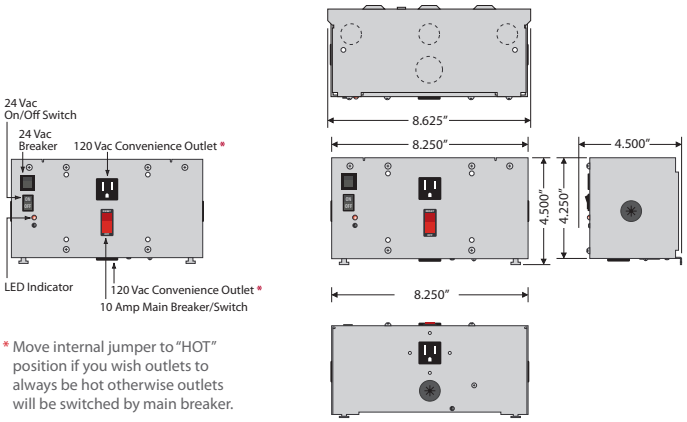
of ARRA 2009



* Move internal jumper to "HOT" position if you wish outlets to always be hot otherwise outlets will be switched by main breaker.

SPECIFICATIONS

Transformer: One 100 VA Split-Bobbin
Voltage Input: 120 Vac
Frequency: 50/60 Hz
Over Current Protection: Circuit Breaker
24 Vac ON/OFF: Switch / Breaker (10 Amp)
Main Breaker ON/OFF: (Kills power to entire unit: Outlets, Aux. Output, & Transformer, and 24 Vdc)*
Total Combined Output 9A
Dimensions: 4.500˝ x 8.625˝ x 4.500˝
Weight: 5.600 lbs.

Input Wires: Input Power Wires
BLK: 120 Vac
WHT: Neutral
GRN: Ground

Notes:
• This device is not certified for use as a Class 2 power source.

Output Wires: DC Supply Output
WHT/RED: 24 Vdc
WHT/BLU: 24 Vdc COM

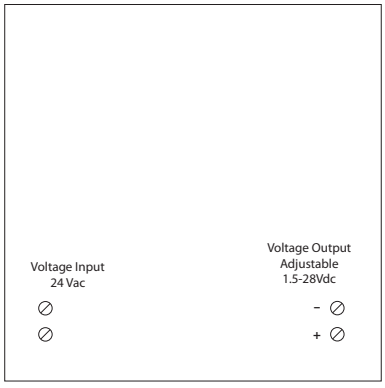
Auxiliary Output
BLU: 120 Vac

Transformer Output
WHT/YEL: 24 Vac
WHT/BLU: 24 Vac COM

DC POWER SUPPLY: 24 VAC TO 1.5 - 28 VDC

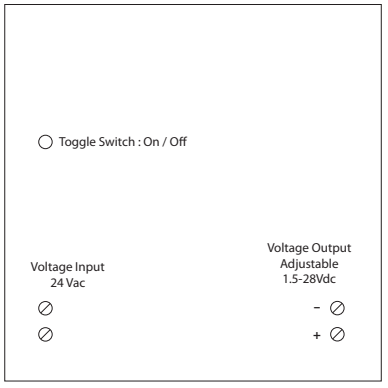
PSMN24DA

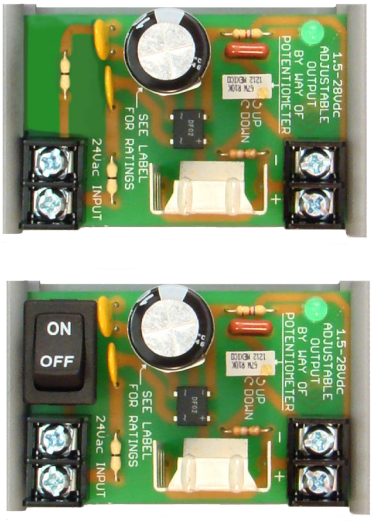
2.75˝ Track Mount Non-Isolated Linear DC Power Supply, 24Vac to 1.5-28 Vdc, 300 mA Adjustable Output



PSMN24DAS

2.75˝ Track Mount Non-Isolated Linear DC Power Supply, 24Vac to 1.5-28 Vdc, 300 mA Adjustable Output, with Switch





c UL us
LISTED
Class 2

CE

RoHS

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SPECIFICATIONS

Voltage Input: 24 Vac, full-wave rectified
Voltage Output: 1.5 - 28 Vdc non-isolated
Frequency: 50/60 Hz
Overload Protection: Electrical and Thermal, Auto-Reset
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: LED On = Activated
Dimensions: 1.500˝ x 2.750˝ x 1.750˝
Track Mount: 2.750˝
MT212-2 Mounting Track Supplied
Weight: 0.20 lbs.
ON/OFF Switch: None (PSMN24DA)
2 Position Toggle (PSMN24DAS)
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

Output Current Ratings:
116 mA @ 10 Vdc
125 mA @ 12 Vdc
300 mA @ 24 Vdc

Input Current Rating:
550 mA Maximum

Percent Ripple:
0.0016%, 24 Vdc @ 300 mA

Regulation:
Load: 0.04% No Load to Full Load
Line: 0.0125 V/V

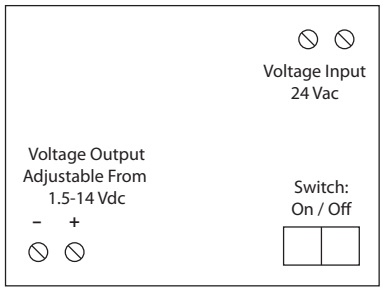
Notes:
• Requires a separate ungrounded transformer when used in conjunction with 1/2 wave rectified power supplies, grounded 24 Vac transformers, or when 24 Vac and 24 Vdc are connected in common.

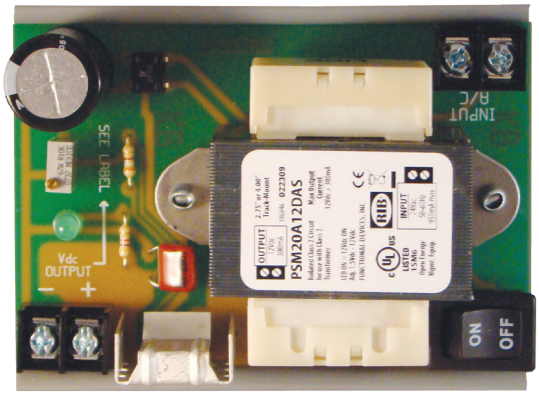
• See also supplementary model PSMN40AS

DC POWER SUPPLY: 24 VAC TO 1.5 - 14 VDC

PSM20A12DAS

4.00″ & 2.75″ Track Mount Isolated Linear DC Power Supply, 24 Vac to 1.5-14Vdc, 300 mA Adjustable Output





c UL us LISTED Class 2

CE

RoHS

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Meets
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of ARRA 2009

SPECIFICATIONS

Voltage Input: 24 Vac
Voltage Output: 1.5 - 14 Vdc Isolated
Frequency: 50/60 Hz
Overload Protection: Electrical and Thermal, Auto-Reset
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: LED On = Activated
Dimensions: 1.625″ x 2.750″ x 4.000″
Track Mount: 4.000″ and 2.750″
MT212-4 Mounting Track Supplied
Weight: 1.10 lbs.
ON/OFF Switch: 2 Position
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

Output Current Ratings:
300 mA @ 12 Vdc

Input Current Rating:
950 mA Maximum

Percent Ripple:
0.0016%, 12 Vdc @ 300 mA

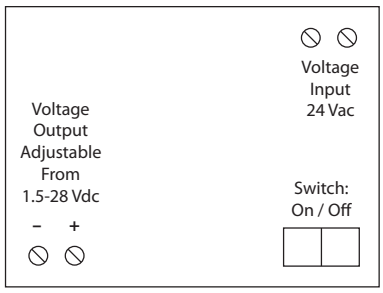
Regulation:
Load: 0.04% No Load to Full Load
Line: 0.0080 mV/V

POWER SUPPLIES

DC POWER SUPPLY: 120 VAC OR 24 VAC TO 1.5 - 28 VDC

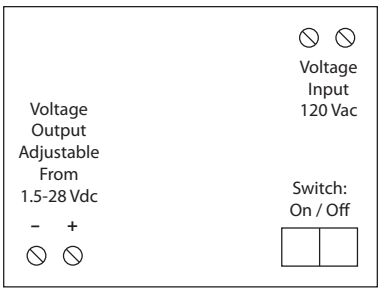
PSM24A24DAS

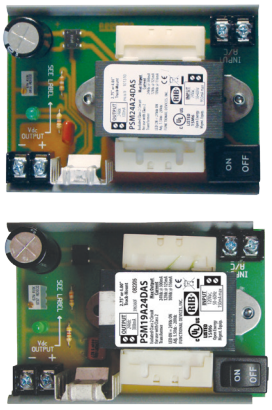
4.00″ & 2.75″ Track Mount Isolated Linear DC Power Supply, 24 Vac to 1.5-28 Vdc, 300 mA Adjustable Output



PSM19A24DAS

4.00″ & 2.75″ Track Mount Isolated Linear DC Power Supply, 120 Vac to 1.5-28 Vdc, 300 mA Adjustable Output





c UL us LISTED Class 2

CE

RoHS

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of ARRA 2009

SPECIFICATIONS

Voltage Input: 24 Vac (PSM24A24DAS)
120 Vac (PSM19A24DAS)
Voltage Output: 1.5 - 28 Vdc Isolated
Frequency: 50/60 Hz
Overload Protection: Electrical and Thermal, Auto-Reset
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: LED On = Activated
Dimensions: 1.625″ x 2.750″ x 4.000″
Track Mount: 4.000″ and 2.750″
MT212-4 Mounting Track Supplied
Weight: 1.10 lbs.
ON/OFF Switch: 2 Position
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

Output Current Ratings:
116 mA @ 10 Vdc
125 mA @ 12 Vdc
300 mA @ 24 Vdc

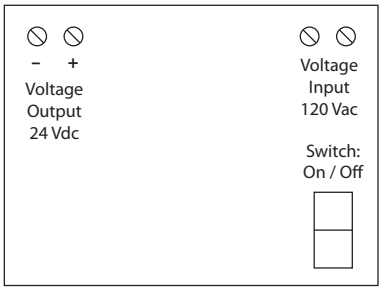
Input Current Rating:
950 mA Maximum (PSM24A24DAS)
150 mA Maximum (PSM19A24DAS)

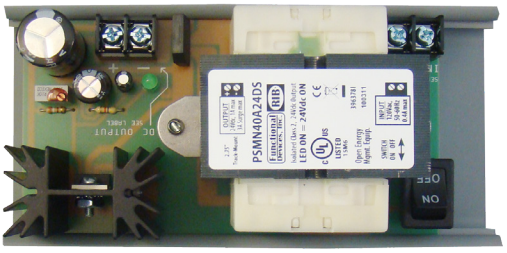
Percent Ripple:
0.0016%, 24 Vdc @ 300 mA

Regulation:
Load: 0.04% No Load to Full Load
Line: 0.0080 mV/V (PSM24A24DAS)
Line: 0.6250 mV/V (PSM19A24DAS)

PSMN40A24DS

2.75˝ Track Mount Isolated Linear DC Power Supply, 120 Vac to 24 Vdc,1 Amp





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CE

RoHS

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SPECIFICATIONS

Voltage Input: 120 Vac
Voltage Output: 24 Vdc Isolated
Frequency: 50/60 Hz
Overload Protection: Electrical and Thermal, Auto-Reset
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Power Status: LED On = Activated
Dimensions: 2.000˝ x 2.750˝ x 5.000˝
Track Mount: 2.750˝
MT212-6 Mounting Track Supplied
Weight: 1.50 lbs.
ON/OFF Switch: 2 Position
Approvals: Class 2 (UL Approved UL5085-3), UL916, C-UL, CE, RoHS

Output Current Ratings:
1 A @ 24 Vdc

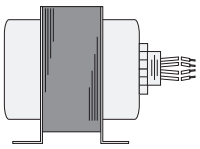
Input Current Rating:
400 mA Maximum

Percent Ripple:
0.0016%, 24 Vdc @ 1 A

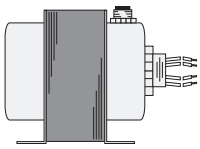
Regulation:
Load: 0.50% No Load to Full Load
Line: 25.0000 mV/V

TRANSFORMERS

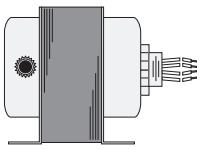
20 VA - 375 VA



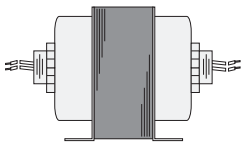
Style 1
Single Hub
& Foot Mount



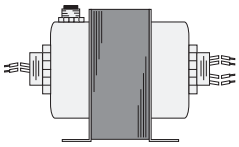
Style 2
Single Hub
& Foot Mount
with Circuit Breaker



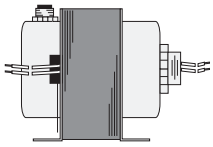
Style 3
Single Hub
& Foot Mount
with Circuit Breaker



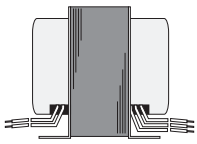
Style 4
Dual Hub
& Foot Mount



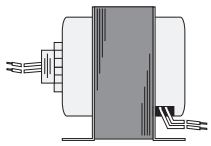
Style 5
Dual Hub
& Foot Mount
with Circuit Breaker



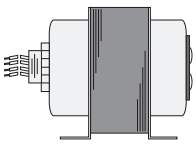
Style 6
Single Hub
& Side Opening
with Circuit Breaker



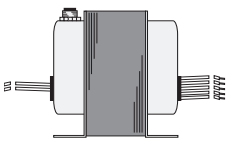
Style 7
Two Bottom Openings
& Foot Mount



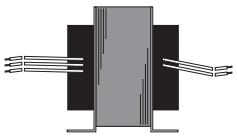
Style 8
Single Hub,
Side Opening
& Foot Mount



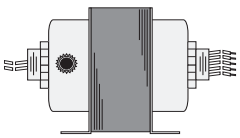
Style 9
Single Hub
& Dual Terminal
Secondary



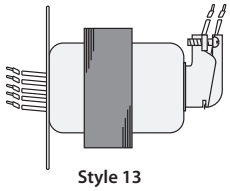
Style 10
Two End-Bell Openings,
& Foot Mount
with Circuit Breaker



Style 11
Two Side Openings
& Foot Mount



Style 12
Dual Hub
& Foot Mount
with Circuit Breaker



Style 13
90° Conduit Connector
& Mounting Plate
Opening

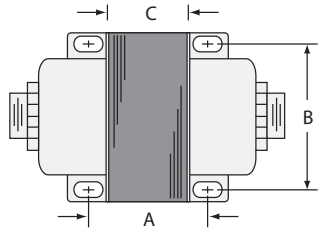
- Transformers may be foot mount, hub mount, or both. Transformers with the hub mount option will have either a single threaded hub or dual threaded hubs. Several transformers are provided with a circuit breaker and many are Class 2. Pigtail wires are standard on most models and are typically 8.00˝ in length[1]. All transformers utilize split-bobbin construction, making them inherently isolated. Custom transformers are also available (contact factory).

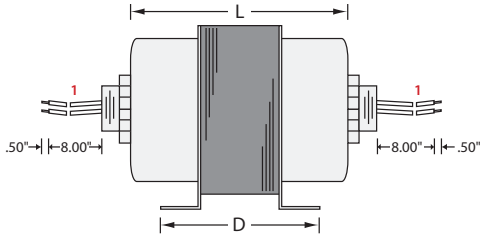
Frequency: 50/60 Hz
Hub Style: .5˝ NPT Hub
Wire Length: 8˝ Typical with .5˝ Strip [1]
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
MTBF: 100,000 Hours @ 77° F
Construction: Split-Bobbin
Approvals: CE approved, RoHS. See chart for UL approvals.

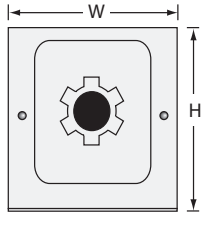
1 = • TR40VA022 = 8˝ Primary, 30˝ Secondary, with .5˝ Strip
• TR50VA019 = 28˝ Typical with .5˝ Strip
• TR100VA002-20 = 8˝ Primary, 20˝ Secondary, with .5˝ Strip

- **Instructions inside product box include wire colors/voltages.**
- **Additional information on voltage and wire colors is available in individual data sheets on website.**
  http://www.functionaldevices.com/building-automation/transformers.php
  Or scan QR code with your smart phone.

DIMENSIONS: SEE CHART.







Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

US Manufactured Control Transformers

Functional Devices, Inc.™ RIB®

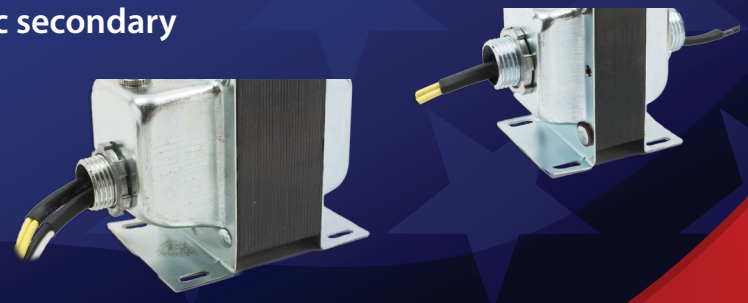
- 40 VA through 100 VA
- Single and dual hub
- Foot or hub mountable
- Circuit breaker models
- Class 2 UL Listed
- 24 Vac secondary

- Single and multi-tap primaries
- Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

ARRA Certificates available upon request.

UL LISTED

Made in USA



US MANUFACTURED TRANSFORMERS

MODEL #	MADE IN USA[1]	UL	VA RATING	STYLE	OVER CURRENT PROTECTION	CLASS 2	PRIMARY VOLTAGE (VAC)	SEC. VOLTAGE (VAC)	FOOT MOUNT	HUBS	L	W	H	A	B	C	WEIGHT
TR40VA001US	•	•	40VA	1	Inherent	•	120	24	•	1 Threaded	2.380″	2.200″	2.930″	1.720″	1.750″	.980″	1.80 lbs.
TR40VA002US	•	•	40VA	4	Inherent	•	120	24	•	2 Threaded	2.380″	2.200″	2.920″	1.720″	1.750″	.980″	1.80 lbs.
TR50VA001US	•	•	50VA	1	Fuse	•	120	24	•	1 Threaded	2.750″	2.200″	2.910″	2.060″	1.750″	1.330″	2.20 lbs.
TR50VA005US	•	•	50VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.270″	2.525″	3.250″	2.210″	2.000″	1.130″	2.60 lbs.
TR50VA022US NEW	•	•	50VA	5	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	3.260″	2.525″	3.290″	2.190″	2.000″	1.120″	2.65 lbs.
TR100VA001US	•	•	96VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.780″	2.500″	3.290″	2.740″	2.000″	1.630″	3.40 lbs.
TR100VA002US	•	•	96VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.750″	2.500″	3.290″	2.690″	2.000″	1.600″	3.40 lbs.
TR100VA009US NEW	•	•	96VA	5	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	3.500″	2.500″	3.250″	2.720″	2.000″	1.630″	3.60 lbs.

1 = Made in USA. Meets "Buy American" of ARRA 2009

FOR MORE TRANSFORMERS, SEE NEXT PAGE.

TRANSFORMERS

MODEL #	UL	VA RATING	STYLE	OVER CURRENT PROTECTION	CLASS 2	PRIMARY VOLTAGE (VAC)	SEC. VOLTAGE (VAC)	FOOT MOUNT	HUBS	L	W	H	A	B	C	D	WEIGHT
TR20VA001	•	20VA	1	Inherent	•	120	24	•	1 Threaded	2.226″	1.877″	2.595″	1.612″	1.619″	1.013″	2.125″	1.20 lbs.
TR20VA002	•	20VA	4	Inherent	•	208	24	•	2 Threaded	2.296″	1.902″	2.616″	1.604″	1.665″	1.020″	2.114″	1.40 lbs.
TR20VA003	•	20VA	1	Inherent		24	24	•	1 Threaded	2.272″	1.900″	2.628″	1.635″	1.686″	1.023″	2.153″	1.40 lbs.
TR20VA004	•	20VA	4	Inherent	•	277/240/208/120	24	•	2 Threaded	2.310″	1.890″	2.625″	1.540″	1.625″	1.000″	2.100″	1.40 lbs.
TR20VA007	•	20VA	1	Inherent	•	277	24	•	1 Threaded	2.302″	1.895″	2.607″	1.608″	1.685″	1.019″	2.107″	1.20 lbs.
TR40VA001	•	40VA	1	Inherent	•	120	24	•	1 Threaded	2.607″	2.169″	2.906″	2.020″	1.786″	1.204″	2.545″	2.00 lbs.
TR40VA002	•	40VA	4	Inherent	•	120	24	•	2 Threaded	2.634″	2.177″	2.886″	2.007″	1.775″	1.206″	2.564″	2.00 lbs.
TR40VA003	•	40VA	1	Inherent		24	24	•	1 Threaded	2.653″	2.171″	2.882″	2.033″	1.779″	1.185″	2.580″	2.00 lbs.
TR40VA004	•	40VA	4	Inherent	•	277/240/208/120	24	•	2 Threaded	2.631″	2.177″	2.882″	1.998″	1.774″	1.189″	2.553″	2.20 lbs.
TR40VA013	•	40VA	2	Circuit Brkr.		480/277/240/208	120	•	1 Threaded	3.267″	2.505″	3.000″	1.699″	1.986″	1.114″	2.325″	2.65 lbs.
TR40VA015	•	40VA	1	Internal Thermal	•	240/208/120	24	•	1 Threaded	2.628″	2.175″	2.907″	2.040″	1.780″	1.188″	2.590″	2.20 lbs.
TR40VA022 #	•	40VA	4	Inherent	•	120	24	•	2 Threaded	2.660″	2.172″	2.891″	1.980″	1.786″	1.201″	2.526″	2.00 lbs.
TR40VA040 ^	•	40VA	9	Internal Thermal	•	240/208/120	24	•	1 Threaded	2.728″	2.171″	2.890″	1.995″	1.792″	1.215″	2.550″	2.20 lbs.
TR50VA001	•	50VA	1	Fuse	•	120	24	•	1 Threaded	2.677″	2.178″	2.879″	2.109″	1.793″	1.253″	2.664″	2.00 lbs.
TR50VA002	•	50VA	4	Fuse	•	120	24	•	2 Threaded	2.696″	2.181″	2.908″	2.053″	1.788″	1.278″	2.614″	2.00 lbs.
TR50VA003	•	50VA	4	Fuse	•	240/208	24	•	2 Threaded	2.695″	2.181″	2.899″	2.082″	1.778″	1.294″	2.646″	2.00 lbs.
TR50VA004	•	50VA	5	Circuit Brkr.	•	480/277/240/120	24	•	2 Threaded	3.475″	2.513″	3.014″	1.858″	1.970″	1.291″	2.490″	3.00 lbs.
TR50VA005	•	50VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.489″	2.515″	3.008″	1.870″	1.971″	1.294″	2.463″	2.40 lbs.
TR50VA006	•	50VA	1	Fuse	•	277	24	•	1 Threaded	2.763″	2.182″	2.898″	2.135″	1.790″	1.322″	2.698″	2.00 lbs.
TR50VA007	•	50VA	4	Fuse	•	277	24	•	2 Threaded	2.715″	2.173″	2.886″	2.148″	1.784″	1.276″	2.661″	2.00 lbs.
TR50VA008	•	50VA	5	Circuit Brkr.		480/277/240/208	120	•	2 Threaded	3.440″	2.510″	3.012″	1.932″	1.945″	1.346″	2.523″	3.04 lbs.
TR50VA009	•	50VA	5	Circuit Brkr.	•	240/208/120	24	•	2 Threaded	3.412″	2.504″	3.014″	1.864″	1.961″	1.313″	2.485″	2.80 lbs.
TR50VA014	•	50VA	2	Circuit Brkr.	•	277	24	•	1 Threaded	3.479″	2.509″	3.009″	1.873″	1.965″	1.285″	2.480″	2.60 lbs.
TR50VA015	•	50VA	2	Circuit Brkr.	•	480/277/240/208/120	24	•	1 Threaded	3.405″	2.517″	3.013″	1.875″	1.985″	1.316″	2.484″	2.80 lbs.
TR50VA016	•	50VA	2	Circuit Brkr.	•	240/208/120	24	•	1 Threaded	3.345″	2.510″	3.028″	1.842″	1.978″	1.325″	2.454″	2.80 lbs.
TR50VA017	•	50VA	2	Circuit Brkr.	•	480/277/208	24	•	1 Threaded	3.470″	2.520″	3.031″	1.880″	1.872″	1.292″	2.460″	2.40 lbs.
TR50VA018	•	50VA	13			480/277/240/208	120		1, 90° Conduit Connector, 1 Mounting Plate Opening	Refer to data sheet on website.							3.00 lbs.
TR50VA019 #	ᴿL	50VA	11	Inherent	•	277/120	24	•	2 Side Openings	2.470″	2.170″	2.896″	1.850″	1.740″	1.130″	2.512″	2.00 lbs.
TR75VA001	•	75VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	3.743″	2.506″	3.016″	2.256″	1.974″	1.711″	2.873″	3.40 lbs.
TR75VA002	•	75VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.890″	2.508″	3.013″	2.290″	1.952″	1.701″	2.882″	3.60 lbs.
TR75VA003	•	75VA	2	Circuit Brkr.	•	277	24	•	1 Threaded	3.875″	2.507″	3.037″	2.269″	1.978″	1.684″	2.860″	3.60 lbs.
TR75VA004	•	75VA	6	Circuit Brkr.	•	480/240/208/120	24	•	1 Threaded 1 Side Opening	3.802″	2.515″	3.050″	2.244″	1.990″	1.665″	2.850″	3.60 lbs.
TR75VA005	•	75VA	2	Circuit Brkr.	•	480/240/208/120	24	•	1 Threaded	3.880″	2.515″	3.030″	2.270″	1.975″	1.700″	2.854″	3.80 lbs.
TR75VA007	•	75VA	5	Circuit Brkr.	•	480/240/208/120	24	•	2 Threaded	3.883″	2.504″	3.034″	2.287″	1.981″	1.708″	2.887″	3.97 lbs.
TR100VA001	•	100VA	2	Circuit Brkr.	•	120	24	•	1 Threaded	4.085″	2.515″	3.030″	2.486″	1.975″	1.900″	3.082″	3.80 lbs.
TR100VA002	•	100VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	4.077″	2.504″	3.023″	2.470″	1.975″	1.888″	3.095″	4.00 lbs.
TR100VA002-20 #	•	100VA	5	Circuit Brkr.	•	120	24	•	2 Threaded	3.973″	2.518″	3.033″	2.486″	1.865″	1.924″	3.060″	4.00 lbs.
TR100VA004	•	100VA	5	Circuit Brkr.	•	480/277/240/120	24	•	2 Threaded	4.173″	2.523″	3.041″	2.647″	1.976″	2.086″	3.268″	4.40 lbs.
TR100VA005	•	100VA	2	Circuit Brkr.	•	480/277/240/120	24	•	1 Threaded	4.258″	2.510″	3.030″	2.670″	1.968″	2.065″	3.260″	4.40 lbs.
TR100VA008	•	100VA	5	Circuit Brkr.		480/277/240/208	120	•	2 Threaded	4.220″	2.525″	3.022″	2.690″	1.970″	2.082″	3.272″	4.40 lbs.
TR100VA009 NEW	•	100VA	5	Circuit Brkr.	•	480/277/240/208/120	24	•	2 Threaded	4.270″	2.500″	3.060″	2.750″	1.975″	2.000″	2.252″	4.40 lbs.
TR100VA015 NEW	•	100VA	2	Circuit Brkr.	•	480/277/240/208/120	24	•	1 Threaded	4.270″	2.500″	3.060″	2.699″	2.030″	2.065″	2.252″	4.74 lbs.
TR150VA001	•	150VA	3	Circuit Brkr.		120	24	•	1 Threaded	3.650″	3.800″	3.183″	2.560″	3.150″	1.438″	3.514″	5.00 lbs.
TR150VA002	•	150VA	5	Circuit Brkr.		120	24	•	2 Threaded	3.620″	3.785″	3.160″	2.568″	3.147″	1.456″	3.511″	5.00 lbs.
TR150VA008	•	150VA	12	Circuit Brkr.		480/277/240/208	120	•	2 Threaded	4.283″	3.786″	3.161″	3.211″	3.260″	2.116″	4.177″	7.20 lbs.
TR175VA001	•	175VA	7			240/208	24	•	2 Bottom Openings	3.801″	3.790″	3.163″	3.264″	3.141″	2.151″	4.197″	7.00 lbs.
TR175VA002	•	175VA	4			120	24	•	2 Threaded	3.800″	3.790″	3.189″	3.220″	3.150″	2.100″	4.180″	7.10 lbs.
TR175VA003	•	175VA	1	Thermal Fuse on Primary		120	24	•	1 Threaded	4.030″	3.786″	3.161″	3.189″	3.155″	2.127″	4.153″	7.44 lbs.
TR240VA001	•	240VA	8			120	24	•	1 Threaded 1 Bottom Opening	3.957″	3.750″	4.530″	3.350″	3.180″	1.932″	4.025″	8.60 lbs.
TR300VA002	ᴿL	300VA	10	Circuit Brkr.		480/240/208/120	24	•	2 End-Bell Openings	5.499″	3.750″	4.500″	3.859″	3.187″	2.526″	4.526″	11.60 lbs.
TR375VA001	•	375VA	7			120	24	•	2 Bottom Openings	4.592″	3.747″	4.504″	3.933″	3.181″	2.516″	4.630″	11.20 lbs.

Ⓤ = UL Listed : UL5085-2 or UL5085-3 ; USA & Canada

ᴿL = UL Component Recognized : UL5085-2 or UL5085-3 ; USA & Canada

= Refer to website for more wire length information.

^ = Dual Terminal Secondary

POWER CONTROL

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Enclosed Power Control Centers

- Two 120 Vac grounded convenience outlets
- 4 or 10 Amp switch / circuit breaker
- Outlets can be continuously powered or controlled by the switch / circuit breaker
- True override switch on load side of relay
- Auxiliary outputs are provided for convenient control panel installations

Track Mount Circuit Breaker Switches

- Track mount circuit breaker switches provide a convenient addition to control panels
- Circuits can be low voltage (24 Vac) or line voltage (120 Vac)

Prepackaged Switches

- Standard configurations to provide simple switching schemes
- Labels can be ordered with custom content to fit your project

UPS Interface

- Functional Devices provides a 550 VA commercial UPS along with an enclosure and an interface board, which allows the installer to hardwire line voltage to the provided UPS while giving the ability to hardwire the UPS to the final load.

ENCLOSED POWER CONTROL CENTERS

MODEL #	UL	CONVENIENCE OUTLETS	SWITCH	CIRCUIT BREAKER	NOTES	SPEC PAGE
PSPT2RB4	•	2, 120 Vac	On / Off	4 Amp		134
PSPW2RB4	•	2, 120 Vac	On / Off	4 Amp		134
PSPT2RB10	•	2, 120 Vac	On / Off	10 Amp		134
PSPW2RB10	•	2, 120 Vac	On / Off	10 Amp		134

TRACK MOUNT CIRCUIT BREAKER SWITCHES

MODEL #	UL	POWER INPUT	SWITCH	LED	CIRCUIT BREAKER	NOTES	SPEC PAGE
PSMN01SB4	•	120 Vac	On / Off	•	4 Amp		134
PSMN01SB10	•	120 Vac	On / Off	•	10 Amp		134
PSMN24SB4	•	24 Vac	On / Off	•	4 Amp		134
PSMN24SB10	•	24 Vac	On / Off	•	10 Amp		134

PREPACKAGED SWITCHES

MODEL #	UL	ENCLOSED	TRACK MOUNT	CONVENIENCE OUTLETS	SWITCH	CIRCUIT BREAKER	NOTES	SPEC PAGE
PSMS1	•		•		5 A, Maintained 3 Position			135
SIB02S	•	•			20 A, Maintained 3 Position			135
SIB04S	•	•			20 A, Maintained 2 Position (On / On)			135
SIB05S	•	•			20 A, Maintained 2 Position (On / Off)			135
SIBLS	•	•			5 A, Maintained 3 Position			135

UPS INTERFACE

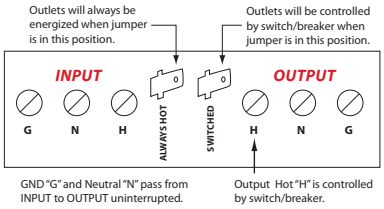
MODEL #	UL	ENCLOSURE	RELAY OUTPUT (STATUS)	UPS	CIRCUIT BREAKER	120 OUTLET	NOTES	SPEC PAGE
PSH550-UPS (Kit)		•		•	•	•		136
PSH2RB10	•	•			•	•		136
PSM2RB10	•				•	•		137
PSH550-UPS-STAT (Kit)		•	2	•	•	•		137
PSH2C2RB10	•	•	2		•	•		138
PSMN2C2RB10	•		2		•	•		138
PSH850-UPS-STAT (Kit)		•	2	•	•	•		139
PSH2C2RB10-L	•	•	2		•	•		139

UL = UL Listed : UL916 Energy Management; UL Listed Canada

SWITCH / CIRCUIT BREAKER COMBOS

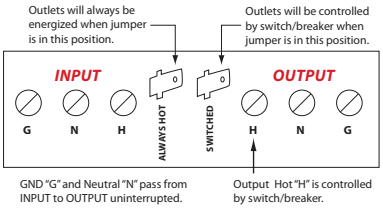
PSPT2RB4

Enclosed Power Control Center, 4 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Terminals



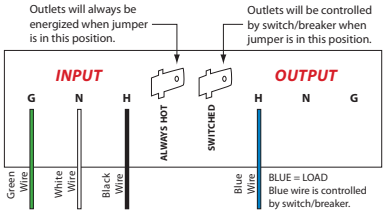
PSPT2RB10

Enclosed Power Control Center, 10 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Terminals



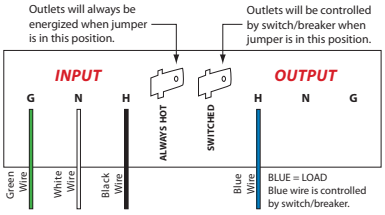
PSPW2RB4

Enclosed Power Control Center, 4 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Wires



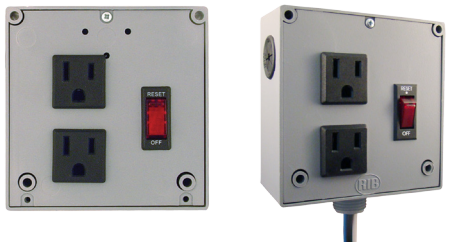
PSPW2RB10

Enclosed Power Control Center, 10 Amp Switch / Circuit Breaker, 120 Vac, 2 Outlets, Wires



PSP SERIES			
Model #	Circuit Breaker	Terminals	Wires
PSPT2RB4	4 Amps	•	
PSPT2RB10	10 Amps	•	
PSPW2RB4	4 Amps		•
PSPW2RB10	10 Amps		•

Made in USA
Meets "Buy American" of ARRA 2009



SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Circuit Breaker: 4 Amp Max. or 10 Amp Max.
Dimensions: 4.000˝ x 4.000˝ x 1.800˝ (w/ .500˝ NPT Nipple - PSPW2RB4 & PSPW2RB10)
Wires: 16˝, 600V Rated (PSPW2RB4 & PSPW2RB10)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Terminals: Ground "G" and Neutral "N" pass from INPUT to OUTPUT uninterrupted.
OUTPUT (PSPT2RB4 & PSPT2RB10)
Hot "H" is controlled by the switch/breaker.

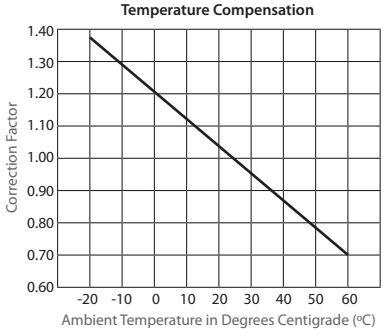
Notes:

- Indicator light will illuminate when switch/breaker is ON (RESET position) indicating power has been transferred from INPUT to OUTPUT by the switch/breaker. If it is desired for the indicator light to be illuminated continuously to indicate the presence of input (Line) power, INPUT and OUTPUT may be reversed -- connect input power from line to OUTPUT and connect output load to INPUT (operation of the jumpers above also reverses).

PREPACKAGED CIRCUIT BREAKER SWITCHES

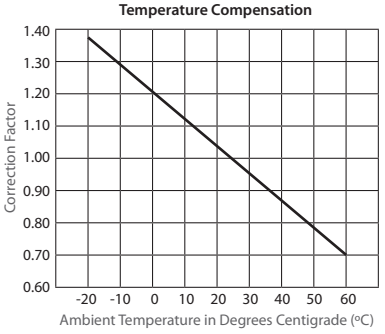
PSMN01S SERIES

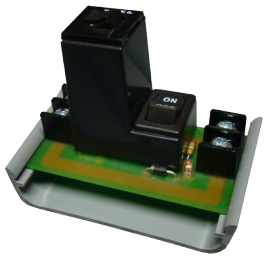
2.75˝ Track Mount Switch, 2 Position Maintained, On/Off, Circuit Breaker, 120 Vac



PSMN24S SERIES

2.75˝ Track Mount Switch, 2 Position Maintained, On/Off, Circuit Breaker, 24 Vac





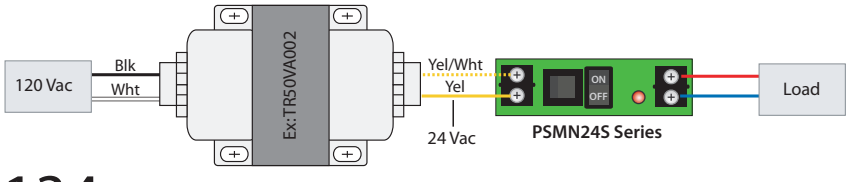
Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Circuit Breaker: 4 Amp and 10 Amp
Dimensions: 2.750˝ x 1.350˝ x 2.061˝
Track Mount: MT212-2 Mounting Track Provided
Approvals: UL Listed, UL916, C-UL

OVER CURRENT / SHORT CIRCUIT PROTECTION AND SWITCHING

PSMN01S Series



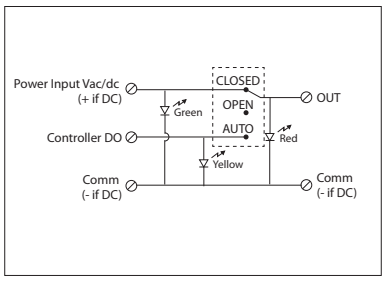
PSMN24S Series

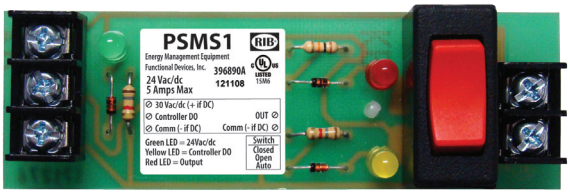
PSMN01S SERIES	
Model #	Circuit Breaker
PSMN01SB4	4 Amps
PSMN01SB10	10 Amps

PSMN24S SERIES	
Model #	Circuit Breaker
PSMN24SB4	4 Amps
PSMN24SB10	10 Amps

PSMS1

4.000˝ Track Mount Switch 5 Amp, 30 Vac/dc, 3 Position Maintained





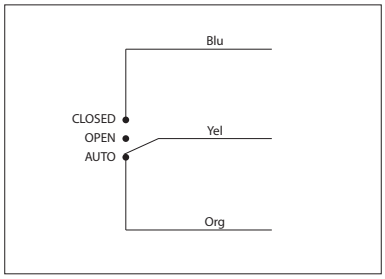
SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 1.275˝ x 4.000˝ x 1.750˝
Track Mount: 4.000˝, See MT4 Series on page 152
MT4 Mounting Track Sold Separately
Switch Status: Green LED On = Power Input present
Yellow LED On = Controller DO ON
Red LED On = Output Signal ON
Approvals: UL Listed, UL916, C-UL, CE, RoHS

Switch Ratings:
5 Amp @ 30 Vac/dc

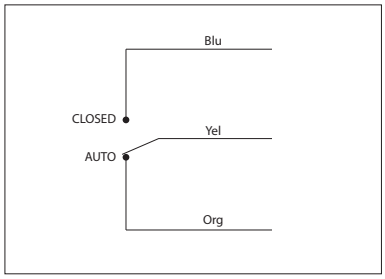
SIB02S

Enclosed Switch 20 Amp, 3 Position Maintained, On/Off/On



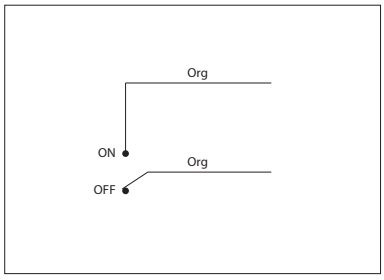
SIB04S

Enclosed Switch 20 Amp, 2 Position Maintained, On/On, 3 Wires



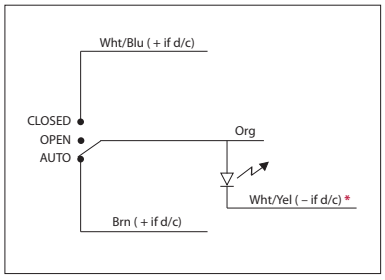
SIB05S

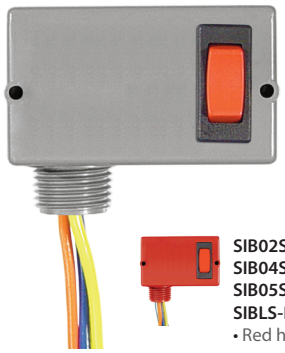
Enclosed Switch 20 Amp, 2 Position Maintained, On/Off, 2 Wires



SIBLS

Enclosed Switch 5 Amp, 30 Vac/dc, 3 Position Maintained, On/Off/On with LED Indicator





SIB02S-RD
SIB04S-RD
SIB05S-RD
SIBLS-RD
• Red housing

SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Dimensions: 1.700˝ x 2.800˝ x 1.500˝
(w/ .500˝ NPT Nipple)
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1

SIB02S, SIB04S, RIB05S Switch Ratings:
20 Amp Resistive @ 277 Vac
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
20 Amp Ballast @ 277 Vac
10 Amp Tungsten @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

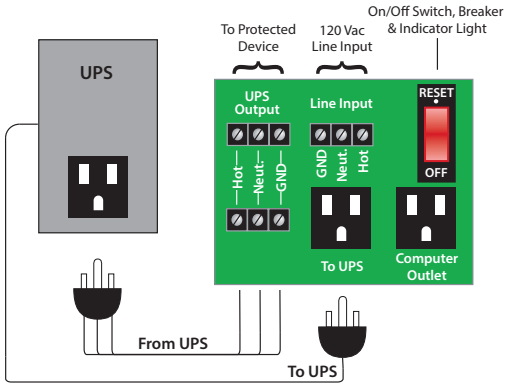
SIBLS Switch Ratings:
5 Amp @ 30 Vac/dc

Notes:
• Switch position label can be custom printed according to your needs, simply consult factory
• Connection to Wht/Yel may be omitted if LED is not needed (SIBLS) *

UNINTERRUPTIBLE POWER SUPPLY KIT

PSH550-UPS

Kit Consisting of Enclosed Power Control Center Model PSH2RB10 (10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input) with a 550 VA UPS. (No Status Contacts)



Shown Without Cover

Shown With Cover

SPECIFICATIONS

UPS

UPS: 550VA
Backup Time: 3 Min. @ Full 550 VA Load
15 Min. @ 1/2 Load
Input: 120 Vac, 12 Amp
Output: 120 Vac, 4.6 Amp
Max Load: 330 Watt
Frequency: 50/60 Hz
Temperature Rating of UPS: 32 to 104° F
UPS Transfer Time: 6ms
Approvals: UL Listed, UL1778

PSH2RB10

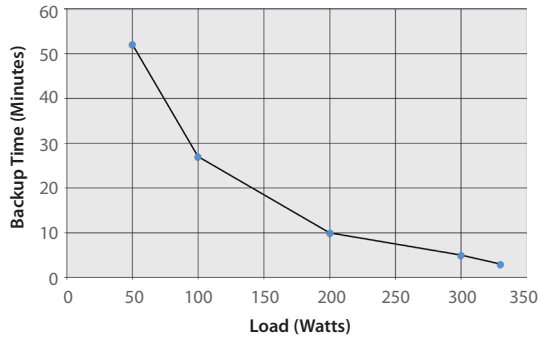
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Dimensions: 12.000˝ x 14.000˝ x 6.000˝
Metal Housing with Screw Cover

Shipping Weight:
28 lbs.

Product Weight:
22.5 lbs.

Notes:
- To order without UPS, so that any other commercial UPS with appropriate ratings and within housing space limitations may be used, see model PSH2RB10.
- To order interface board for replacement or for separate use, order model PSM2RB10.
- Average battery life: 3-5 years depending on the number of discharge cycles and environmental temperature

ESTIMATED BACKUP TIME VS. LOAD

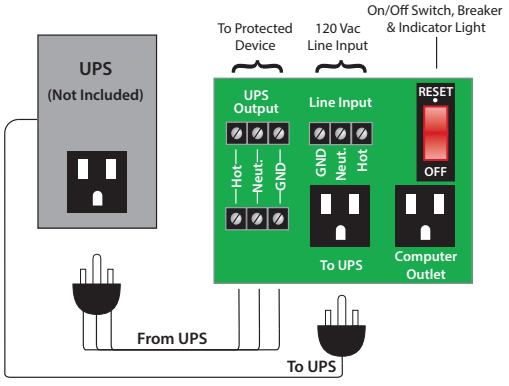


POWER CONTROL

ENCLOSED UPS INTERFACE MODULE

PSH2RB10

Enclosed 4.00˝ Track Mount Power Control Center, 10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input. (No Status Contacts)



Shown Without Cover

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SPECIFICATIONS

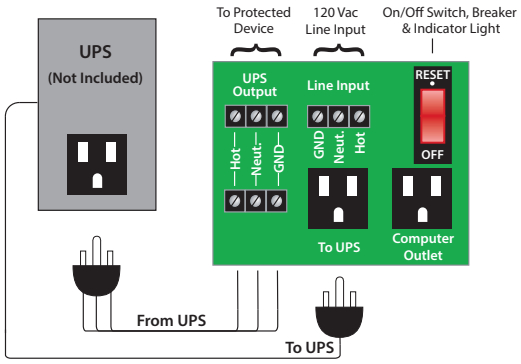
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Dimensions: 12.000˝ x 14.000˝ x 6.000˝
Metal Housing with Screw Cover
Weight: 13.10 lbs.

Notes:
- Track mounted interface board may be ordered separately as model PSM2RB10, to be used with any commercial UPS with appropriate ratings for the circuit breaker.
- Circuit breaker for short protection.
- 14/3 Line Cord included (3´).
- Use with UPS devices rated 1000 VA or less.
  - Max. size: 12.000˝ x 7.250˝ x 5.500˝
  - 120 Vac max., 600 W max., 8.3 Amp max.
- UPS is not included.

UPS INTERFACE MODULE

PSM2RB10

4.00˝ Track Mount Power Control Center, with 10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input. (No Status Contacts)



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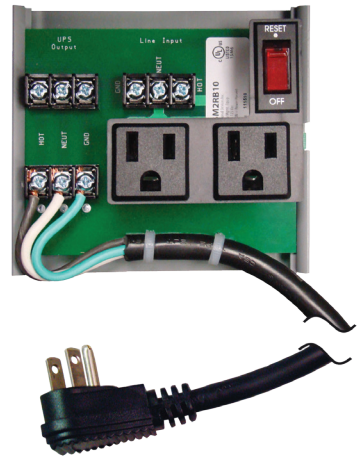

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SPECIFICATIONS

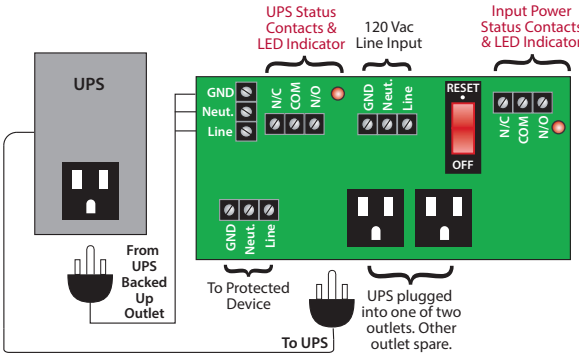
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Dimensions: 4.000˝ x 3.250˝ x 1.750˝
Track Mount: 3.250˝ x 4.000˝
MT4-4N Mounting Track Included
Approvals: UL Listed, UL916, C-UL, CE, RoHS

Notes:
- Circuit breaker for short protection.
- 14/3 Line Cord included (3´).
- Use with UPS devices rated 1000 VA or less.
- UPS is not included.

UNINTERRUPTIBLE POWER SUPPLY IN KIT

PSH550-UPS-STAT

Kit Consisting of Enclosed Power Control Center Model PSH2C2RB10 (10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input) with a 550 VA UPS. (Status Contacts)



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POWER CONTROL

SPECIFICATIONS

UPS

UPS: 550VA
Backup Time: 3 Min. @ Full 550 VA Load
15 Min. @ 1/2 Load
Input: 120 Vac, 12 Amp
Output: 120 Vac, 4.6 Amp
Max Load: 330 Watt
Frequency: 50/60 Hz
Temperature Rating of UPS: 32 to 104° F
UPS Transfer Time: 6ms
Approvals: UL Listed, UL1778
Weight: 12 lbs.

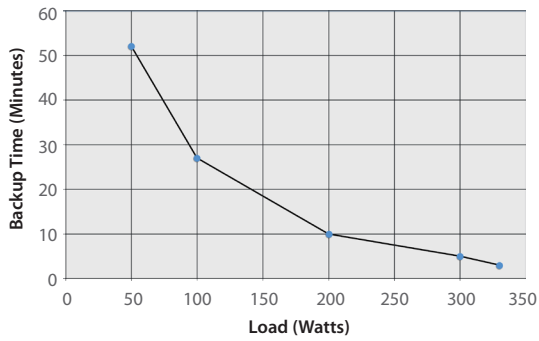
PSH2C2RB10

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Dimensions: 12.000˝ x 16.000˝ x 6.000˝
Metal Housing with Screw Cover

Line Input Status Contacts and UPS Output Status Contacts Rated:
10 Amp @ 277 Vac General Use
10 Amp @ 30 Vdc (N/O)
7 Amp @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1/4 HP @ 277 Vac
1000 VA @ 120 Vac Magnetic Ballast (N/C)
C300 Pilot Duty
16.8 VA @ 24 Vac Pilot Duty

Notes:
- To order without UPS, so that any other commercial UPS with appropriate ratings and within housing space limitations may be used, see model PSH2C2RB10.
- To order interface board for replacement or for separate use, order model PSMN2C2RB10.
- Average battery life: 3-5 years depending on the number of discharge cycles and environmental temperature

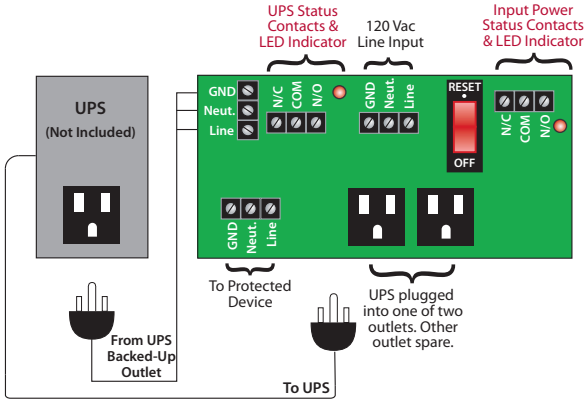
ESTIMATED BACKUP TIME VS. LOAD



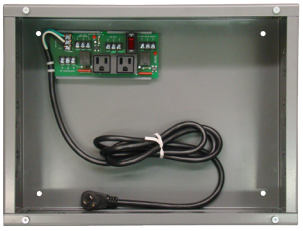
ENCLOSED UPS INTERFACE MODULE

PSH2C2RB10

Enclosed 2.75˝Track Mount Power Control Center, with 10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input. (Status Contacts)



Shown Without Cover



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SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Dimensions: 12.000˝ x 16.000˝ x 6.000˝
Metal Housing with Screw Cover
Weight: 14.14 lbs.

Line Input Status Contacts and UPS Output Status Contacts Rated:
10 Amp @ 277 Vac General Use
10 Amp @ 30 Vdc N/O
7 Amp @ 30 Vdc N/C
1/2 HP @ 125 Vac
1/4 HP @ 277 Vac
100 VA @ 120 Vac Ballast N/C
C300 Pilot Duty
16.8 VA @ 24 Vac Pilot Duty

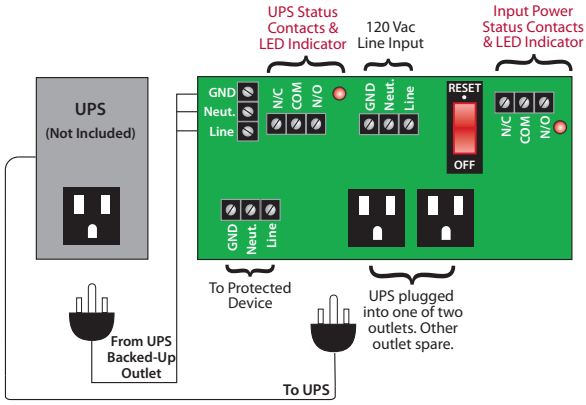
Notes:
- Track mounted interface board may be ordered separately as model PSMN2C2RB10, to be used with any commercial UPS with appropriate ratings for the circuit breaker.
- Circuit breaker for short-circuit protection.
- 14/3 Line Cord included (3´).
- Use with UPS devices rated 1000 VA or less.
  - Max. size: 8.000˝ x 16.000˝ x 5.500˝
  - 120 Vac max., 600 W max., 8.3 Amp max.
- UPS is not included.

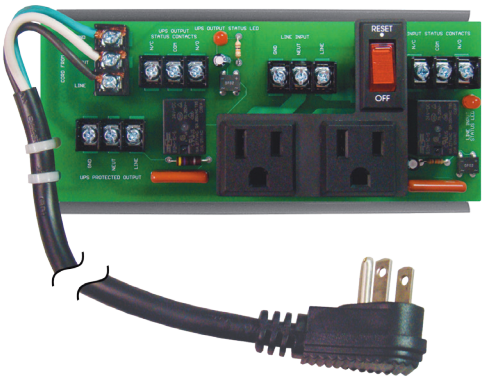
POWER CONTROL

UPS INTERFACE MODULE

PSMN2C2RB10

2.75˝Track Mount Power Control Center, with 10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input. (Status Contacts)





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SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Dimensions: 2.750˝ x 6.655˝ x 1.750˝
Track Mount: 2.750˝ x 6.000˝
MT212-6N Mounting Track Included
Approvals: UL Listed, UL916, C-UL, CE, RoHS

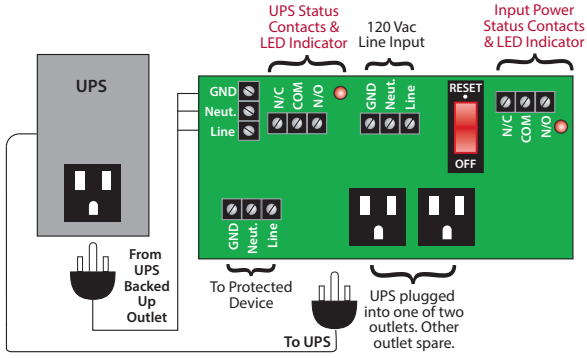
Line Input Status Contacts and UPS Output Status Contacts Rated:
10 Amp @ 277 Vac General Use
10 Amp @ 30 Vdc N/O
7 Amp @ 30 Vdc N/C
1/2 HP @ 125 Vac
1/4 HP @ 277 Vac
100 VA @ 120 Vac Ballast N/C
C300 Pilot Duty
16.8 VA @ 24 Vac Pilot Duty

Notes:
- Circuit breaker for short-circuit protection.
- 14/3 Line Cord included (3´).
- Use with UPS devices rated 1000 VA or less.
- UPS is not included.

UNINTERRUPTIBLE POWER SUPPLY IN KIT

PSH850-UPS-STAT

Kit Consisting of Enclosed Power Control Center Model PSH2C2RB10-L (10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input) with a 850 VA UPS. (Status Contacts)



SINUSOIDAL OUTPUT OR PURE SINE WAVE OUTPUT

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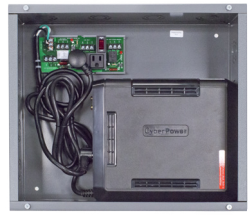

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SPECIFICATIONS

UPS

UPS: 850VA
Backup Time: 2 Min. @ Full 850 VA Load
8 Min. @ 1/2 Load
Input: 120 Vac, 12 Amp
Sine Wave Output: 120 Vac, 7.1 Amp
Max Load: 510 Watt
Frequency: 50/60 Hz
Temperature Rating of UPS: 32 to 95° F
UPS Transfer Time: 10ms
Approvals: UL Listed, UL1778
Weight: 15 lbs.
Model: Cyber Power Model 850PFCLCD

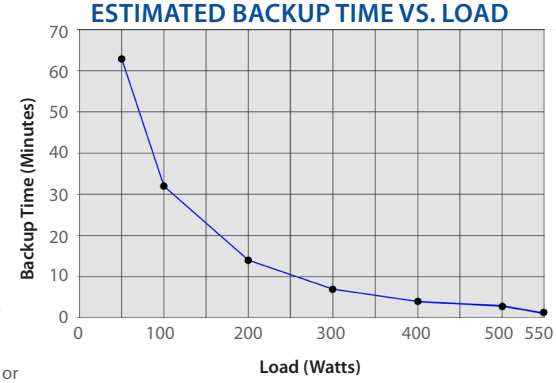
PSH2C2RB10-L

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Dimensions: 14.000˝ x 16.000˝ x 6.000˝ Metal Housing with Screw Cover

Line Input Status Contacts and UPS Output Status Contacts Rated:
10 Amp @ 277 Vac General Use
10 Amp @ 30 Vdc (N/O)
7 Amp @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1/4 HP @ 277 Vac
1000 VA @ 120 Vac Magnetic Ballast (N/C)
C300 Pilot Duty
16.8 VA @ 24 Vac Pilot Duty

Notes:
- To order without UPS, so that any other commercial UPS with appropriate ratings and within housing space limitations may be used, see model PSH2C2RB10-L.
- To order interface board for replacement or for separate use, order model PSMN2C2RB10.
- Typical battery life: 3-6 years, depending on number of discharge/recharge cycles

ESTIMATED BACKUP TIME VS. LOAD

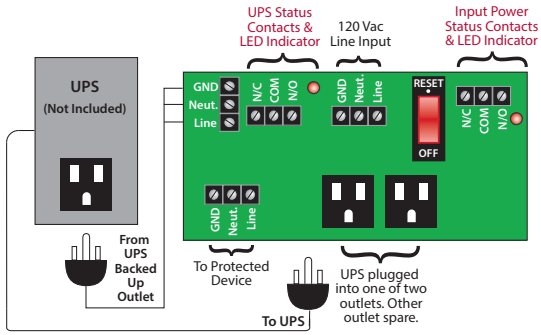


POWER CONTROL

ENCLOSED UPS INTERFACE MODULE

PSH2C2RB10-L

Enclosed 2.75˝ Track Mount Power Control Center, with 10 Amp Switch / Circuit Breaker, Two (2) 120 Vac Outlets, Terminals, 120 Vac Input. (Status Contacts)



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SPECIFICATIONS

Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Main Breaker ON/OFF: Switch / Breaker (10 Amp)
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Dimensions: 14.000˝ x 16.000˝ x 6.000˝ Metal Housing with Screw Cover
Weight: 14.76 lbs.

Line Input Status Contacts and UPS Output Status Contacts Rated:
10 Amp @ 277 Vac General Use
10 Amp @ 30 Vdc N/O
7 Amp @ 30 Vdc N/C
1/2 HP @ 125 Vac
1/4 HP @ 277 Vac
1000 VA @ 120 Vac Magnetic Ballast N/C
C300 Pilot Duty
16.8 VA @ 24 Vac Pilot Duty

Notes:
- Track mounted interface board may be ordered separately as model PSMN2C2RB10, to be used with any commercial UPS with appropriate ratings for the circuit breaker.
- Circuit breaker for short-circuit protection.
- 14/3 Line Cord included (3´).
- Use with UPS devices rated 1000 VA or less.
  - Max. size: 14.000˝ x 10.000˝ x 5.500˝
  - 120 Vac, 600 W max., 8.3 Amp max.
- UPS is not included.
- To order a kit with a UPS, see PSH850-UPS-STAT.

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

NEMA 1 and NEMA 4 Metal & Plastic Enclosures

- All enclosures are NEMA 1 or NEMA 4 rated and are UL Listed. Smaller enclosures have an abundance of knockouts and metal enclosures are stackable vertically and horizontally. Available in a variety of sizes, these enclosures provide many useful features. Small metal enclosure sizes have screw covers and the larger sizes are equipped with key-lock latch doors, most of which are full-hinge.

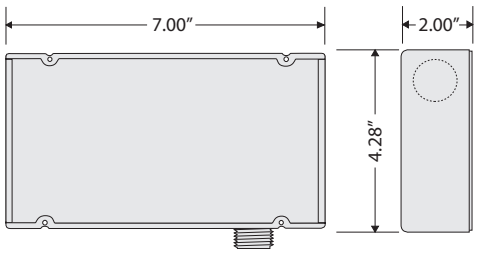
ENCLOSURES

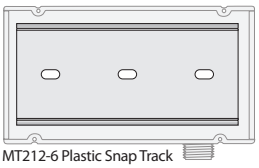
MODEL #	UL	NEMA RATING	COVER / DOOR	HEIGHT	WIDTH	DEPTH	GAUGE	NOTES	SPEC PAGE
PE6000 Series	•	NEMA 1 / NEMA 4/4X	Screw Down Cover	4.28″	7.00″	2.00″			141
MH1000 Series	•	NEMA 1	Screw Down Cover	14.50″	7.70″	3.90″	18		142
MH1200 Series	•	NEMA 1	Screw Down Cover	8.30″	7.70″	3.90″	18		142
MH2204-N4	•	NEMA 4/4X	Hinge Key Latch Door	9.84″	7.87″	3.98″	16		142
MH3100-M1	•	NEMA 1	Screw Down Cover	12.00″	12.00″	6.00″	16		143
MH3204-N4	•	NEMA 4/4X	Hinge Key Latch Door	15.75″	11.81″	5.91″	16		143
MH3300 Series	•	NEMA 1	Vertical Lift Screw Down Cover	12.50″	12.50″	7.00″	18		143
MH3500 Series	•	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50″	10.25″	3.90″	18		144
MH3800 Series	•	NEMA 1	Reversible Hook Hinge Key Latch Door	24.50″	12.50″	6.50″	18		144
MH4400 Series	•	NEMA 1	Full Hinge Key Latch Door	18.00″	18.00″	7.00″	16		144
MH5500 Series	•	NEMA 1	Full Hinge Key Latch Door	25.00″	25.00″	9.50″	14		145
MH5800 Series	•	NEMA 1	Full Hinge Key Latch Door	36.00″	25.00″	9.50″	14		145

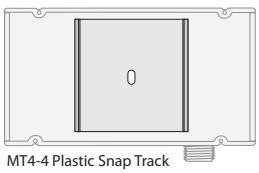
UL = UL Listed : UL916 Energy Management ; USA & Canada

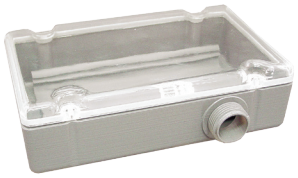
ENCLOSURE

PE6000 Series
Plastic Housing, .75″ NPT Nipple, 4.28″ H x 7.00″ W x 2.00″ D




MT212-6 Plastic Snap Track


MT4-4 Plastic Snap Track



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PE6000 SERIES ASSEMBLIES

Model #	Enclosure	Plastic Snap Track	NEMA Type	Weight
PE6000	PE6000		NEMA 1	.656 lbs.
PE6010	PE6000	MT4-4 (4.00″W)	NEMA 1	.717 lbs.
PE6020	PE6000	MT212-6 (2.75″W)	NEMA 1	.769 lbs.
PE6000-N4	PE6000-N4		NEMA 4/4X	.656 lbs.
PE6010-N4	PE6000-N4	MT4-4 (4.00″W)	NEMA 4/4X	.717 lbs.
PE6020-N4	PE6000-N4	MT212-6 (2.75″W)	NEMA 4/4X	.769 lbs.

SPECIFICATIONS

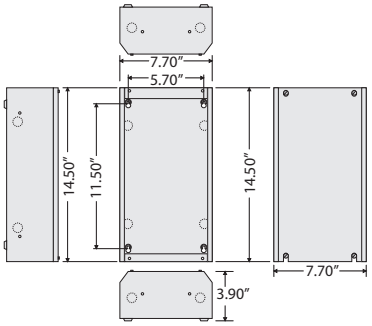
Cover Type: Screw Down Cover
Approvals: UL Listed, C-UL, CE Approved, RoHS
Housing Rating: UL Accepted for Use in Plenum, NEMA 1, Also available NEMA 4 / 4X

Notes:
• Comes with transparent lid. To order with gray opaque lid, add "-GY" to end of model number.

ENCLOSURE

MH1000 Series

Metal Housing, NEMA 1, 14.50˝H x 7.70˝W x 3.90˝D



MH1000 SERIES ASSEMBLIES			
Model #	Enclosure	Plastic Snap Track	Weight
MH1000	MH1000		6.00 lbs.
MH1010	MH1000	MT4-12 (4.00″W)	6.30 lbs.
MH1020	MH1000	MT212-12 (2.75″W)	6.25 lbs.

Made in USA
Meets
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of ARRA 2009

SPECIFICATIONS

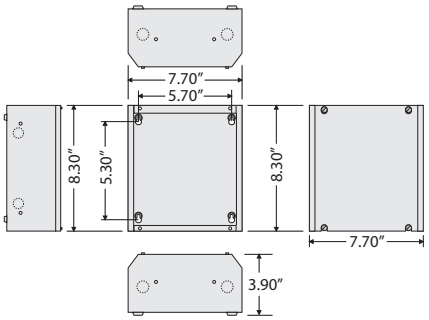
Construction: 18 Gauge Steel
Cover Type: Screw Down Cover
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
• Consult factory for custom colors for large orders.

ENCLOSURE

MH1200 Series

Metal Housing, NEMA 1, 8.30˝H x 7.70˝W x 3.90˝D



MH1200 SERIES ASSEMBLIES			
Model #	Enclosure	Plastic Snap Track	Weight
MH1200	MH1200		3.86 lbs.
MH1210	MH1200	MT4-8 (4.00″W)	4.06 lbs.
MH1220	MH1200	MT212-8 (2.75″W)	4.00 lbs.

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

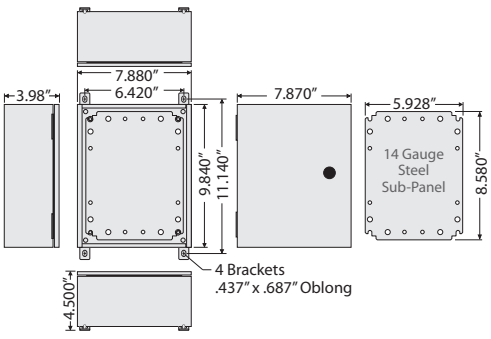
Construction: 18 Gauge Steel
Cover Type: Screw Down Cover
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
• Consult factory for custom colors for large orders.

ENCLOSURE

MH2204-N4

Metal Housing, NEMA 4/4X, 9.84˝H x 7.87˝W x 3.98˝D



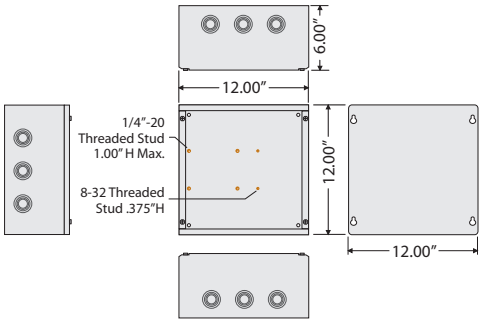
SPECIFICATIONS

Construction: 16 Gauge Steel
Weight: 7.70 lbs.
Cover Type: Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

ENCLOSURE

MH3100-M1

Metal Housing, NEMA 1, 12.00˝H x 12.00˝W x 6.00˝D, Mounting Option 1



MH3100-M1 ASSEMBLY		
Model #	Enclosure	Plastic Snap Track
MH3100-M1 *	MH3100	6 Threaded Studs

* MH3100-M1 + PSMN500A = **PSH500A**
MH3100-M1 + PSMN300A = **PSH300A**

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

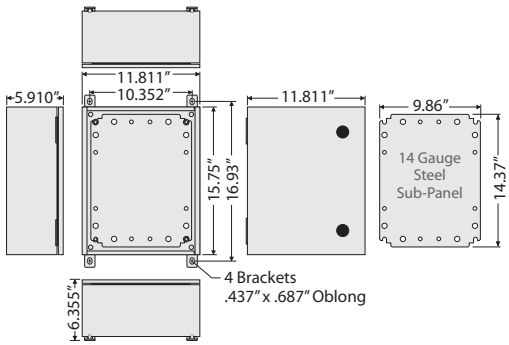
Construction: 16 Gauge Steel
Weight: 12 lbs.
Cover Type: Screw Down Cover
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
• To convert panel-mounted power supply to enclosed, simply remove the sub-panel and mount to enclosure with provided screw pack. *

ENCLOSURE

MH3204-N4

Metal Housing, NEMA 4/4X, 15.75˝H x 11.81˝W x 5.91˝D



Made in USA
Meets "Buy American" of ARRA 2009

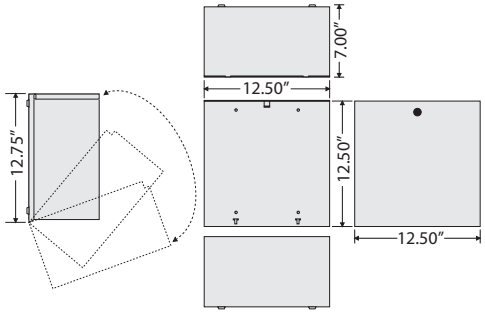
SPECIFICATIONS

Construction: 16 Gauge Steel
Weight: 17 lbs.
Cover Type: Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

ENCLOSURE

MH3300 Series

Metal Housing, NEMA 1, 12.50˝H x 12.50˝W x 7.00˝D



MH3300 SERIES ASSEMBLIES				
Model #	Enclosure	Cover Type	Sub-Panel	Weight
MH3300	MH3300	Vertical Lift Screw Down		10.5 lbs.
MH3300K	MH3300K	Vertical Lift Key Latch		10.7 lbs.
MH3303	MH3300	Vertical Lift Screw Down	SP3303 [1]	11.8 lbs.
MH3304	MH3300	Vertical Lift Screw Down	SP3304 [2]	11.8 lbs.
MH3303K	MH3300K	Vertical Lift Key Latch	SP3303 [1]	12.5 lbs.
MH3304K	MH3300K	Vertical Lift Key Latch	SP3304 [2]	12.5 lbs.

1 = Polymetal 11.33″H x 11.40″W
2 = Perforated Steel 11.33″H x 11.40″W

SPECIFICATIONS

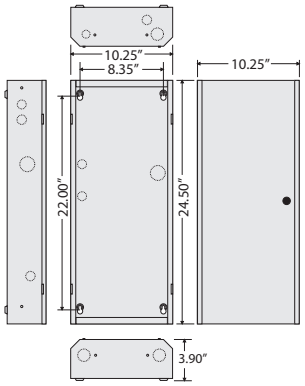
Construction: 18 Gauge Steel
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
• Consult factory for custom colors for large orders.

ENCLOSURE

MH3500 Series

Metal Housing, NEMA 1, 24.50˝H x 10.25˝W x 3.90˝D



MH3500 SERIES ASSEMBLIES			
Model #	Enclosure	Plastic Snap Track	Weight
MH3500	MH3500		11.1 lbs.
MH3510	MH3500	MT4-24 (4.00″W)	11.7 lbs.
MH3520	MH3500	MT212-24 (2.75″W)	11.5 lbs.

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CE

RoHS

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

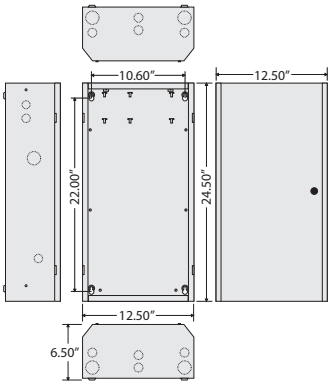
Construction: 18 Gauge Steel
Cover Type: Reversible Hook Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
- Consult factory for custom colors for large orders.
- Order with coin latch by adding "-L4" to end of model number.

ENCLOSURE

MH3800 Series

Metal Housing, NEMA 1, 24.50˝H x 12.50˝W x 6.50˝D



MH3800 SERIES ASSEMBLIES			
Model #	Enclosure	Plastic Snap Track / Sub-Panel	Weight
MH3800	MH3800		16.6 lbs.
MH3810	MH3800	MT4-18 (4.00″W)	16.9 lbs.
MH3820	MH3800	MT212-18 (2.75″W)	16.8 lbs.
MH3803S	MH3800	SP3803S [1]	18.1 lbs.
MH3803L	MH3800	SP3803L [1]	18.5 lbs.
MH3804S	MH3800	SP3804S [2]	19.9 lbs.
MH3804L	MH3800	SP3804L [2]	20.3 lbs.

1 = Polymetal
Model S: 19.00″H x 11.75″W
Model L: 23.00″H x 11.75″W

2 = Perforated Steel
Model S: 19.00″H x 11.75″W
Model L: 23.00″H x 11.75″W

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CE

RoHS

Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

Construction: 18 Gauge Steel
Cover Type: Reversible Hook Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
- Consult factory for custom colors for large orders.
- Order with coin latch by adding "-L4" to end of model number.

ENCLOSURE

MH4400 Series

Metal Housing, NEMA 1, 18.00˝H x 18.00˝W x 7.00˝D

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"Buy American"
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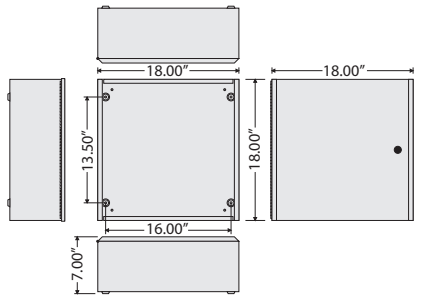


MH4400 SERIES ASSEMBLIES			
Model #	Enclosure	Sub-Panel	Weight
MH4400	MH4400		22.5 lbs.
MH4403L	MH4400	SP4403L [1]	24.7 lbs.
MH4404L	MH4400	SP4404L [2]	26.3 lbs.

1 = Polymetal
16.875″H x 15.75″W

2 = Perforated Steel
16.875″H x 15.75″W

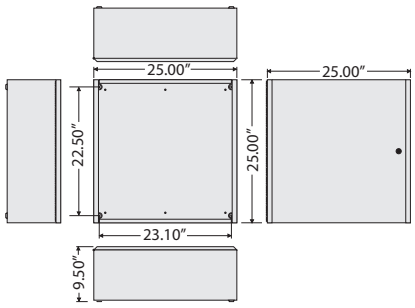
SPECIFICATIONS

Construction: 16 Gauge Steel
Cover Type: Full Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
- Consult factory for custom colors for large orders.
- Order with coin latch by adding "-L4" to end of model number.

MH5500 Series

Metal Housing, NEMA 1, 25.00˝ H x 25.00˝ W x 9.50˝ D



MH5500 SERIES ASSEMBLIES			
Model #	Enclosure	Sub-Panel	Weight
MH5500	MH5500		50.7 lbs.
MH5503L	MH5500	SP5503L [1]	56.4 lbs.
MH5504L	MH5500	SP5504L [2]	60.0 lbs.

1 = Polymetal
23.00" H x 22.50" W

2 = Perforated Steel
23.00" H x 22.50" W

Made in USA
Meets "Buy American" of ARRA 2009

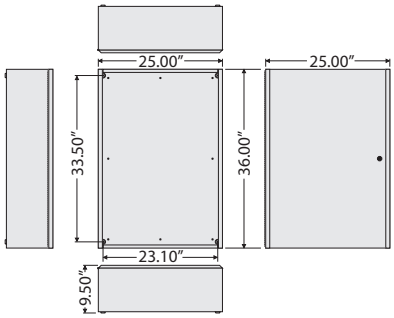
SPECIFICATIONS

Construction: 14 Gauge Steel
Cover Type: Full Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
- Consult factory for custom colors for large orders.
- Order with coin latch by adding "-L4" to end of model number.

MH5800 Series

Metal Housing, NEMA 1, 36.00˝ H x 25.00˝ W x 9.50˝ D



MH5800 SERIES ASSEMBLIES			
Model #	Enclosure	Sub-Panel	Weight
MH5800	MH5800		68.5 lbs.
MH5803L	MH5800	SP5803L [1]	74.2 lbs.
MH5804L	MH5800	SP5804L [2]	80.8 lbs.

1 = Polymetal
34.125" H x 22.50" W

2 = Perforated Steel
34.125" H x 22.50" W

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Construction: 14 Gauge Steel
Cover Type: Full Hinge Key Latch Door
Approvals: UL Listed, C-UL, CE Approved, RoHS

Notes:
- Consult factory for custom colors for large orders.
- Order with coin latch by adding "-L4" to end of model number.

ACCESSORIES

Sub-Panels | Mounting Supplies | Replacement Parts

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Sub-Panels

- Two types of sub-panel material are available - polymetal and perforated steel. Both the polymetal and perforated steel sub-panels are Plenum Rated and designed to mount in model "MH" metal housings and the mounting holes are pre-drilled, ready to install. Sub-panels can be ordered pre-installed in your choice of "MH" enclosures. See the general specifications for pre-assembled enclosure kit model numbers.

Replacement Parts

- Replacement parts are available for several products including remote sensors, enclosures, and more.

Mounting Supplies

- Mounting options include plastic track for snap-mounting circuit boards. One style of track can be mounted to the back surface of any cabinet and is available in 4.00" or 2.75" widths. Another style of track, AdapTrack®, snaps onto any of the three most popular DIN rails. In turn, it can accomodate a 4.00" wide circuit board.

SUB-PANELS

MODEL #	USE WITH ENCLOSURE	MATERIAL	HEIGHT	WIDTH	THICKNESS	MOUNTING AREA	WEIGHT	NOTES	SPEC PAGE
SP3303	MH3300 or MH3300K	Polymetal	11.330"	11.400"	.130"	129.16" square	.932 lbs.		148
SP3304	MH3300 or MH3300K	Perforated Steel	11.330"	11.400"	.250"	129.16" square	1.662 lbs.		148
SP3803S	MH3800	Polymetal	19.000"	11.750"	.130"	223.25" square	1.705 lbs.		148
SP3803L	MH3800	Polymetal	23.000"	11.750"	.130"	270.25" square	2.140 lbs.		149
SP3804S	MH3800	Perforated Steel	19.000"	11.750"	.250"	223.25" square	2.940 lbs.		149
SP3804L	MH3800	Perforated Steel	23.000"	11.750"	.250"	270.25" square	3.520 lbs.		149
SP4403L	MH4400	Polymetal	16.875"	15.750"	.130"	265.78" square	2.100 lbs.		150
SP4404L	MH4400	Perforated Steel	16.875"	15.750"	.250"	265.78" square	3.520 lbs.		150
SP5503L	MH5500	Polymetal	23.000"	22.500"	.130"	517.50" square	3.940 lbs.		150
SP5504L	MH5500	Perforated Steel	23.000"	22.500"	.250"	517.50" square	6.560 lbs.		151
SP5803L	MH5800	Polymetal	34.125"	22.500"	.130"	767.81" square	5.875 lbs.		151
SP5804L	MH5800	Perforated Steel	34.125"	22.500"	.250"	767.81" square	9.720 lbs.		151

MOUNTING SUPPLIES

MODEL #	DESCRIPTION	NOTES	SPEC PAGE
MT212 Series	• 2.75" wide screw mounted snap-in track for mounting relays, current sensors and power supplies		152
MT4 Series	• 4.00" wide screw mounted snap-in track for mounting relays, current sensors and power supplies		152
AT4 Series	• 4.00" wide AdapTrack® for DIN rail mounting relays, current sensors and power supplies		152
DS8062	Self-tapping 5/8" drill screws for mounting devices to all polymetal sub-panels	1	153

REPLACEMENT PARTS

MODEL #	DESCRIPTION	NOTES	SPEC PAGE
MKL Series	Locking latch assemblies for use with Functional Devices metal enclosures	1	153
KEYSET	One set of 2 keys for use with any of the key latch metal enclosures	1	153
AXK	Remote mini current sensor assembly (Wire Output)		153
AXKT	Remote mini current sensor assembly (Terminal Output)		153
AXG	Split ring remote current sensor assembly (Wire Output)		153
AXGT	Split ring remote current sensor assembly (Terminal Output)		153
AXR	Remote current sensor assembly (Wire Output)		153
TS-AN	Pluggable terminal strips for RIBAN Series		153
APS53-TC	Primary voltage terminal cover for use with 300 VA and 500 VA power supplies		153

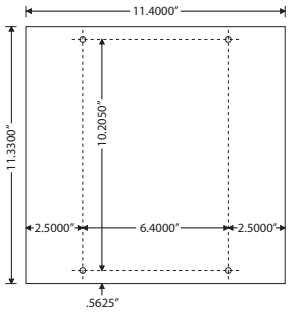
= UL Component Recognized ; USA & Canada

1 = Does not meet "Buy American" of ARRA 2009

SUB-PANEL

SP3303

Polymetal Sub-Panel, 11.330˝H x 11.400˝W x .130˝Thick



Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

Mounting Area: 129.16˝square
Weight: .932 lbs.
Approvals: Plenum Rated

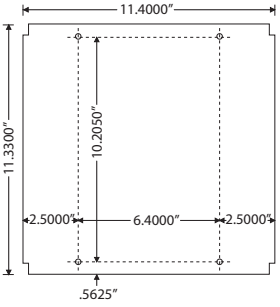
Enclosure Assemblies: *MH3303*
MH3300 Enclosure with SP3303 Sub-Panel pre-mounted

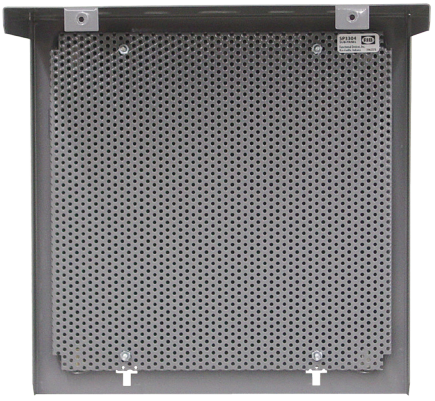
MH3303K
MH3300K Enclosure with SP3303 Sub-Panel pre-mounted

SUB-PANEL

SP3304

Perforated Steel Sub-Panel, 11.330˝H x 11.400˝W x .250˝Thick





Made in USA
Meets
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of ARRA 2009

SPECIFICATIONS

Mounting Area: 129.16˝square
Weight: 1.662 lbs.
Approvals: Plenum Rated

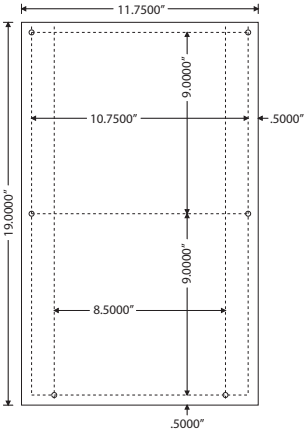
Enclosure Assemblies: *MH3304*
MH3300 Enclosure with SP3304 Sub-Panel pre-mounted

MH3304K
MH3300K Enclosure with SP3304 Sub-Panel pre-mounted

SUB-PANEL

SP3803S

Polymetal Sub-Panel, 19.000˝H x 11.750˝W x .130˝Thick



Made in USA
Meets
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of ARRA 2009

SPECIFICATIONS

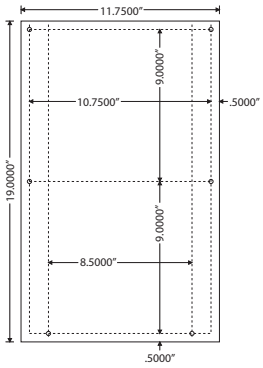
Mounting Area: 223.25˝square
Weight: 1.705 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH3803S*
MH3800 Enclosure with SP3803S Sub-Panel pre-mounted

SUB-PANEL

SP3804S

Perforated Steel Sub-Panel, 19.000˝ H x 11.750˝W x .250˝Thick



Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

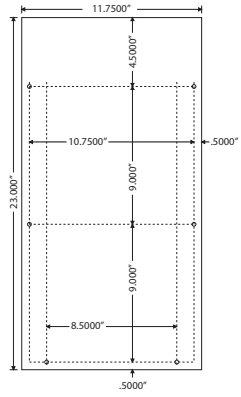
Mounting Area: 223.25˝ square
Weight: 2.94 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH3804S*
MH3800 Enclosure with SP3804S
Sub-Panel pre-mounted

SUB-PANEL

SP3803L

Polymetal Sub-Panel, 23.000˝ H x 11.750˝W x .130˝Thick



Made in USA
Meets
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of ARRA 2009

SPECIFICATIONS

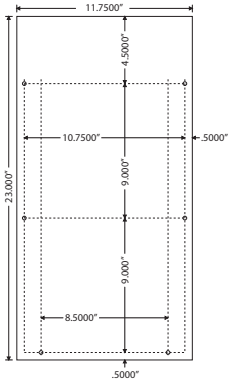
Mounting Area: 270.25˝ square
Weight: 2.14 lbs.
Approvals: Plenum Rated

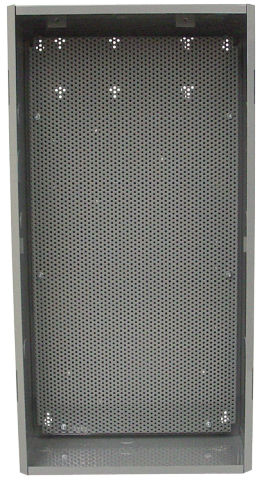
Enclosure Assemblies: *MH3803L*
MH3800 Enclosure with SP3803L
Sub-Panel pre-mounted

SUB-PANEL

SP3804L

Perforated Steel Sub-Panel, 23.000˝ H x 11.750˝W x .250˝Thick





Made in USA
Meets
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of ARRA 2009

SPECIFICATIONS

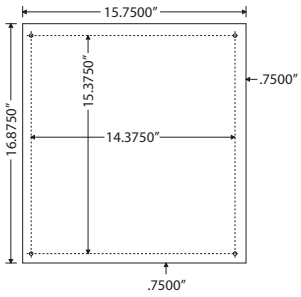
Mounting Area: 270.25˝ square
Weight: 3.52 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH3804L*
MH3800 Enclosure with SP3304L
Sub-Panel pre-mounted

SUB-PANEL

SP4403L

Polymetal Sub-Panel, 16.875˝H x 15.750˝W x .130˝Thick



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SPECIFICATIONS

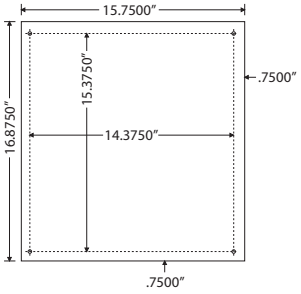
Mounting Area: 265.78˝square
Weight: 2.10 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH4403L*
MH4400 Enclosure with SP4403L
Sub-Panel pre-mounted

SUB-PANEL

SP4404L

Perforated Steel Sub-Panel, 16.875˝H x 15.750˝W x .250˝Thick



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SPECIFICATIONS

Mounting Area: 265.78˝square
Weight: 3.52 lbs.
Approvals: Plenum Rated

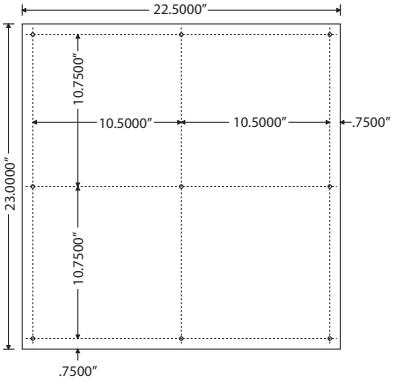
Enclosure Assemblies: *MH4404L*
MH4400 Enclosure with SP4404L
Sub-Panel pre-mounted

ACCESSORIES

SUB-PANEL

SP5503L

Polymetal Sub-Panel, 23.000˝H x 22.500˝W x .130˝Thick



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SPECIFICATIONS

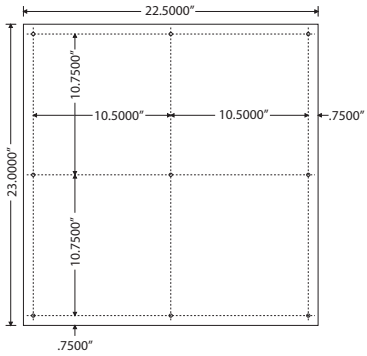
Mounting Area: 517.50˝square
Weight: 3.94 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH5503L*
MH5500 Enclosure with SP5503L
Sub-Panel pre-mounted

SUB-PANEL

SP5504L

Perforated Steel Sub-Panel, 23.000˝ H x 22.500˝W x .250˝Thick



Made in USA
Meets
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of ARRA 2009

SPECIFICATIONS

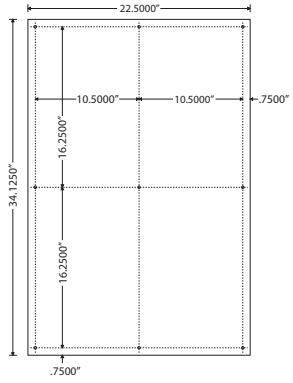
Mounting Area: 517.50˝ square
Weight: 6.56 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH5504L*
MH5500 Enclosure with SP5504L
Sub-Panel pre-mounted

SUB-PANEL

SP5803L

Polymetal Sub-Panel, 34.125˝ H x 22.500˝W x .130˝Thick



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SPECIFICATIONS

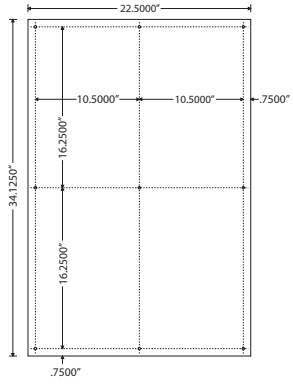
Mounting Area: 767.81˝ square
Weight: 5.875 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH5803L*
MH5800 Enclosure with SP5803L
Sub-Panel pre-mounted

SUB-PANEL

SP5804L

Perforated Steel Sub-Panel, 34.125˝ H x 22.500˝W x .250˝Thick



Made in USA
Meets
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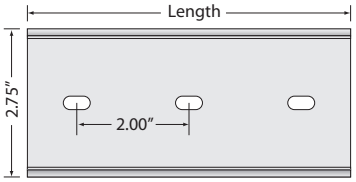
SPECIFICATIONS

Mounting Area: 767.81˝ square
Weight: 9.72 lbs.
Approvals: Plenum Rated

Enclosure Assemblies: *MH5804L*
MH5800 Enclosure with SP5804L
Sub-Panel pre-mounted

MT212 Series

2.75˝ Wide Mounting Track for Relays, Current Sensors, and Power Supplies



Made in USA
Meets
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SPECIFICATIONS

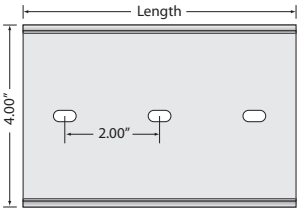
Flame Rated: 94-5V
Approvals: UL Component Recognized, USA & Canada
CE Approved, RoHS
Mounting: MT212 Series track can be screw-mounted to any flat surface to provide mounting for 2.75˝ wide track-mountable relays, current sensors, or power supplies.

MT212 SERIES SELECTION GUIDE

Model #	Width	Length	Distance Between Hole Centers
MT212-2	2.75˝	2.00˝	2.00˝ Center to Center
MT212-4	2.75˝	4.00˝	2.00˝ Center to Center
MT212-6	2.75˝	6.00˝	2.00˝ Center to Center
MT212-8	2.75˝	8.00˝	2.00˝ Center to Center
MT212-12	2.75˝	12.00˝	2.00˝ Center to Center
MT212-18	2.75˝	18.00˝	2.00˝ Center to Center
MT212-24	2.75˝	24.00˝	2.00˝ Center to Center
MT212-48	2.75˝	48.00˝	2.00˝ Center to Center

MT4 Series

4.00˝ Wide Mounting Track for Relays, Current Sensors, and Power Supplies



Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

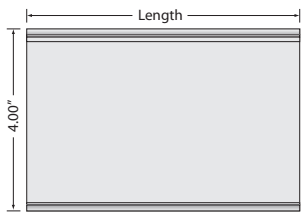
Flame Rated: 94-5V
Approvals: UL Component Recognized, USA & Canada
CE Approved, RoHS
Mounting: MT4 Series track can be screw-mounted to any flat surface to provide mounting for 4.00˝ wide track-mountable relays, current sensors, or power supplies.

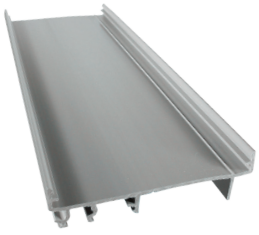
MT4 SERIES SELECTION GUIDE

Model #	Width	Length	Distance Between Hole Centers
MT4-2	4.00˝	2.00˝	2.00˝ Center to Center
MT4-4	4.00˝	4.00˝	2.00˝ Center to Center
MT4-6	4.00˝	6.00˝	2.00˝ Center to Center
MT4-8	4.00˝	8.00˝	2.00˝ Center to Center
MT4-12	4.00˝	12.00˝	2.00˝ Center to Center
MT4-18	4.00˝	18.00˝	2.00˝ Center to Center
MT4-24	4.00˝	24.00˝	2.00˝ Center to Center
MT4-48	4.00˝	48.00˝	2.00˝ Center to Center

AT4 Series

4.00˝ Wide AdapTrack® for Relays, Current Sensors, and Power Supplies





Made in USA
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of ARRA 2009

SPECIFICATIONS

Flame Rated: 94-5V
DIN Rail Sizes: 32 mm x 15 mm asymmetrical DIN rail EN50035
35 mm x 7.5 mm symmetrical DIN rail EN50022
22.4 mm x 6.9 mm symmetrical NEMA A Series rail
Approvals: UL Component Recognized, USA & Canada
CE Approved, RoHS
Mounting: AT4 Series AdapTrack® snaps onto the three most common DIN rail sizes to provide mounting for 4.00˝ wide track-mountable relays, current sensors, or power supplies.

AT4 SERIES SELECTION GUIDE

Model #	Width	Length	DIN Rail Sizes
AT4-2	4.00˝	2.00˝	3 Most Common (see general specs to the left)
AT4-6	4.00˝	6.00˝	3 Most Common (see general specs to the left)
AT4-12	4.00˝	12.00˝	3 Most Common (see general specs to the left)
AT4-24	4.00˝	24.00˝	3 Most Common (see general specs to the left)
AT4-48	4.00˝	48.00˝	3 Most Common (see general specs to the left)

MKL Series

Lock Assemblies for use with RIB® Metal Enclosures

LOCK ASSEMBLIES

MKL-1
Locking key-latch assembly for use with all metal enclosures except MH3300K

MKL-2
Locking key-hook latch assembly for use with metal enclosure MH3300K

MKL-3
Metal locking key-latch assembly for use with all metal enclosures except MH3300K

MKL-4
Coin locking key-latch assembly for use with all metal enclosures except MH3300K

KEYSET

Set of Two Replacement Keys

KEY SET

SPECIFICATIONS

Quantity: Two keys and one ring per set
For Use With: Any of the key-lock enclosures
Advantages: Works with any Functional Devices, Inc. key-lock enclosures

DS80625

Number 8 Self-Tapping Drill Screws

SCREW SET

SPECIFICATIONS

Size: No. 8 x 5/8″
For Use With: All polymetal sub-panels
Advantages: Self-tapping, eliminates mushrooming

AXK

Replacement for any damaged or lost sensor. For use with models listed below *

REPLACEMENT

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Dimensions: (Inside Diameter) .50″
(Outside) 1.86″ x 1.46″ x 1.50″
***Only For Use With:** RIBXLCRA, RIBXLCRF, RIBXLSRA, RIBXLSRF, RIBXRA, RIBXRF
Purpose: Can replace any damaged or lost sensor. For use with the models listed above.

AXKT

Replacement for any damaged or lost sensor. For use with models listed below *

REPLACEMENT

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Dimensions: (Inside Diameter) .50″
(Outside) 2.05″ x 1.46″ x 1.50″
***Only For Use With:** RIBXLCRA, RIBXLCRF, RIBXLSRA, RIBXLSRF, RIBXRA, RIBXRF
Purpose: Can replace any damaged or lost sensor. For use with the models listed above.

AXG

Replacement for any damaged or lost sensor. For use with models listed below *

REPLACEMENT

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Dimensions: (Inside) .52″ x .52″
(Outside) 2.52″ x 2.00″ x 1.75″
***Only For Use With:** RIBXJA, RIBXJF, RIBXLCJA, RIBXLCJF, RIBXLSJA, RIBXLSJF
Purpose: Can replace any damaged or lost sensor. For use with the models listed above.

AXGT

Replacement for any damaged or lost sensor. For use with models listed below *

REPLACEMENT

Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Dimensions: (Inside) .52″ x .52″
(Outside) 2.52″ x 2.00″ x 1.75″
***Only For Use With:** RIBXJA, RIBXJF, RIBXLCJA, RIBXLCJF, RIBXLSJA, RIBXLSJF
Purpose: Can replace any damaged or lost sensor. For use with the models listed above.

AXR

Replacement for any damaged or lost sensor. For use with models listed below *

REPLACEMENT

Made in USA
Meets "Buy American" of ARRA 2009

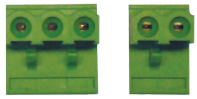
SPECIFICATIONS

Dimensions: (Inside Diameter) .75″
(Outside Diameter) 2.28″
***Only For Use With:** RIBMXRA, RIBMXRF
Purpose: Can replace any damaged or lost sensor. For use with the models listed above.

TS-AN

Replacement for any damaged or lost pluggable terminal strips for RIBAN Series. For use with models listed below *

REPLACEMENT



Made in USA
Meets "Buy American" of ARRA 2009

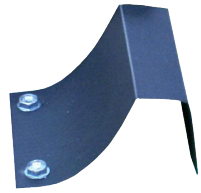
SPECIFICATIONS

***Only For Use With:** RIBAN12C, RIBAN24C
Installation Instructions: Plug the terminal strips into the headers found on the RIBAN Series product.

APS53-TC

Primary Voltage Terminal Cover for use with 300 VA and 500 VA Power Supplies

TERMINAL COVER



Made in USA
Meets "Buy American" of ARRA 2009

SPECIFICATIONS

Includes: (2) Self-Tapping Drill Screws for Installation

For Use With: PSMN300A, PSMN300A-IC, PSMN500A, PSMN500A-IC, PSH300A, PSH300A-IC, PSH500A, PSH500A-IC

WIRELESS DEVICES

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Short Range Wireless Devices

- EnOcean® enabled wireless relay receivers work in conjunction with many switching devices that are EnOcean® enabled with 902 MHz transmitters.
- Wireless wall switches, occupancy sensors, thermostats, key card switches, patio and door switches are all devices which can activate the RIB® wireless control relays by using EnOcean's "energy harvesting" technology. Energy harvesting refers to the process by which energy is captured and stored, then used to transmit a wireless signal, which in turn is received by the RIB® wireless relay.

enocean® alliance
No Wires. No Batteries. No Limits.

WIRELESS CONTROL RELAYS

MODEL #	UL	COIL VOLTAGE AC/DC	COIL VOLTAGE AC	RELAYS	CONTACTS	REPEAT FUNCTION	DRY CONTACT INPUT	BALLAST SIZE ENCLOSURE	NOTES	SPEC PAGE
RIBW01B-EN3	•		120	1	SPDT	•	•		NEW	156
RIBW208B-EN3	•		208	1	SPDT	•	•		NEW	156
RIBW240B-EN3	•		240	1	SPDT	•	•		NEW	156
RIBW277B-EN3	•		277	1	SPDT	•	•		NEW	156
RIBW24B-EN3		24		1	SPDT	•	•		NEW	156
RIBW01C-EN3	•		120	1	SPST	•		•	NEW	157
RIBW02C-EN3	•		208-277	1	SPST	•		•	NEW	157

WIRELESS TRANSMITTERS

MODEL #	UL	POWER INPUT	ENOCEAN® ENERGY HARVESTING	FREQUENCY	COLOR	WIRELESS SWITCH COVER PLATE [1]	NOTES	SPEC PAGE
WWS-EN3		Self-Powered	•	902 MHz	White	WSTP-W	NEW	157
WDWS-EN3		Self-Powered	•	902 MHz	White		NEW	158

UL = UL Listed : UL916 Energy Management, UL864 Fire ; USA & Canada

1 = Sold separately

* For other loads, see data sheet.

RIBW01B-EN3

Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 120 Vac Power, with Dry Contact Input

RIBW208B-EN3

Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 208 Vac Power, with Dry Contact Input

RIBW240B-EN3

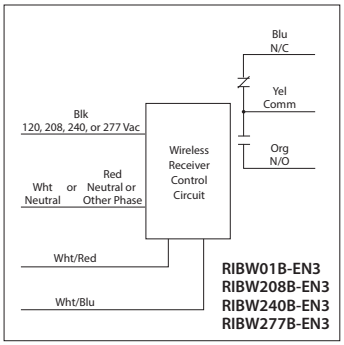
Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 240 Vac Power, with Dry Contact Input

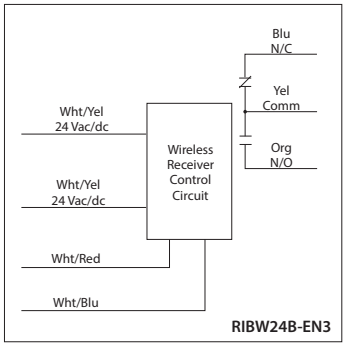
RIBW277B-EN3

Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 277 Vac Power, with Dry Contact Input

RIBW24B-EN3

Enclosed EnOcean® Enabled Wireless Relay Transceiver / Repeater 20 Amp SPDT, 24 Vac/dc Power, with Dry Contact Input





RELAY HAS BUILT-IN REPEATER FUNCTION. RELAY RECEIVES SIGNAL FROM WIRELESS SWITCH TRANSMITTER AND REBROADCASTS THE SIGNAL TO THE NEXT RELAY RECEIVER.

SPECIFICATIONS

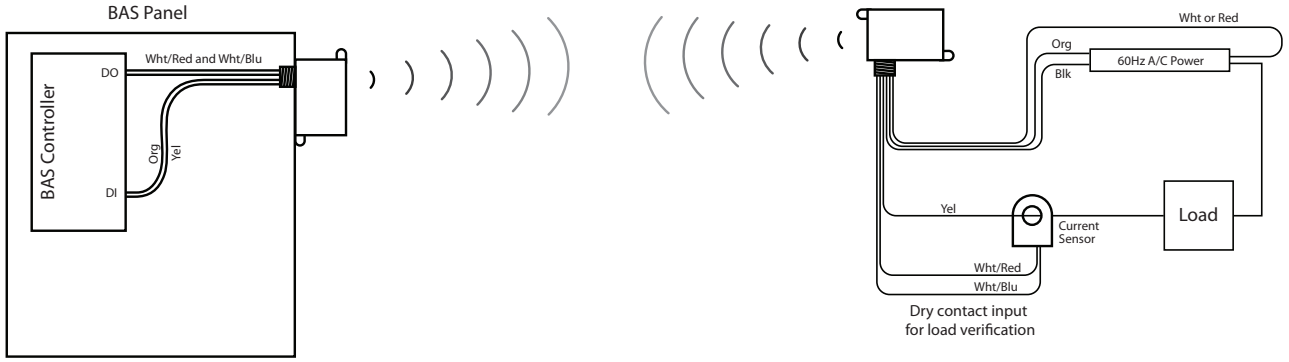
 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Red LED: Relay Status / Learn Mode Status (Flashing)
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, C-UL, RoHS,
Agency Compliance: FCCID: SZV-TCM3200
IC: 5713A-TCM3200
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No
Frequency: 902 MHz
Receiver Sensitivity: -93 dBm typical
Conducted Power: 5 mW typical
Built-in Switch Modes: Alarm, Repeater, Delay, Rocker, Momentary, and Toggle

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
73 mA @ 120 Vac ; 60 Hz (RIBW01B-EN3)
80 mA @ 208 Vac ; 60 Hz (RIBW208B-EN3)
80 mA @ 240 Vac ; 60 Hz (RIBW240B-EN3)
80 mA @ 277 Vac ; 60 Hz (RIBW277B-EN3)
139 mA @ 24 Vac (RIBW24B-EN3)
69 mA @ 24 Vdc (RIBW24B-EN3)

Notes:
- Compatible with Enocean® 902 MHz Switches/Transmitters.
- Typical range: 50-150 ft.
  - Open area transmission could be farther. Consult factory for more information.
- Repeater function only rebroadcasts original EnOcean® transmission. Up to two repeaters can be used.
- Version 1.5 firmware or later implements Functional Devices, Inc.'s EnOcean® Manufacturer ID of 0x055.
- For setup instructions, see website for -EN3 Series Application Manual:
  www.functionaldevices.com/pdf/bulletins/B1867_393231.pdf
  or scan QR code with your smart phone.

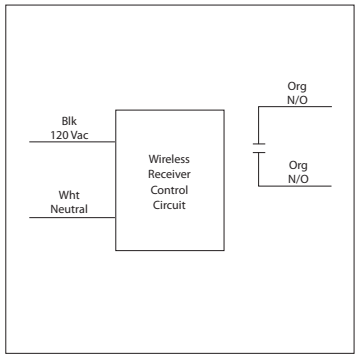
APPLICATION FOR WIRELESS CONTROL & FEEDBACK IN A BUILDING AUTOMATION SYSTEM



WIRELESS CONTROL RELAYS WITH TWO-WAY COMMUNICATION

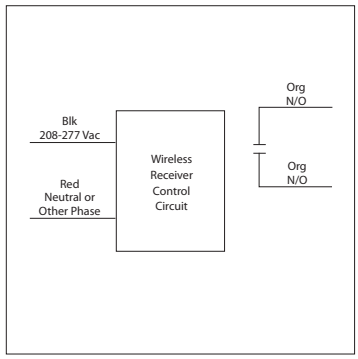
RIBW01C-EN3

Enclosed EnOcean® Enabled Wireless Relay Receiver / Repeater 5 Amp SPST-N/O,
120 Vac Power Input



RIBW02C-EN3

Enclosed EnOcean® Enabled Wireless Relay Receiver / Repeater 5 Amp SPST-N/O,
208-277 Vac Power Input



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SMALLER SIZE DESIGN TO FIT INSIDE BALLAST HOUSING OF FLUORESCENT LIGHT FIXTURE.

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPST Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Red LED: Relay Status / Learn Mode Status (Flashing)
Dimensions: 4.60˝ x 1.20˝ x 1.70˝
Wires: 16˝, 600V Rated
Approvals: UL Listed, UL916, C-UL
Agency Compliance: FCCID: SZV-TCM3200
IC: 5713A-TCM3200
Gold Flash: No
Override Switch: No
Frequency: 902 MHz
Receiver Sensitivity: -93 dBm typical
Conducted Power: 5 mW typical
Built-in Switch Modes: Alarm, Repeater, Delay, Rocker, Momentary, and Toggle

Contact Ratings:
5 Amp Ballast @ 120/277 Vac
5 Amp Tungsten @ 120 Vac
5 Amp Electronic Ballast @ 120 Vac

Power Input Ratings:
75 mA @ 120 Vac ; 60 Hz (RIBW01C-EN3)
100 mA @ 208-277 Vac ; 60 Hz (RIBW02C-EN3)

Notes:
- Compatible with Enocean® 902 MHz Switches/Transmitters.
- Typical range: 50-150 ft.
  - Open area transmission could be farther. Consult factory for more information.
- Repeater function only rebroadcasts original EnOcean® transmission. Up to two repeaters can be used.
- Version 1.5 firmware or later implements Functional Devices, Inc.'s EnOcean® Manufacturer ID of 0x055.
- For setup instructions, see website for -EN3 Series:
www.functionaldevices.com/pdf/bulletins/B1867_393231.pdf
or scan QR code with your smart phone.

WIRELESS ROCKER SWITCH TRANSMITTER & COVER PLATE

WWS-EN3

EnOcean® Enabled Wireless Wall Switch Transmitter Switch, 902 MHz

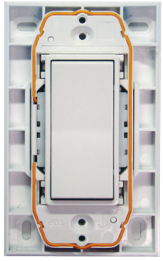
Switch Colors Available:

White

WSTP-W

Cover Plate Colors Available:

White



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SPECIFICATIONS

Operating Modes: On/Off, Toggle, Scene control
Power Supply: Powered by finger press (Electrodynamic Energy Harvester)
Frequency: 902 MHz
Antenna: Integrated antenna, 15cm
Transmission Power: Max. 10mw EIRP
Energy Bowtravel/Operating Force: 50,000 actuations tested to EN60669 / VDE 0632
Operating Temperature: -25 to 65° C
Relative Humidity 5 to 92% (noncondensing)
Dimensions: 2.75˝ x 4.50˝ x 0.62˝
Weight: 3 oz.
Agency Compliance: FCCID: SZV-PTM 210U
IC: 5713A-PTM210U

Notes:
- Control one load or one group of loads with a single rocker style Wireless Switch Transmitter.
- Typical range: 50-150 ft.
  - Open area transmission could be farther. Consult factory for more information.
- Switch cover plate sold separately.
- Do not use metal switch plate covers due to interference with wireless signal.
- Mount with screws or double sided tape.
- For use with EN3 Series Relays.
- EEP F6-02-02

WDWS-EN3

EnOcean® Enabled Wireless Solar Door / Window Sensor, 902 MHz

enocean alliance

SPECIFICATIONS

Charge Time before Linking:	2.7 hours @ 10 lux 3.7 minutes @ 200 lux
Light Required to Sustain Operation:	15 lux for 6 actuations/hour 50 lux for 30 actuations/hour 100 lux for 60 actuations/hour
Charge Time for Full Charge:	21 hours @ 200 lux (after startup) 42 hours @ 200 lux (cold start)
Operating Life in Darkness (after full charge):	174 hours heartbeat only 67 hours @ 10 actuations/hour 10 hours @ 100 actuations/hour
Maximum Sensor Gap:	0.25" (6.4mm)
Dimensions (Sensor):	3.15" L x 0.83" W x 0.59" D (80mm x 21mm x 15mm)
Dimensions (Magnet):	3.15" L x 0.47" W x 0.50" D (80mm x 12mm x 13mm)
Weight (Total):	0.97 oz. (27.5 g)
Environment:	Indoor use only 32° to 131° F (0° to 55° C) 5 to 95% relative humidity (noncondensing)
Agency Compliance:	FCC, IC

Notes:

- Typical range: 50-150 ft.
  - Open area transmission could be farther. Consult factory for more information.
- Only for use with –EN3 Series relays.
- EEP D5-00-01

www.functionaldevices.com/pdf/bulletins/B1877_393233.pdf
or scan QR code with your smart phone.

Made in the U.S.A.
Meets the "Buy American" provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

Half-Light® Ballast Controllers

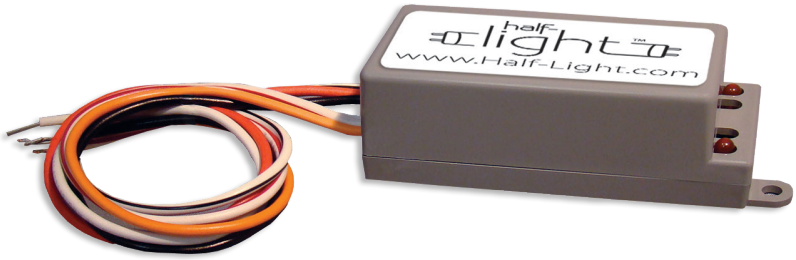
- Providing independent control for multiple ballast light fixtures from a single existing wall switch or from a lighting controller output, the Half-Light® Ballast Controllers can significantly reduce a building's light output, enabling professional lighting users to cost-effectively enjoy the benefits of lighting control with just a simple toggle of their wall-based light switch. Easy to use and install, Half-Light® Ballast Controllers from Functional Devices are fully compatible with the market's range of popular fluorescent and HID lamps and represent a simple and affordable alternative to the industry's costlier and more complicated dimming systems and components.

HALF-LIGHT® BALLAST CONTROLLERS

MODEL #	UL[1]	POWER INPUT	CONTROL INPUT	RELAYS	CONTACTS	ENCLOSED	NOTES	SPEC PAGE
HAF2	•	120 / 208-277 Vac		1	SPST	•		160
HAF3	•	120 / 208-277 Vac		2	SPST	•		160
HAF-AI	•	24 Vac	0-10 Vdc / 0-5 Vdc	2	SPST	•		162

[1] = UL Listed : UL916 Energy Management ; USA & Canada

half-light®



Plug & Play Energy Saving Device for Lighting

Up to 50% Energy Savings & Works with All Lighting

TWO STAGE & THREE STAGE HALF-LIGHT® BALLAST CONTROLLERS

HAF2
Enclosed Independent Control for Multiple Ballast Light Fixtures from One Existing Wall Switch, Two Stage; 120/208-277 Vac Power Input

HAF3
Enclosed Independent Control for Multiple Ballast Light Fixtures from One Existing Wall Switch, Three Stage; 120/208-277 Vac Power Input

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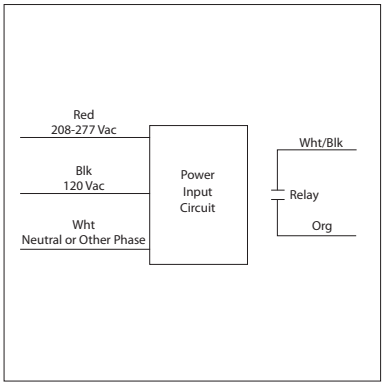
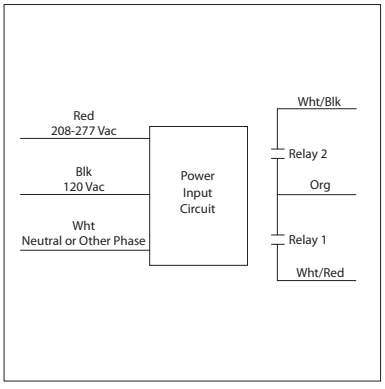




half-light®

Energy Saving Device©

ENERGY SAVING

SPECIFICATIONS

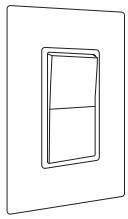
Input Power: 120 / 208-277 Vac
Contact Ratings: 5 Amp Ballast @ 120-277 Vac
5 Amp Incandescent @ 120 Vac
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)

Dimensions: 3.75″ x 1.66″ x 1.18″
Weight: 0.20 lbs. (HAF2); 0.24 lbs. (HAF3)
Wire Length: 6.00″
Approvals: UL Listed, UL916, C-UL, CE Approved, RoHS
Power Consumption: Refer to www. Half-Light.com for details

THREE APPLICATIONS

MULTIPLE BALLAST LIGHT FIXTURES

CLASSROOMS, OFFICES & HIGH BAY FLUORESCENT FIXTURES



TWO STAGE HALF-LIGHT®

Switch ON
activates Ballast 1 Only (50% light)

Switch OFF, then ON
activates Both Ballasts (Full light)

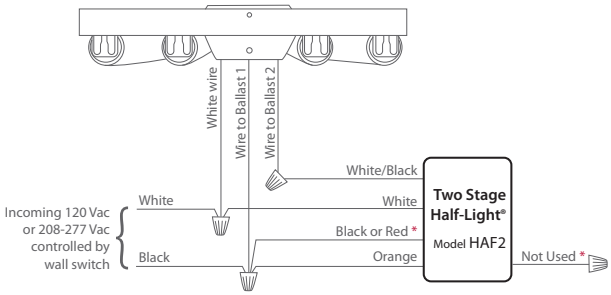
Wall switch can be replaced by switching devices such as contactors, relays, or controllers.

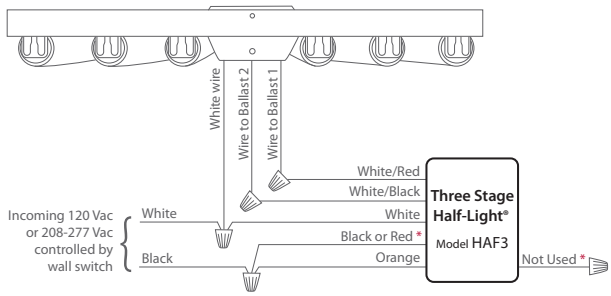
THREE STAGE HALF-LIGHT®

Switch ON
activates Ballast 1 Only

Switch OFF, then ON
activates Ballast 2 Only

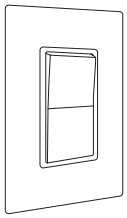
Switch OFF, then ON
activates Both Ballasts (Full light)





STEP DIMMING BALLAST CONTROL

ELIMINATES DUAL WALL SWITCH CONTROL

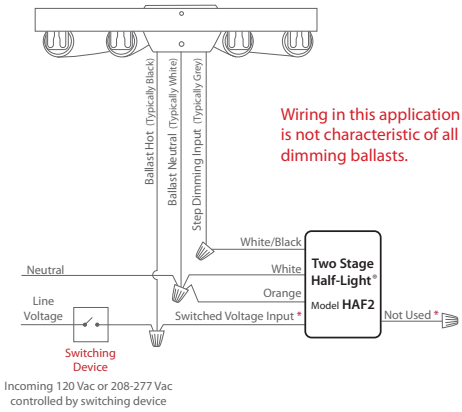


TWO STAGE HALF-LIGHT®

Switch ON
50% Light

Switch OFF, then ON
Full Light

Wall switch can be replaced by switching devices such as contactors, relays, or controllers.



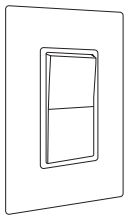
Wiring in this application note is not characteristic of all step dimming ballasts.

ALTERNATE FIXTURE CONTROL

HIGH BAY FIXTURES IN BOX STORES, GYMNASIUMS, EXHIBITION HALLS & WAREHOUSES

Start up and restart times may vary depending on fixture.

Lights 2, 4, and 6 controlled by switch only.
Half-Light® controls lights 1, 3, and 5.

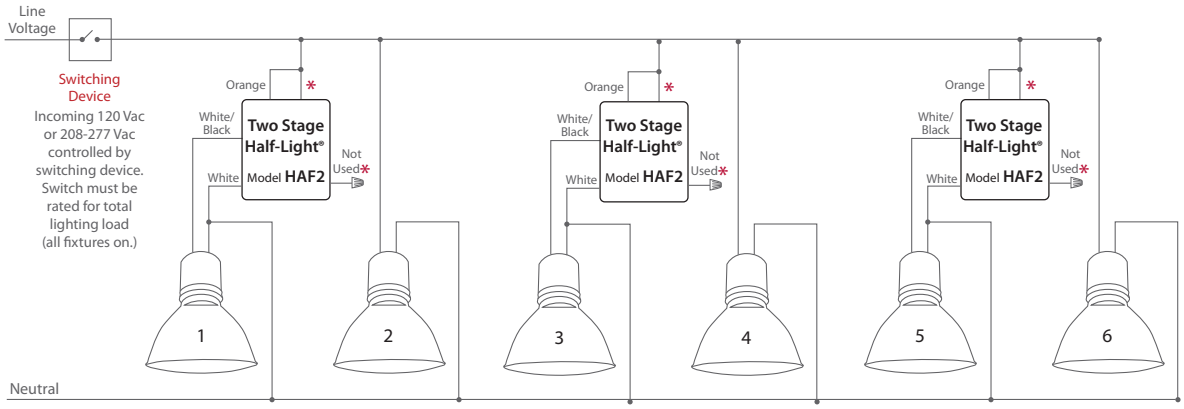


TWO STAGE HALF-LIGHT®

Switch ON
Every Other Light On

Switch OFF, then ON
All Lights On

Wall switch can be replaced by switching devices such as contactors, relays, or controllers.



* For 120 Vac systems, Black wire is used, Red wire is not used. For 208-277 Vac systems, Red wire is used, Black wire is not used.

ENERGY SAVING

THREE STAGE HALF-LIGHT® BALLAST CONTROLLER WITH ANALOG INPUT

HAF-AI

Enclosed Independent Control for Multiple Ballast Light Fixtures with Analog Input for Stage Selection (0-10 Vdc / 0-5 Vdc); Three Stage; 24 Vac/dc Power Input

0-10 VDC CONTROL VOLTAGE	0-5 VDC * CONTROL VOLTAGE	RELAY 1 STATUS	RELAY 2 STATUS
0 - 2.117Vdc	0 - 1.058Vdc	OFF	OFF
2.745 - 4.627Vdc	1.373 - 2.313Vdc	ON	OFF
5.255 - 7.137Vdc	2.628 - 3.568Vdc	OFF	ON
7.765 - 10.000Vdc	3.883 - 5.000Vdc	ON	ON

HALF-LIGHT® BALLAST CONTROLLER WITH ANALOG INPUT FOR USE WITH CONTROLLER OUTPUT

Made in USA
Meets "Buy American" of ARRA 2009

Energy Saving Device®

SPECIFICATIONS

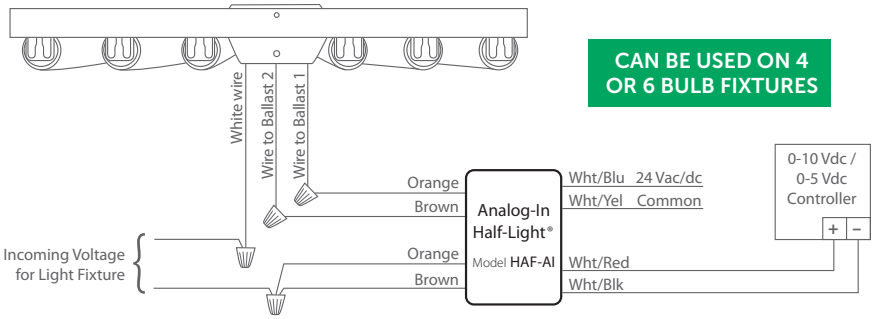
 # Relays & Contact Type: Two (2) SPST-NO Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Relay Status: Green LED On = Power On
Red LEDs On = Relays Activated
Dimensions: 3.750˝ x 1.660˝ x 1.800˝
Wire Length: 6.00˝
Approvals: UL Listed, UL916, C-UL, CE, RoHS
Gold Flash: No
Override Switch: No

Contact Ratings:
10 Amp General Use @ 277 Vac
10 Amp Resistive @ 30 Vdc (N/O)
7 Amp Resistive @ 30 Vdc (N/C)
1/2 HP @ 125 Vac
1 HP @ 250 Vac
1/4 HP @ 277 Vac
470 VA Pilot Duty @ 125 Vac
770 VA Pilot Duty @ 250 Vac

Power Input:
24 Vac/dc ; 50-60 Hz
100mA max.

Notes:
- Custom programming available for large orders.
- For Normally Closed, add -NC to end of model number
- Must move jumper for 0-5Vdc.*

MULTIPLE BALLAST LIGHT FIXTURES
CLASSROOMS, OFFICES & HIGH BAY FLUORESCENT FIXTURES



CAN BE USED ON 4 OR 6 BULB FIXTURES

ENERGY SAVING

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