GE Total Lighting Control
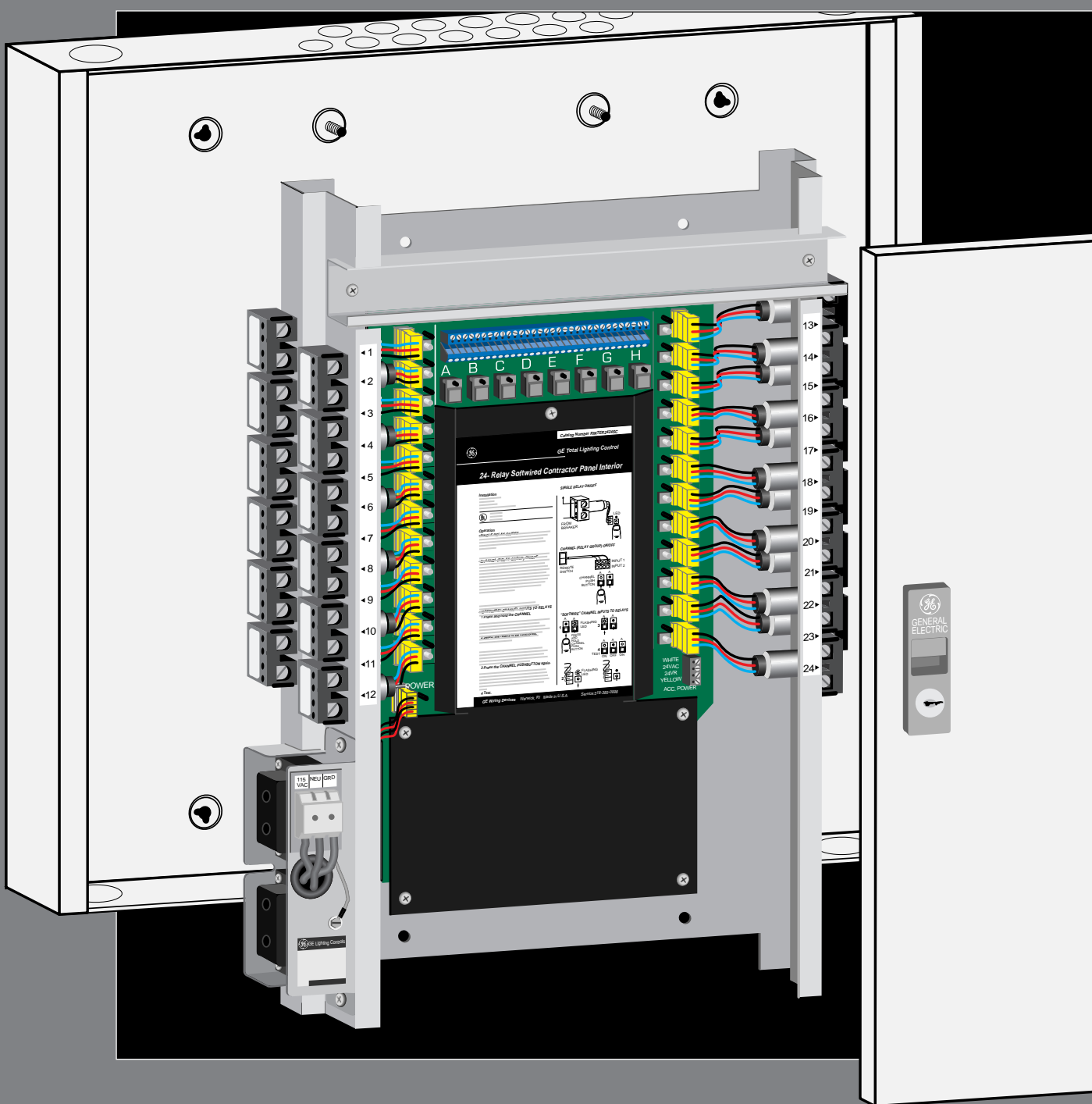
MechTronics
C o n t r o l s
www.hvacusa.com
Phone (877) 632-4876

Softwired Contactor™ Panels

ACCENT LIGHTING — SWITCHED LIGHTING CIRCUITS — GENERAL LIGHTING

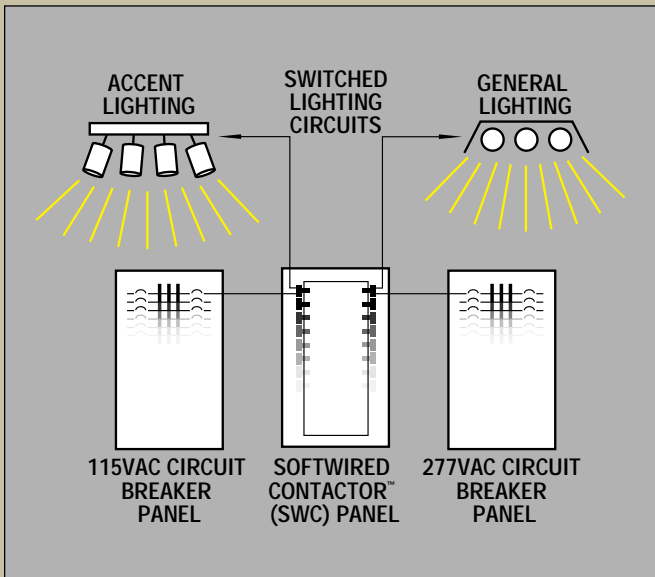115VAC CIRCUIT BREAKER PANEL — SOFTWIRED CONTACTOR™ (SWC) PANEL — 277VAC CIRCUIT BREAKER PANEL

Creating Functional Lighting Groups

In many applications, particularly stores and malls, lighting circuits need to be grouped for common control. For example, within a store, General Lighting provides the foundation for visibility or color; Perimeter Lighting provides a pleasing brightness and visual excitment to wall displays; and Incandescent Accent/Showcase Lighting adds visual impact and drama.

The first step in controlling the lighting is to define these functional groups and circuit them accordingly. The second step is to group these circuits for both manual and automatic control.

The GE TLC Softwired Contactor™ provides a simple, low-cost, flexible approach to grouping lighting circuits for both manual and automatic control.

Each lighting circuit is wired through one of the standard relays in the factory assembled panel. The relays controlling a functional lighting group can then be "softwired" to a channel in seconds. 24-relay panels are supplied with 8 channels; 36- and 48-relay panels have 16 channels. The groupings can be changed at any time without shutting the panel down or touching the wiring.

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1 — A A FLASHING LED PRESS AND HOLD CHANNEL PUSH BUTTON

2 — FLASHING LED

3 — A A

4 — A A A ON OFF ON

Softwiring a Relay Group to a Channel

1 **Press and hold the Channel Push Button for several seconds.** *The channel LED and the LEDs for relays currently controlled by that input will begin to flash.*

2 **Select the relays to be controlled.** *The LED for each relay "softwired" to the channel input selected will be flashing ON/OFF. Press the associated Relay Control Button to add/delete that relay from the group.*

3 **Press the Channel Push Button again.** *The LEDs will stop flashing and the input switch will now control the relays selected.*

4 **Test.** *Press the Channel Push Button to toggle the group ON/OFF/ON. The input LED will track the last action. Now, turn OFF each relay in the group using the individual Relay Control Buttons. When the last relay is turned OFF, the channel LED should also go OFF.*


REMOTE SWITCH
2- or 3-wire maintained or momentary

CHANNEL INPUTS
INPUT 1   R B Y W   R B Y W
INPUT 2   A   B

PILOT CONTACTS

YELLOW COMMON
Connected to 24V RECT for pilot light operation

Controlling Functional Lighting Groups

Each channel, or group of relays, has an associated Channel Push Button with LED status indication. Pressing this button toggles the channel group ON/OFF. The Channel Push Buttons may be used as manual overrides. However, in a typical application we often wish to provide local switches to control the functional lighting groups.

Each channel has two switch inputs. The first of these may be wired to a standard low-voltage switch mounted in the area. To provide Master Control of several lighting groups, a spare channel may be softwired to include all of the relays in these groups. When the Master turns all of the relays ON/OFF, each of the "sub-group" channels will also relfect the correct status… each channel LED (and pilot contact) tracks the state of the relays within its group.

The second input on a channel may be wired to the building's automation system or to a timeswitch. Using the Master switch concept above, a single BAS or timeclock input can control multiple groups which share a common schedule.

Each channel also has an isolated pilot contact which tracks the channel LED status. These may be used either to control a pilot light switch as shown or to provide feedback to the automation system.
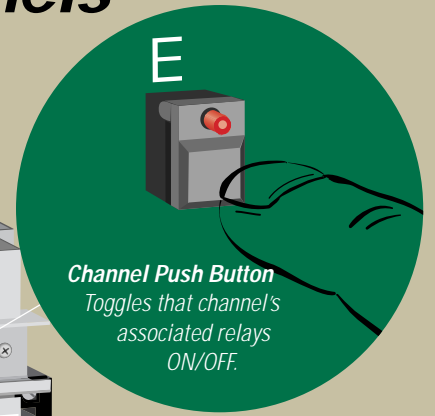
GE TLC *Softwired Contactor*™ *Panels*

E
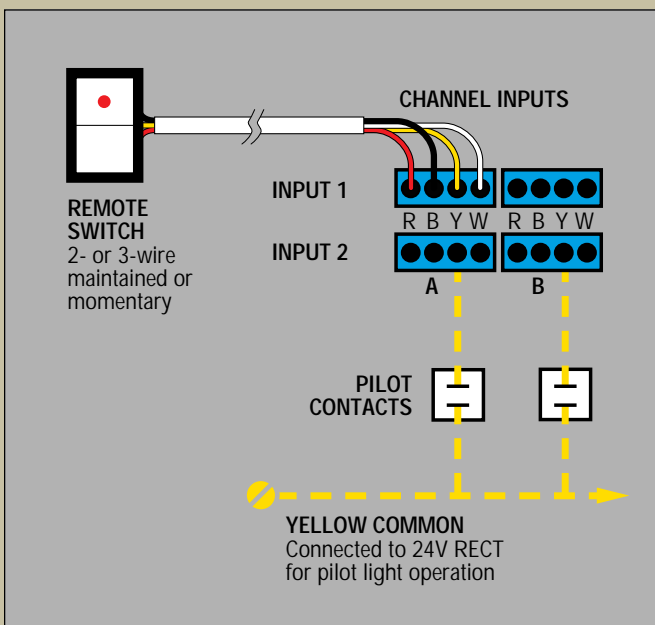
Shown: RINTER4848SC 48-Relay Interior
(A complete panel consists of a Tub, Interior, Power Supply and Cover. See next page.)
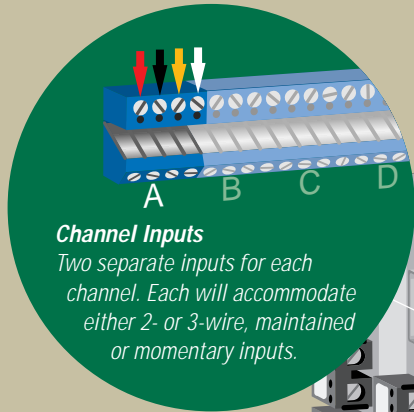
Channel Inputs
Two separate inputs for each channel. Each will accommodate either 2- or 3-wire, maintained or momentary inputs.

Channel Push Button
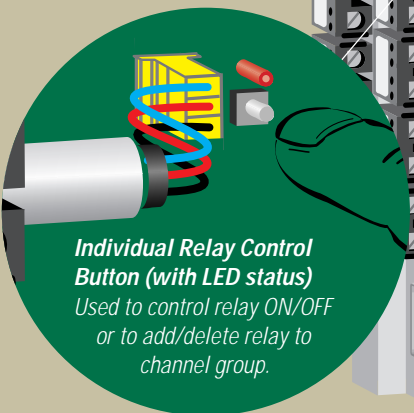*Toggles that channel's associated relays ON/OFF.*

Isolated Pilot Contacts
1 amp, 30 volt DC pilot contacts indicate channel status. All relays ON = closed; OFF = open.

Accessory Device Power Tap
24 volt AC, 40VA for powering timeclocks or other controls. 24 volt rectified for powering pilot lights (connects to pilot relay common).

Power Supply
115 volt or 277 volt AC (347V in Canada). Two 40VA transformers with GE-MOV transient protection.

Accessory Mount Plate
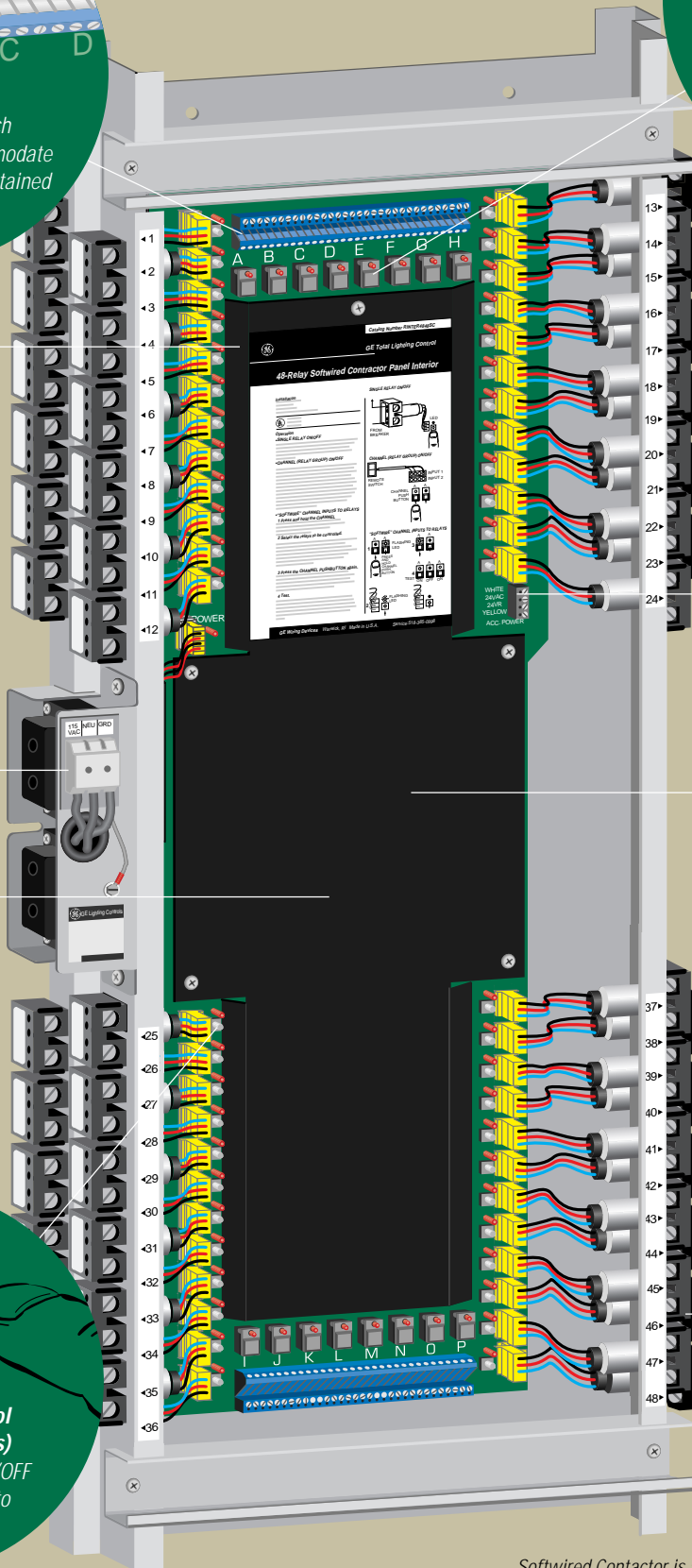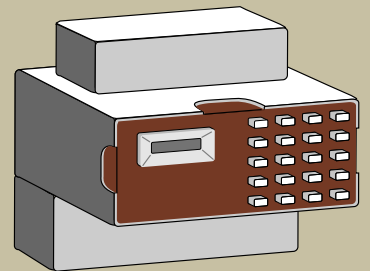*Optional plate for mounting accessory devices. 9" wide x 6" high x 3" deep.*

EEPROM Memory
All "softwiring connections" and status data stored in EEPROM. 40-year memory with no battery or backup requirements.

RR7P3 Mechanically-Latching Relay
20 amp, 277 volt (347V in Canada). Rated for 50,000 cycles. Tungsten, fluorescent or HID.

Individual Relay Control Button (with LED status)
Used to control relay ON/OFF or to add/delete relay to channel group.

Softwired Contactor is a trademark of GE Total Lighting Control

Catalog Number

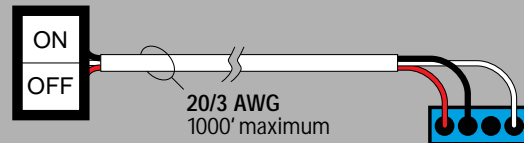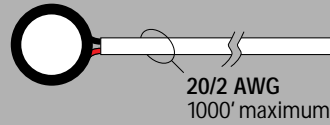| Catalog Number	Component Description
RTUB12	Tub for 12-Relay Interior
RINTER1212SC	12-Relay Softwired Contactor™ Interior, 4 Channels, 2 Inputs per channel, 4 Pilots
RCOV12SL	Surface-mount, Hinged, Lockable Cover for RTUB12
RCOV12FL	Flush-mount, Hinged, Lockable Cover for RTUB12
RTUB24	Tub for 24-Relay Interior
RINTER2424SC	24-Relay Softwired Contactor™ Interior, 8 Channels, 2 Inputs per channel, 8 Pilots
RCOV24SL	Surface-mount, Hinged, Lockable Cover for RTUB24
RCOV24FL	Flush-mount, Hinged, Lockable Cover for RTUB24
RCOV24SHL	Surface-mount, Hinged, Lockable Cover for RTUB24 with Windowed Door for Low-voltage Section
RCOV24FHL	Flush-mount, Hinged, Lockable Cover for RTUB24 with Windowed Door for Low-voltage Section
RTUB48	Tub for 36- or 48-Relay Interior
RINTER3648SC	36-Relay Softwired Contactor™ Interior, 16 Channels, 2 Inputs per channel, 16 Pilots
RINTER4848SC	48-Relay Softwired Contactor™ Interior, 16 Channels, 2 Inputs per channel, 16 Pilots
RCOV48SL	Surface-mount, Hinged, Lockable Cover for RTUB48
RCOV48FL	Flush-mount, Hinged, Lockable Cover for RTUB48
RCOV48SHL	Surface-mount, Hinged, Lockable Cover for RTUB48 with Windowed Door for Low-voltage Section
RCOV48FHL	Flush-mount, Hinged, Lockable Cover for RTUB48 with Windowed Door for Low-voltage Section
RPWR115	115 volt AC (±10%), 50-60 Hz Power Supply
RPWR277	277 volt AC (±10%), 50-60 Hz Power Supply
RPWR347	347 volt AC (±10%), 50-60 Hz Power Supply, Canada
RACCESSBRK12	Accessory Mount Bracket for 12-Relay Interior
RACCESSBRK	Accessory Mount Bracket for 24-, 36- and 48-Relay Interiors

Dimensions

RTUB12 – 16.5"W x 16.0"H x 4.5"D

RTUB24 – 24.0"W x 22.5"H x 4.5"D

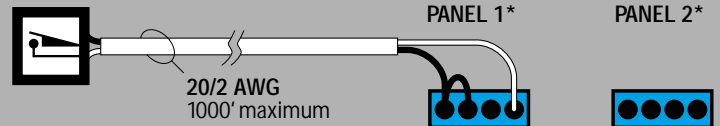**RTUB48** – 24.0"W x 36.0"H x 4.5"D

Manual Switching Inputs

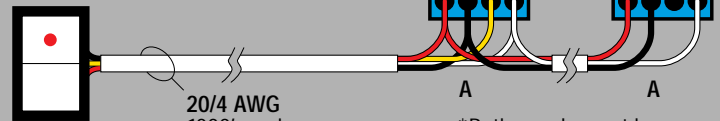**STANDARD MOMENTARY OR MAINTAINED 3-WIRE SWITCH** (RS23x Series)

ON
OFF

20/3 AWG
1000' maximum

R B Y W

MOMENTARY 2-WIRE TOGGLE

20/2 AWG
1000' maximum

SINGLE POLE MAINTAINED 2-WIRE SWITCH

20/2 AWG
1000' maximum

PANEL 1*   PANEL 2*

R B Y W   R B Y W

A   A

PILOT LIGHT MOMENTARY 3-WIRE SWITCH

20/4 AWG
1000' maximum

*Both panels must be on the same phase.

Automation Inputs

SCHEDULE ON/OFF* CONTROL OF MULTIPLE CHANNELS

R B Y W   R B Y W   R B Y W

A   B   C**
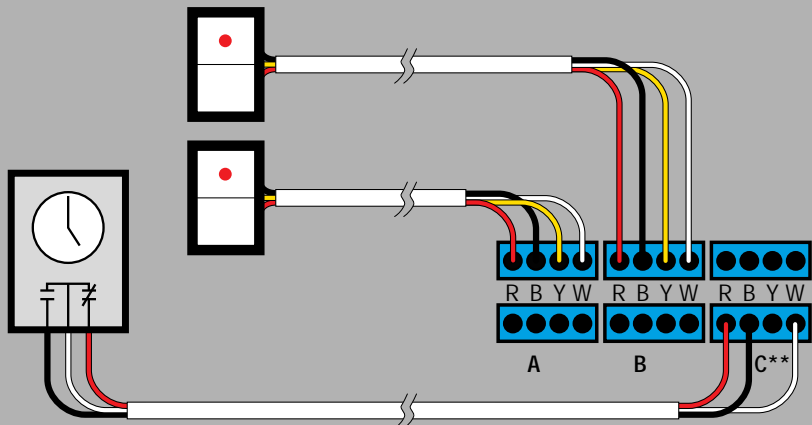
*Note: Multiple OFF sweeps require a 2-channel timeclock or one with momentary outputs.
**C is softwired to include A and B.