

Power Cube ME4430, ME4530 Actuators



Description:

These 2-way and 3-way control valves all use common high strength, glass filled, nylon composite, electric gear motor actuators. The ME4430, normally open series, & the ME4530, normally closed series are 2-position, 2-wire, fail-safe on power disruption units. They are designed for on-off control of hot or chilled water, glycol (50%) and low-pressure steam. An insulating collar keeps the valve body heat away from the actuator. The actuator is equipped with a dial type position indicator and an M30 quick disconnect mounting thumbnut.

General Specification:

Motor Type: Brushless hysteresis, capable of continuous stall.
Action: Power Interrupt - ME4430 Stem UP (NO), ME4530 Stem down (NC)
Operating Voltage: 24VAC, 110VAC, 220VAC 50/60Hz, $\pm 10\%$
Power Consumption: 8 VA, 0.3A at 24VAC
Ambient Temperature: 40 to 122°F (5-50°C)
Enclosure: IP20 (NEMA 1)
Drive Time: 20 sec closing, 10 sec opening - 4430/4431/4432
 20 sec opening, 10 sec closing - 4530/4531/4532



Stroke: 4.5 MM

Stem Force: 27lb (120 Newton)

Wiring Connections: 4" (100 MM) leads 7/8" strain relief connector (Wire harness optional designated with "W")

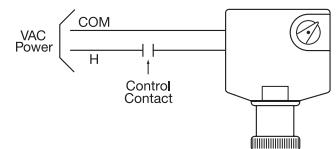
Option: SPDT End Switch 250V 5A (designated with "S")

Approvals: Meets CE, ROHS requirements
 Electric motor UL & CSA approved

Maintenance Free

Electrical Connection:

Electrical connection 24 Vac Class 2 wiring using strain relief 7/8" connector provided: Connect the two wires (polarity is not required) to the short leads of the electric motor. Secure the connection with wire maretts and tuck them inside the motor true 7/8" hole. Snap on the wire connector, press into the opening and it will lock in place.



Power Cube 2-position Actuators types:

Actuator Part Number	Action Power Interrupt	Power	Option
ME4430	Normally Open Stem up	24VAC	none
ME4430W	Normally Open Stem up	24VAC	Wire Harness
ME4430S	Normally Open Stem up	24VAC	End Switch
ME4431	Normally Open Stem up	110VAC	none
ME4431W	Normally Open Stem up	110VAC	Wire Harness
ME4431S	Normally Open Stem up	110VAC	End Switch
ME4432	Normally Open Stem up	220VAC	none
ME4432W	Normally Open Stem up	220VAC	Wire Harness
ME4432S	Normally Open Stem up	220VAC	End Switch
ME4530	Normally Closed Stem down	24VAC	none
ME4530W	Normally Closed Stem down	24VAC	Wire Harness
ME4530S	Normally Closed Stem down	24VAC	End Switch
ME4531	Normally Closed Stem down	110VAC	none
ME4531W	Normally Closed Stem down	110VAC	Wire Harness
ME4531S	Normally Closed Stem down	110VAC	End Switch
ME4532	Normally Closed Stem down	220VAC	none
ME4532W	Normally Closed Stem down	220VAC	Wire Harness
ME4532S	Normally Closed Stem down	220VAC	End Switch

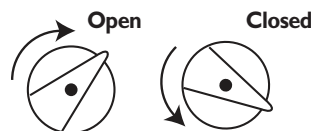
Valve Bodies:

All valve bodies are spring-loaded stem up. The spring returns the valve & actuator to the stem up position when power is lost in fail open type ME4430 or fail closed in type ME4530.

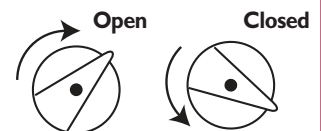
All valve bodies have in line replaceable and / or interchangeable cartridges to enable Cv (Kv) size change on site, resizing or servicing with out removing the valve body from the pipe. Refer to the valve body data sheet for complete specification and selection.

Position Indicator:

ME4430 Series

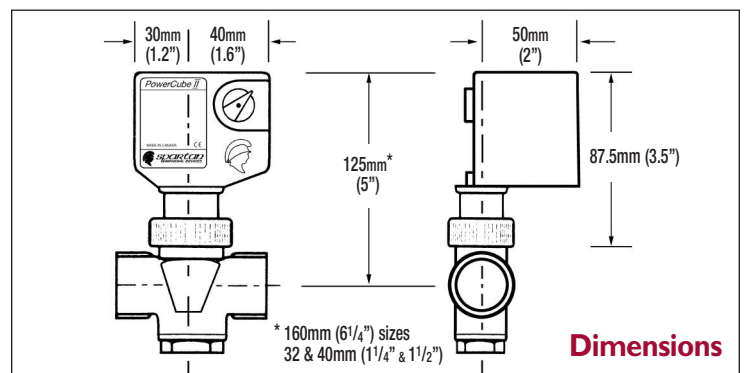
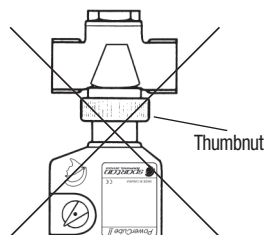


ME4530 Series



Installation Instructions:

The actuator can be installed vertically or horizontally; it cannot be installed upside down. The Actuator mounting thumbnut is to be tightened by hand only, using tools may result in over-tightening.



Dimensions

Compact, Electric, two position, spring return Zone Control Valves (2 & 3 Way)

ME4430, ME4431, ME4432, ME4530, ME4531, ME4532

Valve Body	Description	Size	*Cartridge CV/KV Selection	Actuator ME4430/31/32 24/110/230Vac Spring Open	EP Cartridge Max. Close-off PSI / Bar	EB Cartridge Max. Close-off PSI / Bar	Actuator ME4530/31/32 24/110/230Vac Spring Closed	EP Cartridge Max. Close-off PSI / Bar	EB Cartridge Max. Close-off PSI / Bar
V240 - 2 way valve body - union connection both ports									
V240-12X	Select solder S or threaded N unions**	1/2"	BC-0,15,0.25	VE240-12-BCXX-4430/31/32	60 / 4.0	-	VE240-12-BCXX-4530/31/32	50 / 3.4	-
V240-12X		1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE240-12-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE240-12-EPXX-4530/31/32	40 / 2.7	100 / 6.8*
V240-34X		3/4"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE240-34-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE240-34-EPXX-4530/31/32	40 / 2.7	100 / 6.8*
V241 - 2 way valve body - female port in, X union connection port out									
V241-12	Single union straight with female port in and male union out	1/2"	BC-0,15,0.25	VE241-12-BCXX-4430/31/32	60 / 4.0	-	VE241-12-BCXX-4530/31/32	50 / 3.4	-
V241-12		1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE241-12-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE241-12-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V241-34		3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VE241-34-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE241-34-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V243 - 2 way valve body - female port in, X female port out									
V243-12		1/2"	BC-0,15,0.25	VE243-12-BCXX-4430/31/32	60 / 4.0	-	VE243-12-BCXX-4530/31/32	50 / 3.4	-
V243-12	Female by female port	1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE243-12-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE243-12-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V243-34	Straight valve body	3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VE243-34-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE243-34-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V243-10		1"	EB-6,0,6.4,8,0,9,0	VE243-10-EBXX-4430/31/32	60 / 4.0	-	VE243-10-EBXX-4530/31/32	50 / 3.4	-
V245 - 2 way valve body - female port in, X female port out									
V245-12		1/2"	BC-0,15,0.25	VE245-12-BCXX-4430/31/32	60 / 4.0	-	VE245-12-BCXX-4530/31/32	50 / 3.4	-
V245-12	Direct solder body	1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE245-12-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE245-12-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V245-34		3/4"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE245-34-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE245-34-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V260 - 2 way angle valve body - double union OR V261 - 2 way angle valve body - single union									
V260/V261-12	Angle body with single or double union	1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VE260-12-EP/EBXX-4430/31/32	45 / 3.0	100 / 6.8*	VE260-12-EP/EBXX-4530/31/32	40 / 2.7	100 / 6.8*
V260/V261-34		3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VE260-34-EP/EBXX-4430/31/32	30 / 2.0	100 / 6.8*	VE260-34-EP/EBXX-4530/31/32	30 / 2.0	100 / 6.8*
V320 - 3 way diverting valve body - unions on all three ports OR V321 - 3 way mixing valve body - unions on all three ports									
V320/V321-12X	Select solder S	1/2"	ED1,0.2,0.3,0.3,5	VE320-12-EDXX-4430/31/32	50 / 3.4	-	VE320-12-EDXX-4530/31/32	50 / 3.4	-
V320/V321-34X	or threaded N union	3/4"	ED1,0.2,0.3,0.3,5	VE320-34-EDXX-4430/31/32	50 / 3.4	-	VE320-34-EDXX-4530/31/32	50 / 3.4	-
V345-34	Threaded unions only****	3/4"	CV/5	VE345-34-5-4430/31/32	50 / 3.4	-	VE345-34-5-4530/31/32	45 / 3.0	-
V345-10		1"	CV/5	VE345-10-5-4430/31/32	50 / 3.4	-	VE345-10-5-4530/31/32	45 / 3.0	-
V323 - 3 way diverting valve body - Female thread all ports									
V323-12	Female thread	1/2"	ED1,0.2,0.3,0.3,0	VE323-12-EDXX-4430/31/32	30 / 2.0	-	VE323-34-EDXX-4530/31/32	30 / 2.0	-
V325 - 3 way diverting valve body - direct solder									
V325-12	3 way diverting	1/2"	ED1,0.2,0.3,0.3,5	VE325-12-EDXX-4430/31/32	50 / 3.4	-	VE325-12-EDXX-4530/31/32	50 / 3.4	-
V325-34	direct solder	3/4"	ED1,0.2,0.3,0.3,5	VE325-34-EDXX-4430/31/32	50 / 3.4	-	VE325-34-EDXX-4530/31/32	50 / 3.4	-

*Select CV from available cartridges and replace XX with CV value in complete part number of the assembly. †Maximum differential pressure 50 Psi / 3.4 Bar to prevent water noise.
 100PSI / 6.8 Bar close-off pressure can be achieved by using an EB0,5, 1,0, 1,5, 2,0, 2,5, 3,0, 3,5, 4,5 cartridge