

On/Off & Pulse Width Modulating Globe Valve Actuators



MVA

DESCRIPTION

Electro-thermal, bidirectional, noiseless, zone globe valve actuators with fail-safe control.

APPLICATION

Actuators with integrated quick clamp and screw for pop-on coupling on 2-way or 3-way zone globe valves for fan coil units, reheat of VAV/VVT boxes, base boards, and other AC units. Can be controlled by any compatible electric or electronic analog controller, DDC/PLC control or automation system.

FEATURES

- Easy, pop-on valve actuator
- Spring return, with V.Z valves
- On/Off
- Modulating with PI/PID time proportioning/pulse width
- 2-wire
- Compact size
- Maintenance free
- Two-year warranty



CE certified ISO 9000

SPECIFICATIONS

Control

Input signal Refer to table
- connection 2-wire

Electrical

Power supply Refer to table
Frequency 50/60 Hz
Power consumption 5 VA, inrush 0.55 A

Actuator type

Electro-thermal
(PTC thermistor heats thermostatic element and moves piston/stem downwards, valve spring moves stem/piston upwards)

Noise level

- actuating and spring return

0 db (A), noiseless

Input Signal	Control Voltage / Power Supply	Part Numbers
On/Off or Pulse width modulating	24 VAC, ± 10%	MVA 43
On/Off	110...230 VAC, ± 10%	MVA 23

Performance

Positioning force
- actuator 24.7 lbf (110 N)
- spring return 24.7 lbf (110 N)
Positioning stroke 0.157 (4.0 mm)
Running time
- actuator cold start (powered up to 1st movement) 120 sec.
- full stroke opening (stem down) 180 sec.
- full stroke closing, spring return (stem up) 480 sec.
Power failure Springs back to stem-up w/ V.Z valve series

Environmental

Permissible ambient
- working temperature 41°F to 122°F (5°C to 50°C)
- storage temperature -13°F to 149°F (-25°C to 65°C)
- humidity 5-95% RH, non-condensing

Physical

Enclosure Fire retardant, UL94-HB
- cover (top) material PA6
- base material PP
- color Blue and gray
- protection NEMA 2 (IP 31), conforms to IES 730-1 (93)/6.5.3
- protection class II (CEI 107-10)
Mounting position Horizontal or vertical, avoid cable outlet pointing upwards

SPECIFICATIONS

Physical (cont...)

Wire connection	Terminal block, screw type for lead wire
Wire size	Min. 18 AWG (0.75 mm ²) Max. 14 AWG (2.5 mm ²)
Cable entry	1 slotted hole, 5/16" (7.9 mm) with cable grommet
Weight	
- w/o conduit adapter	0.44 lbs. (0.2 kg)

OPTION

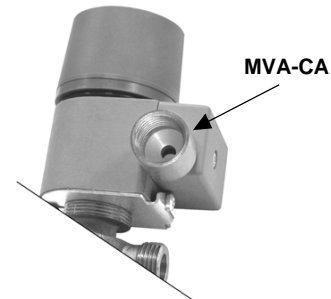
- MVA-CA (1) Conduit adapter	1/2" NPT female threaded connection with 1/4" pass-through hole
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Valve Body, Compatibilities Valve Coupling

VSZ...B, VMZ...B valve series
Quick clamp/screw system, easy pop-on/hand connection
ISO 9000 certified
EMC 89/336 directive, EN50081-1 for emission, and EN50082-1 for immunity
CE
Two-year material and workmanship

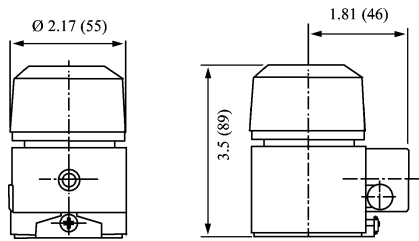
Manufacturing Conformity

Listings/Approvals Warranty



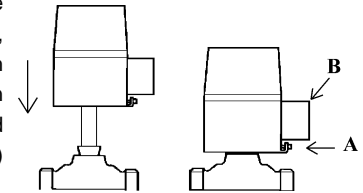
DIMENSIONS

inches (mm)



COUPLING TO THE VALVE BODY

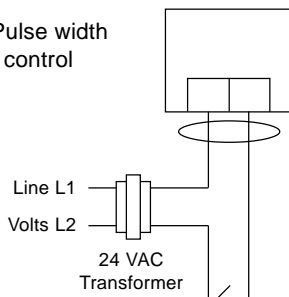
Remove protective plastic hood fitted over valve stem prior to coupling actuator on valve body. Loosen up screw (A), fit actuator over stem, push down actuator and position sliding plate into tapered valve neck. Tighten screw (A) tightly.



WIRING CONFIGURATION

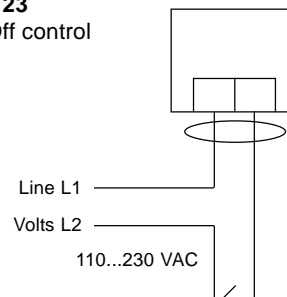
MVA 43

On/Off or Pulse width modulating control



MVA 23

On/Off control



- Notes:
- To access the terminal wiring connection block, remove screw from terminal cover (B).
 - Wire connections at the actuator are interchangeable.
 - **Do not supply power to the actuator unless the actuator has been coupled to the valve body appropriately.**

- Actuator will be damaged if 110...230 VAC is applied to the 24 VAC actuator.
- When power/signal is applied to the actuator, the actuator piston/valve stem will move downwards (N.C. valves will open, N.O. valves will close). Be patient, cold start will take up to 300 sec. to stroke 100%.