

Z-one™ zone valves

Submittal Data

Z-one™ On/Off Spring Return Zone Valve

The Z-one, a motorized two-position on/off spring return zone valve, is used in heating and air-conditioning systems. The Z-one series consist of a Z1 actuator which is easily attached to a Z2 (2-way) or Z3 (3-way) valve body with the push of a button. Z1 actuator is equipped with or without micro switch.

Z1 actuator + Z2 body = Z4 set and Z1 actuator + Z3 body = Z6 set.



Overview

The Z-1 actuator has a synchronous motor that winds the return spring and moves the valve paddle to the desired position. When power is removed the actuator spring returns the valve paddle. The Z-1 actuator is equipped with or without micro switch.

Features

- Enhanced Motion gear action
- Up to 75 PSI Δ P close-off
- Spring return normally closed or normally opened
- Voltages 24 to 277 VAC
- Long life hysteresis synchronous motor
- Brass forged 300 PSI rated body
- Drop in replacement for existing zone valves
- Only 2 3/8" wide to fit most baseboards
- One actuator for 2-way and 3-way bodies
- 24V actuators use sealed reed switch for end switch, requiring no minimum current load
- One button for quick removal of actuator, end mounted for easy access
- Easy manual open lever with automatic return
- Euro styled polycarbonate actuator housing
- 2 Year Factory Warranty

Specifications

Flow Characteristics

Connection size	Flow Coefficient	Max. Close-off ΔP
1/2"	1.0 Cv (0.9 kv)	75 PSI (517 kPa)
1/2" 3/4"	2.5 Cv (2.2 kv)	50 PSI (345 kPa)
1/2" 3/4"	3.5 Cv (3.0 kv)	30 PSI (207 kPa)
3/4" 1"	5.0 Cv (4.3 kv)	25 PSI (172 kPa)
3/4" 1" 1-1/4"	7.5 Cv (6.5 kv)	20 PSI (138 kPa)

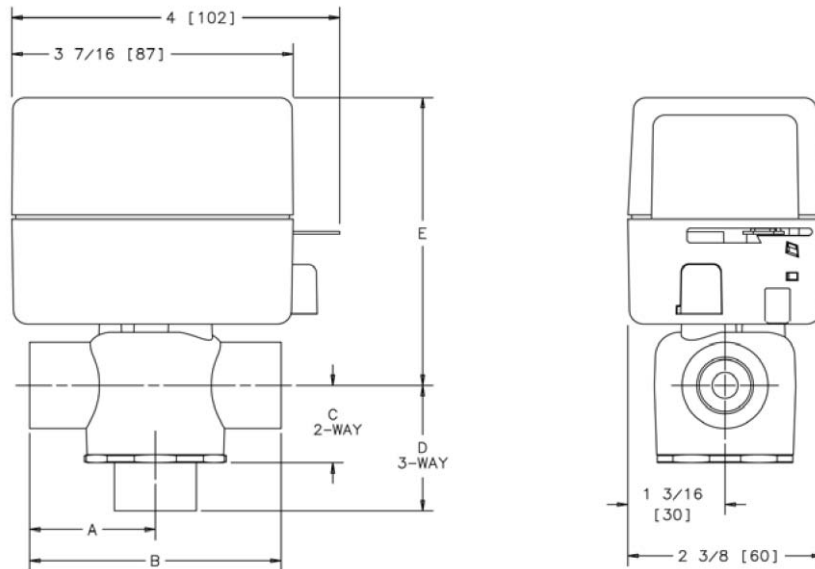
Body

Material: - body: Forged brass
 -stem: Stainless steel
 - two o-ring seals: EPDM
 - paddle: EPDM
 Medium: water and glycol,
 Low pressure steam
 Maximum percent of glycol: 50%
 Temperature range: 32 to 240°F (0 – 115°C)
 15 psi (1 bar) steam
 Max. static pressure: 300 psi (20 bar)
 Connection: - sweat 1/2", 3/4" 1" & 1 1/4"
 -NPT 1/2", 3/4" & 1"
 -inverted flare 1/2", 3/4" & 1" (fittings separate)
 -SAE flare 1/2"

Actuator

Material: - base and cover: polycarbonate
 - base plate: aluminum
 Motor: - voltage: 24 VAC 50/60 Hz CI 2
 120 VAC 50/60 Hz
 208 VAC 50/60 Hz
 230 VAC 50/60 Hz
 277 VAC 50/60 Hz
 Wire lead length: 6" (15cm),
 24V 18"(45cm)
 Power requirements: 5 W, 7 VA
 Ambient temp range: 32 to 170°F (0 - 77°C)
 Auxiliary Switch: 0.4 A max,
 24V (24V only)
 5.0A, 250V
 (120, 208, 230, 277V)
 Full Stroke Time: Open <60 seconds
 Close <10 seconds
 Humidity: 95% non-condensing
 Approvals: UL, cUL Listed & CE
 Normal Open actuators must be powered down
 during off-season

Figure 1: Device Dimensions



Connection Size and type	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)
1/2" sweat	1 5/16 (34)	2 5/8 (68)	15/16 (24)	1 5/16 (34)	3 1/2 (89)
3/4" sweat	1 3/8 (35)	2 3/4 (70)	15/16 (24)	1 1/2 (38)	3 1/2 (89)
1" sweat	1 11/16 (43)	3 3/8 (86)	15/16 (24)	1 9/16 (39)	3 11/16 (93)
1 1/4" sweat	1 13/16 (46)	3 5/8 (92)	15/16 (24)	1 11/16 (43)	3 11/16 (93)
1/2" NPT	1 7/16 (36)	2 7/8 (72)	15/16 (24)	1 1/4 (32)	3 1/2 (89)
3/4" NPT	1 9/16 (39)	3 1/16 (78)	15/16 (24)	1 1/4 (32)	3 11/16 (93)
1" NPT	1 13/16 (46)	3 5/8 (92)	15/16 (24)	1 11/16 (43)	3 11/16 (93)
Inverted Flare with adaptor	1 3/8 (35)	2 3/4 (70) 3 1/2 (88)	15/16 (24)	1 1/4 (32)	3 1/2 (89)
SAE Flare	2 11/32 (60)	4 11/16 (119)	15/16 (24)	2 1/8 (54)	3 1/2 (89)