

Control Valves for Hot and Chilled Water with ZM Signal Module



Magnetic M3P..FY
Mixing Valve with Actuator.

Description

The Magnetic M3P..FY valve uses a magnetic actuator to positively position with extremely high speed and accuracy. The combination of >1000:1 resolution and full range positioning in less than one second allows exceptional loop stability and reaction time.

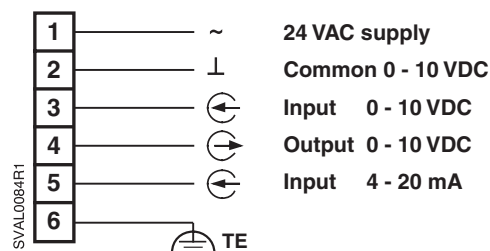
Features

- Fast positioning time (< 1 second)
- >1000:1 resolution
- Magnetic actuation
- No periodic maintenance
- Manual override
- Built-in position control and feedback
- Low friction, heavy-duty and maintenance free

Applications

The Magnetic M3P..FY Mixing Valve is designed for modulating control of chilled water and hot water, especially in HVAC systems. The valves are also configured for straight-through applications. The valves may be shipped with flanged fittings: 2BN is two-way with Companion Flange Kit, and 3BN is three-way with Companion Flange Kit. The valves are used in closed loop applications.

Wiring Diagram



M3P...FY Valves Specifications

Operating Voltage	24 Vac
Nominal Power	
3"	80 VA (20w)
4"	120 VA (30w)
Frequency	50/60 Hz +15/-10%
Control Signals	0 to 10 Vdc or 4 to 20 mA
Position Feedback Signal	0 to 10 Vdc
Materials	
Body	Cast Iron
Plug	CrNi Steel
Seat	Brass
Packing	
Normal Duty	EDPM (O-ring)

Max. Differential Pressure	44 psi (3 in.) 29 psi (4 in.)
Water Temperature	35° to 248°F (2° to 120°C)
Ambient Temperature	35° to 122°F (2° to 50°C)
Resolution	>1000:1
Position with Actuator De-energized	A → AB Closed
Positioning Time	<1 Second
Agency Approvals	UL873, cUL, CSA C22.2 No. 24
Flow Characteristic	Linear
Environmental Protection	NEMA Type 1

Sizing

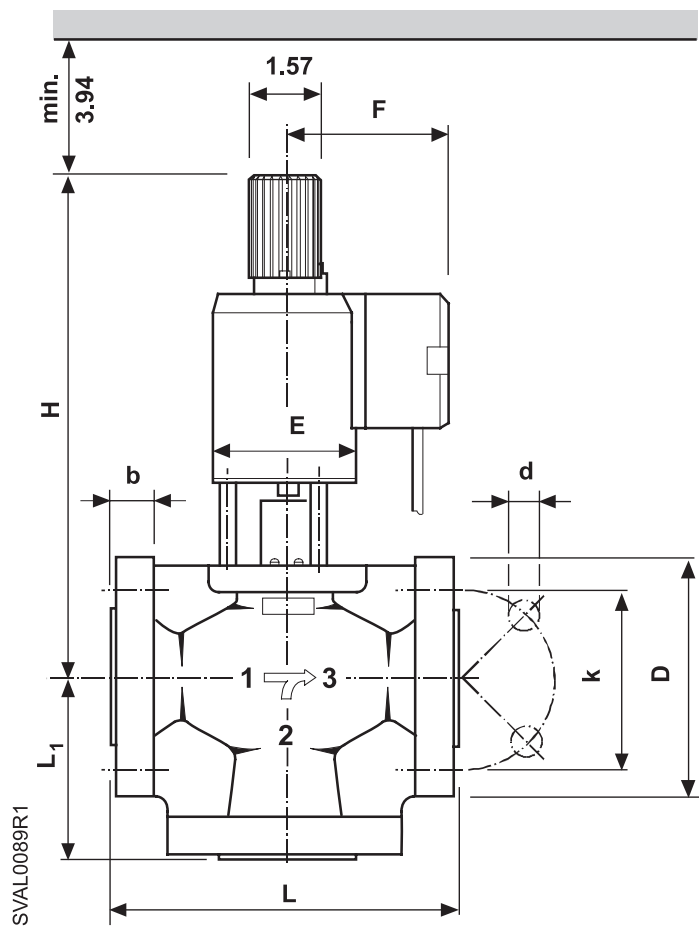
Part No.	Valve Size (in.)	Cv	Max. Differential Pressure and Close-off		Power for Transformer Sizing (VA)	Power Consumption (W)	Wire Gauge (AWG)		
			(psi)	(bar)			16	14	12
							Max. Wiring Length (ft.)		
M3P80FY	3	93	44	3	80	20	33	52	89
M3P100FY	4	152	29	2	120	30	20	33	56

M3P...FY Valves with ZM Module

Product Ordering

Description	Cv	Part No.
Without Flanges		
3" 3-way	93	M3P80FY
4" 3-way	152	M3P100FY
With Flanges		
3" 2-way	93	M3P80FY/2BN
4" 2-way	152	M3P100FY/2BN
3" 3-way	93	M3P80FY/3BN
4" 3-way	152	M3P100FY/3BN

M3P..FY Control Valve



Dimensions shown in inches (mm).

Part No.	L	L1	D	b	k	d	H	E	F	Weight lb. (kg)
M3P80FY	12.20 (310)	5.51 (140)	7.87 (200)	0.87 (22)	6.30 (160)	8x 0.71 (8x18)	20.00 (508)	5.71 (145)	4.88 (124)	100.0 (45.5)
M3P100FY	13.78 (350)	6.30 (160)	8.66 (220)	0.94 (24)	7.09 (180)	8x 0.71 (8x18)	22.44 (570)	5.71 (145)	4.88 (124)	130.0 (59.0)

Table Note:

Counter flanges are not supplied. Flange dimensions to DIN2533, PN16