

J Series

Electric Zone Valves – Two- and Three-Way Non-Spring Return, Modulating Control

Description

This electric zone valve with forged brass body offers two- and three-way non-spring return, modulating control for hot or chilled water applications. For complete details, refer to *J Series Electric Zone Valves Product Bulletin (LIT-977282)*.

Features

- economical control of hot or chilled water (up to 50% glycol) for fan coil, baseboard radiator and VAV reheat applications.
- 0 to 10 VDC proportional and three wire floating control.
- 32 to 200°F (0 to 93°C) fluid temperature rating
- 32 to 125°F (0 to 52°C) ambient temperature rating
- 300 psig Static Pressure Rating
- 20 to 30 VAC 50/60 Hz
- forged brass body



JM Series
Two-way Non-spring Return
Modulating Electric Zone Valve

Note: Actuators and valve bodies can be ordered separately using the actuator and valve code numbers shown. JM Series Modulating Three-Way Electric Zone Valves must be piped in a mixing configuration only.

Selection Chart

| Valve | Size | Cv | Close-off | Actuator | |
|---|--------|-----|-----------|---------------------|--------------------------|
| | | | | Three Wire Floating | 0 to 10 VDC Proportional |
| | | | | JT33A00T | JP33A000 |
| Two-Way – Sweat Connections | | | | | |
| JM2211 | 1/2" | 1 | 50 | JM2211T33A00T | JM2211P33A000 |
| JM2212 | 1/2" | 2 | 50 | JM2212T33A00T | JM2212P33A000 |
| JM2213 | 1/2" | 4 | 35 | JM2213T33A00T | JM2213P33A000 |
| JM2312 | 3/4" | 2 | 50 | JM2312T33A00T | JM2312P33A000 |
| JM2313 | 3/4" | 4 | 35 | JM2313T33A00T | JM2313P33A000 |
| JM2317 | 3/4" | 7.5 | 35 | JM2317T33A00T | JM2317P33A000 |
| JM2413 | 1" | 4 | 35 | JM2413T33A00T | JM2413P33A000 |
| JM2417 | 1" | 8 | 35 | JM2417T33A00T | JM2417P33A000 |
| JM2517 | 1-1/4" | 8 | 35 | JM2517T33A00T | JM2517P33A000 |
| Two-Way – NPT Connections | | | | | |
| JM2221 | 1/2" | 1 | 50 | JM2221T33A00T | JM2221P33A000 |
| JM2222 | 1/2" | 2 | 50 | JM2222T33A00T | JM2222P33A000 |
| JM2223 | 1/2" | 4 | 35 | JM2223T33A00T | JM2223P33A000 |
| JM2322 | 3/4" | 2 | 50 | JM2322T33A00T | JM2322P33A000 |
| JM2323 | 3/4" | 4 | 35 | JM2323T33A00T | JM2323P33A000 |
| JM2327 | 3/4" | 7.5 | 35 | JM2327T33A00T | JM2327P33A000 |
| JM2427 | 1" | 8 | 35 | JM2427T33A00T | JM2427P33A000 |
| Three-Way – Sweat Connections | | | | | |
| JM3211 | 1/2" | 1 | 50 | JM3211T33A00T | JM3211P33A000 |
| JM3212 | 1/2" | 2 | 50 | JM3212T33A00T | JM3212P33A000 |
| JM3213 | 1/2" | 4 | 35 | JM3213T33A00T | JM3213P33A000 |
| JM3312 | 3/4" | 2 | 50 | JM3312T33A00T | JM3312P33A000 |
| JM3313 | 3/4" | 4 | 35 | JM3313T33A00T | JM3313P33A000 |
| JM3317 | 3/4" | 7.5 | 35 | JM3317T33A00T | JM3317P33A000 |
| JM3413 | 1" | 4 | 35 | JM3413T33A00T | JM3413P33A000 |
| JM3417 | 1" | 8 | 35 | JM3417T33A00T | JM3417P33A000 |
| JM3517 | 1-1/4" | 8 | 35 | JM3517T33A00T | JM3517P33A000 |
| Three-Way – NPT Connections, mixing configuration only | | | | | |
| JM3221 | 1/2" | 1 | 50 | JM3221T33A00T | JM3221P33A000 |
| JM3222 | 1/2" | 2 | 50 | JM3222T33A00T | JM3222P33A000 |
| JM3223 | 1/2" | 4 | 35 | JM3223T33A00T | JM3223P33A000 |
| JM3322 | 3/4" | 2 | 50 | JM3322T33A00T | JM3322P33A000 |
| JM3323 | 3/4" | 4 | 35 | JM3323T33A00T | JM3323P33A000 |
| JM3327 | 3/4" | 7.5 | 35 | JM3327T33A00T | JM3327P33A000 |
| JM3427 | 1" | 8 | 35 | JM3427T33A00T | JM3427P33A000 |

Repair Information

If the J Series Electric Zone Valve – Two-Way and Three-Way Non-Spring Return, Modulating Control fails to operate within its specifications, replace the unit. For a replacement valve, contact the nearest Johnson Controls® representative.

Technical Specifications

| J Series Electric Zone Valves – Two-Way and Three-Way Non-Spring Return, Modulating Control | | |
|---|--|--|
| Service ¹ | Hot Water Chill Water, and 50/50 Glycol Solutions for HVAC Systems | |
| Fluid Temperature Limits | Water | 32 to 200°F (0 to 93°C) |
| | Steam | Not rated for steam service |
| Valve Body Pressure Rating | 300 psig (2,067 kPa) | |
| Leakage | 0.01% of Maximum Flow per ANSI/FCI 70-2 Class IV | |
| Ambient Operating Temperature Limits | 32 to 125°F (0 to 52°C) | |
| Cycle Time | Full Open to Full Close 150 seconds | |
| Control Signal | "T" Type Actuator | 24 VAC, 60 Hz, Three-Wire Floating Control |
| | "P" Type Actuator | 0 to 10 VDC (1 to 9 VDC Actual) Factory Setting, 0 to 5 VDC, 5 to 10 VDC jumper selectable |
| Control Action | "P" Type Actuator | Factory Setting: Direct Acting Valve opens Port "B" as signal increases. Jumper selectable |
| Power Requirements | "T" Type Actuator | 1.2 VA |
| | "P" Type Actuator | 1.6 VA |
| Electrical Connection | Terminal Block | |
| Materials | Body | Brass |
| | Stem | Brass (Hard Chrome Plated) |
| | Base Plate and Bearing Plate | Stainless Steel |
| | Actuator Housing | High Temperature Plastic |
| | Valve Plug | High Temperature Thermoplastic Rubber |
| | Stem Seals | Viton™ O-rings |

1. Refer to VDI 2035 Standard for recommended proper water treatment.