

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
<b>Two-Way – Sweat Connections</b>					
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
<b>Two-Way – NPT Connections</b>					
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
<b>Three-Way – Sweat Connections</b>					
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
<b>Three-Way – NPT Connections, mixing configuration only</b>					
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 <sup>1</sup>	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.