



PM Series Pulse-Width Modulating (PWM) Expansion Valves

White-Rodgers

PM Series PWM Expansion Valves

Design Overview

System Refrigerants

- All common A1 class, including R-744
- A2L class R-1234yf, R-1234ze, R-32, R-452B,
- R-454A, R-454B, R-454C, R-455A
- A3 class R-290

Coil Voltage (vac): 24, 120, 208-240

Coil Series: AM, ASC2

Typical Applications

- Display cases
- Frozen beverage dispensers



Features

Reliable Corrosion-Resistant Construction

- Stainless steel
- Forged brass body with copper connections
- AMF Series coil with coated steel housing

Versatile Design

- Gate-type, direct-acting solenoid valve with six fixed-capacity sizes
- Power shut-off function eliminates the need for a separate solenoid valve
- Direct lay-in match with competitors' PWM valves

Additional Emerson Recommendations

- Controllers: XM679, CC200, XEV12D
- Liquid Line Filter Driers: EK, ALF



Capacities & Ordering Information

PM SERIES PWM EXPANSION VALVES:

VALVE SIZE	CONNECTION TYPE	INLET SIZE	OUTLET SIZE	NOMINAL CAPACITY IN TONS (KW) - RATED AT 100% DUTY CYCLE									MODEL NUMBER	ITEM NUMBER
				R-134a	R-290	R-404A/ R-452A/ R-507	R-407C/ R-448A/ R-449A	R-454C	R-455A	R-513A/ R-450A	R-744 -20°F (-29°C) Evaporator	R-744 +20°F (-7°C) Evaporator		
1/4	ODF	3/8"	1/2"	0.10 (0.37)	0.13 (0.45)	0.09 (0.33)	0.14 (0.48)	0.12 (0.41)	0.14 (0.48)	0.11 (0.39)	0.31 (1.08)	0.22 (0.77)	PM 1/4S34VLC-01	1832044
1/2	ODF	3/8"	1/2"	0.20 (0.70)	0.26 (0.91)	0.18 (0.63)	0.26 (0.92)	0.23 (0.82)	0.27 (0.96)	0.21 (0.75)	0.59 (2.07)	0.42 (1.49)	PM 1/2S34VLC-01	1832036
1	ODF	3/8"	1/2"	0.71 (2.50)	0.91 (3.21)	0.64 (2.24)	0.93 (3.26)	0.83 (2.92)	0.96 (3.39)	0.76 (2.66)	2.10 (7.38)	1.50 (5.29)	PM 1S34VLC-01	1832052
3	ODF	3/8"	1/2"	1.50 (5.28)	1.92 (7.21)	1.34 (4.72)	1.95 (6.87)	1.74 (6.13)	2.02 (7.11)	1.59 (5.60)	4.42 (15.5)	3.17 (11.1)	PM 3S34VLC-01	1832061
5	ODF	3/8"	1/2"	2.23 (7.86)	2.85 (10.71)	2.00 (7.03)	2.91 (10.24)	2.59 (9.10)	3.00 (10.57)	2.37 (8.34)	6.58 (23.1)	4.72 (16.6)	PM 5S34VLC-01	1832079
6	ODF	3/8"	1/2"	2.76 (9.69)	3.51 (13.21)	2.46 (8.67)	3.59 (12.63)	3.19 (11.22)	3.70 (13.03)	2.93 (10.29)	8.12 (28.6)	5.82 (20.5)	PM 6S34VLC-01	1832087

All capacities shown are at 100°F/+38°C condensing and 40°F/+4°C evaporator temperature, except for R744 with 50°F/+10°C (638 psig/44 barg) entering liquid and either -20°F/-29°C (200 psig/13.8 barg) or +20°F/-7°C (407 psig/28.1 barg) evaporator, as indicated. All capacities shown are at 100% duty cycle (zero reserve capacity). Sizing is recommended for 50-80% duty cycle to accommodate load fluctuations. See Extended Capacity Tables for Ratings for a wide range of conditions and refrigerants. The refrigerant entering the valve must be in the liquid phase.

RECOMMENDED COILS FOR PM SERIES VALVES:

COIL SERIES	VOLTAGE	WATTS 50/60 HZ	ENCLOSURE TYPE	LEADS	MODEL NUMBER	ITEM NUMBER
AMF	24 VAC	17/12	Open Frame with Coated Metal Housing	18"	AMF 1-03	1838438
	120 VAC	17/12		18"	AMF 2-02	1838446
	208-240 VAC	17/12		18"	AMF 3-02	1838454

See catalog for additional AM Series and ASC2 Series coils.

Specifications & Competitive Cross-Reference

SPECIFICATIONS:

Refrigerants:..... All common A1 class; A2L class R-1234yf, R-1234ze, R-32, R-452B, R-454A, R-454B, R-454C, R-455A; A3 class R-290
 Valve Weight: 0.48 lbs.
 Maximum Fluid Temperature..... 221°F (105°C)
 Maximum Working Pressure..... 680 psig (47 bar)
 Maximum Operating Pressure Differential 500 psig (35 bar)
 UL/CUL File Number MP604

CROSS REFERENCE:

Emerson	R404A Tons	Danfoss	Sporlan
PM ¼	0.1	AKV 10-0	SPW-0
PM ½	0.2	AKV 10-1	SPW-1
PM 1	0.6	AKV 10-2, -3	SPW-2, -3
PM 3	1.3	AKV 10-4, -5	SPW-4, -5
PM 5	2.0	—	SPW-6
PM 6	2.5	AKV 10-6	—

