

Electrical Control Valves Series EXM/EXL for OEM Use, Stepper Motor Driven

Features

- Unipolar stepper motor
- Bi-flow (same performance in both flow directions in term of capacity)
- High MOPD: 40 bar in normal flow direction
- Removable coils in two versions: 12VDC/24VDC
- Continuous modulation of mass flow, no stress (liquid hammering) in the refrigeration circuit
- Linear flow
- Resolution: 500 pulses (half steps) or 250 full steps
- Hermetic design
- Reliability: 225 millions pulses at continuous 40 bar differential pressure



EXM/EXL

Note: The valve is not released for refrigeration applications such as cold rooms and refrigeration display cabinets.

Selection Table

Valve Series	Description	Type	Part No. (10 pcs)	Nominal Capacity kW						Connections Size / Style	
				R290	R32	R452B*	R454B*	R410A	R407C		R134a
EXM	Valve less coil	EXM-B0A	800 399M	1.6	2.7	2.1	2.1	1.8	1.6	1.2	¼" ODF
		EXM-B0B	800 400M	4.9	8.2	6.3	6.3	5.5	5.0	3.7	
		EXM-B0D	800 401M	10.3	17.3	13.3	13.3	11.6	10.5	7.7	
		EXM-B0E	800 402M	12.1	20.4	15.7	15.7	13.7	12.4	9.1	
	Coil 12VDC	EXM-125	800 403M	-	-	-	-	-	-	-	-
	Coil 24VDC	EXM-24U	800 415M	-	-	-	-	-	-	-	-
EXL	Valve less coil	EXL-B1F	800 405M	15.0	25.3	19.4	19.4	17.0	15.4	11.3	¼" ODF 8 mm ODM
		EXL-B1G	800 406M	20.3	34.2	26.3	26.4	23.0	20.7	15.2	
	Coil 12VDC	EXL-125	800 407M	-	-	-	-	-	-	-	-
	Coil 24VDC	EXL-24U	800 416M	-	-	-	-	-	-	-	-

Note 1: *) The material compatibility test is pending with R452B and R454B. Before selection or use, please contact Emerson local sales offices for availability and approval

Note 2: When selecting also observe the information in the operating instructions. Available for download on the Emerson website.

The nominal capacity is based on the following conditions:

Refrigerant	Evaporating Temperature	Condensing Temperature	Subcooling
R407C	+4°C (Dew Point)	+38°C Bubble Point / +43°C Dew Point	1K
R134a, R410A	+4°C	+38°C	

Note: For selection of other operating conditions, please use the "Controls Navigator" selection tool.

Technical Data

Max. Allowable Pressure PS	45 Bar
MOPD	40 Bar in Normal Flow Direction
Temperature Range TS	-30...+70°C (Liquid Refrigerant) -30...+60°C (Ambient)
Stepper Motor Type	Uni-polar, Constant Voltage

Full Travel Time	16.6 Seconds at 30 Pulse/Sec. 5.5 Seconds at 90 Pulse/Sec.
Reference Position	Mechanical Stop at Fully Close Position
Total Number of Pulses	500 Half Step (250 Full Step)
Insulation Class	EXM: A EXL: E
Cable Length	1m