

The Emerson EX3 is an electronically controlled expansion device that provides precise control of refrigerant flow and system superheat. The EX3 employs a high resolution, linear stepper motor in conjunction with a built in solenoid to provide positive closure in the event of power interruption. This automatic “shut-off” capability, combined with a take-a-part construction and water resistant design, make the EX3 a robust solution for many applications including supermarket cases and walk-ins.

Features

- Positive shut-off, no need for a battery
- IP67 Moisture Protection - Operates in humid, icy, and wet environments
- Superior control resolution for high efficiency (stepper motor driven)
- Very long life, High reliability
- Take-apart construction for easy field serviceability
 - Cleanable/removable strainer
 - Field exchangeable pin and orifice
- 1 valve assembly with 8 field serviceable pin/orifice combinations for flexible capacity

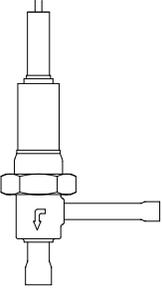
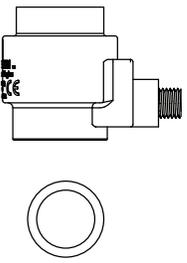
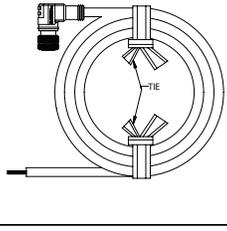
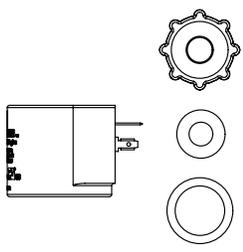
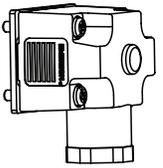
Key Specifications

- MWP: 500psig
- MOPD: 360psig (Uni-flow)
- IP67 (with proper plugs)
- Working Temperature: -58~167°F (liquid)
- Seat leakage: 16 SCCM
- Integral solenoid coil with three voltage options: 230VAC/ 120VAC/ 24VAC
- Certification: UL/CE



Ordering Information

The EX3 offers several different exchangeable components to maximize flexibility

Step 1	Step 2	Step 3	Step 4	Step 5
Sizing Valve Assembly	Order Stator	Select Stator Plug with Lead Wire	Select Solenoid Coil	Order Coil Connector
				
Valve assembly with different pin and orifice sizes (capacity)	Stepper motor, with O-ring	M12 stator plug with lead wires	Solenoid coil with O-rings and screw cap	Connector for reliable IP67 seal
Options: EX3-2000 ~ EX3-5000 EX3-6000 ~ EX3-9000	Options: EX3-S012	Options: EX3-M300: 3 meters EX3-M600: 6 meters	Options: EX3-C230: 220-230VAC EX3-C120: 110-120VAC EX3-C024: 24VAC	Options: EX3-PL67

Ordering Example

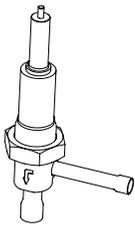
Step 1: Sizing the Valve

Nominal cooling capacity: Tons

	EX3-2000	EX3-3000	EX3-4000	EX3-5000	EX3-6000	EX3-7000	EX3-8000	EX3-9000
R-404A	0.25	0.53	0.86	1.39	2.25	2.85	3.17	4.06
R-134a	0.29	0.60	0.97	1.57	2.54	3.22	3.59	4.59
R-22	0.40	0.84	1.34	2.18	3.53	4.47	4.98	6.36
R-407F	0.38	0.79	1.27	2.06	3.34	4.23	4.71	6.02
R-507	0.25	0.52	0.83	1.35	2.18	2.77	3.08	3.94

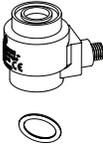
The nominal capacity is based upon the following standard conditions per ARI:

Evaporating Temperature	Condensing Temperature
40°F(4.4°C)	100°F(38°C)

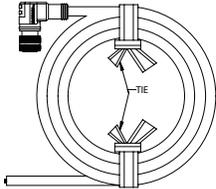
PCN	Model	Description	
098252	EX3-2000	Valve assembly with Pin #2, Orifice #1	
098253	EX3-3000	Valve assembly with Pin #3, Orifice #1	
098254	EX3-4000	Valve assembly with Pin #4, Orifice #1	
098255	EX3-5000	Valve assembly with Pin #5, Orifice #1	
098256	EX3-6000	Valve assembly with Pin #6, Orifice #2	
098257	EX3-7000	Valve assembly with Pin #7, Orifice #2	
098258	EX3-8000	Valve assembly with Pin #8, Orifice #2	
098259	EX3-9000	Valve assembly with Pin #9, Orifice #2	

Select the appropriate valve

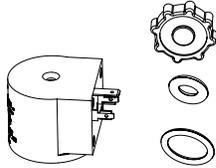
Step 2: Order Stepper Motor

PCN	Model	Description	
098263	EX3-S012	1pc Stepper motor stator 1pc O-ring (Ø23.4mm)	

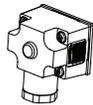
Step 3: Choose A Cable

PCN	Model	Description	
098250	EX3-M300	M12 plug to stator (3M Length)	
098251	EX3-M600	M12 plug to stator (6M Length)	

Step 4: Choose Solenoid Coil

PCN	Model	Description	
098260	EX3-C230	Solenoid Coil, 220-230VAC 50/60Hz, 1pc Screw-cap, 1pc O-ring (Ø10.5mm) 1pc O-ring (Ø23.4mm)	
098261	EX3-C120	Solenoid Coil, 110-120VAC 50/60Hz, 1pc Screw-cap, 1pc O-ring (Ø10.5mm) 1pc O-ring (Ø23.4mm)	
098262	EX3-C024	Solenoid Coil, 24VAC 50/60Hz, 1pc Screw-cap, 1pc O-ring (Ø10.5mm) 1pc O-ring (Ø23.4mm)	

Step 5: Choose plug to solenoid coil

PCN	Model	Description	
098276	EX3-PL67	Connector (Solenoid), IP67	

Note:

1. It is strongly recommended to use EX3-PL67 for reliable IP67 class protection.
2. Please use OD 7.0mm wiring for solenoid coil.

Replacement Components

Item	Strainer Kit		Pin Assembly Kit		Orifice Kit		Seal Assembly Kit		O-ring (Body)	
PCN(Description)	098264		098265(Pin#2) 098266(Pin#3) 098267(Pin#4) 098268(Pin#5) 098269(Pin#6) 098270(Pin#7) 098271(Pin#8) 098272(Pin#9)		098273(Orifice#1) 098274(Orifice#2)		098277		098275	
Visual										
Components	O-ring: Ø26.7mm	1pc	O-ring: Ø26.7mm	1pc	O-ring: Ø26.7mm	1pc	O-ring: Ø10.5mm	1pc	O-ring: Ø26.7mm	5pcs
	Strainer	1pc	Pin	1pc	Orifice	1pc	Screw cap	1pc	-	-
	Strainer Cover	1pc	Snap-ring	2pcs	-	-	O-ring: Ø23.4mm	2pcs	-	-

Dimensional Data

