

Installation guide

Electric expansion valve Type ETS 5M

034R9819

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Refrigerants R410A, R22, R32, R290, R454C, R515B, R1234ze, R452B, R1234yf, R452A, R454B, R454A, R455A, R449A, R407C, R134a, R407H, R513A, R449B, R404A, R448A, R463A	Max. working pressure PS / MWP: 4.55 MPa / 45.5 barg / 660 psig			
	Refrigerant temperature $t_{Min.} : -30\text{ °C} / -22\text{ °F}$, $t_{Max.} : 70\text{ °C} / 158\text{ °F}$			
⚠ Safety notes for flammable refrigerants (R454C, R454A, R1234ze, R290, R32, R452B, R454B, R455A, R1234yf) - This product is validated in accordance to ATEX, EN 378, ISO 5149, ASHRAE 15, IEC 60335-2-x or equivalent standards. - Ignition risk is evaluated in accordance to ISO 5149 and IEC 60335. - See safety note below.	Allowable ambient temperature -30 °C / -22 °F - 60 °C / 140 °F		Phase current 240 mA	
	Stepper motor type Unipolar			Resistance 50 Ω
	Nominal voltage 12 V DC			
⚠ Safety notes: - The product can be applied on systems with R454C, R454A, R1234ze, R290, R32, R452B, R454B, R455A, R1234yf as the working fluid. - For countries where safety standards are not an indispensable part of the safety system Danfoss recommend the installer to get a third party approval of the system containing flammable refrigerant. - Note, please follow specific selection criteria stated in the datasheet for these particular refrigerants. - The valve must only be used in closed circuit refrigeration system, where no oxygen is present acc. EN 378, ISO 5149 ASHRAE 15 or IEC 60335-2-x or equivalent standards.	1 Mounting Angle 			
	⚠ Warning! <p>Do not connect directly to AC / DC power source. Connect valve to appropriate controller / driver only. Do not operate valve while assembling or disassembling.</p>			

2 Open position

Always open valve to overdrive before brazing using manual coil.

ETS 5M manual coil: Code no. 034G3803

3 Brazing option 1

Brazing option 2

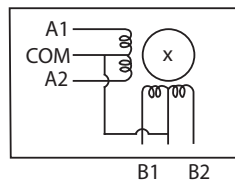
N₂ gas from opposite side of soldering point.

4 Assembling

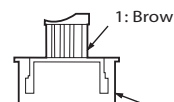
5 Connection

Table:1 Stepper motor open and close sequence

	Yellow (A1)	Orange (A2)	Brown (B1)	Black (B2)	Red (Com)	
Valve Opening ↓	ON	OFF	OFF	OFF	0	Valve Closing ↑
	ON	OFF	ON	OFF	0	
	OFF	OFF	ON	OFF	0	
	OFF	ON	ON	OFF	0	
	OFF	ON	OFF	OFF	0	
	OFF	ON	OFF	ON	0	
	OFF	OFF	OFF	ON	0	
	ON	OFF	OFF	ON	0	



E (2 : 1)



Plug Coding

JST XHP-6: 1 2 3 4 5 6
JST XHP-5: 1 2 3 4 5

Color coding

JST 5/6
5/6: RED - Common
-/5: No wire -
4/4: Yellow - Coil A1
3/3: Black - Coil B2
2/2: Orange - Coil A2
1/1: Brown - Coil B1