ENGINEERING
TOMORROW

Installation guide

Electric expansion valve
Type ETS 5M

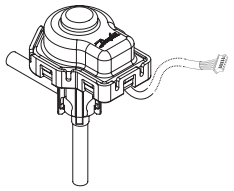
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034R9819

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 °C / -22 °F, $t_{Max.}$: 70 °C /158 °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

Stepper motor type
Unipolar

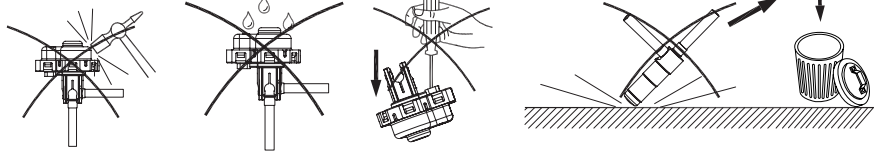
Nominal voltage
12 V DC

Phase current
240 mA

Resistance
50 Ω

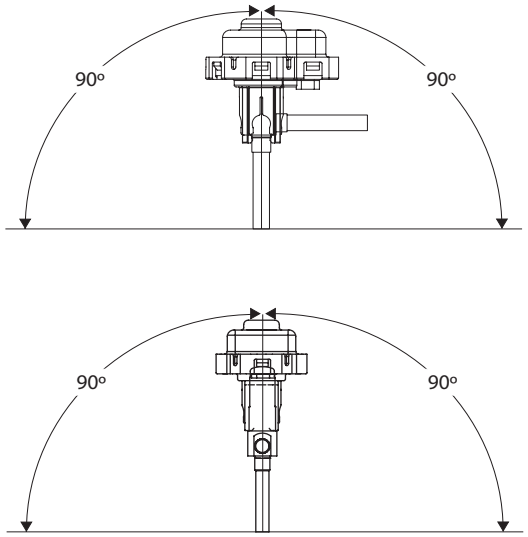
Safety notes:
- The product can be applied on systems with R454C, R454A, R1234ze, R290, R32, R452B, R454B, R455A, R1234yf as the working fluid.
- For countries where safety standards are not an indispensable part of the safety system Danfoss recommend the installer to get a third party approval of the 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.

Warning!



Do not connect directly to AC / DC power source. Connect valve to appropriate controller / driver only.
Do not operate valve while assembling or disassembling.

1 Mounting Angle



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Імпортер:ТОВ з ii "Данфосс ТОВ" 04080, Київ 80, п/с 168, Україна

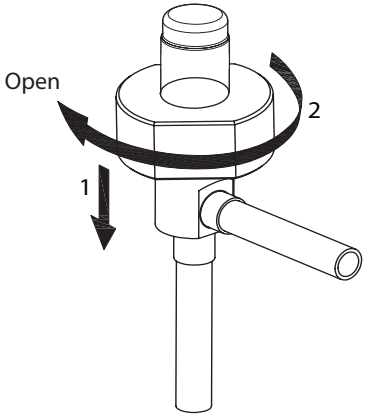
Info for UK customers only: Danfoss Ltd., 22 Wycombe End, HP9 1NB, GB

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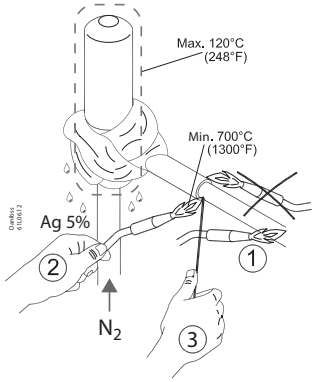
2 Open position

Always open valve to overdrive before brazing using manual coil.

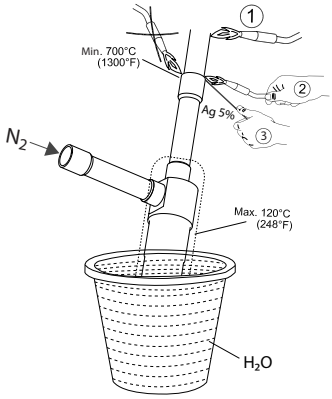
ETS 5M manual coil: Code no. 034G3803



3 Brazing option 1

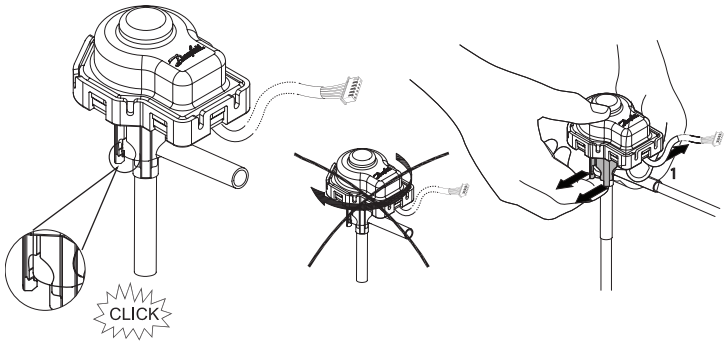


Brazing option 2



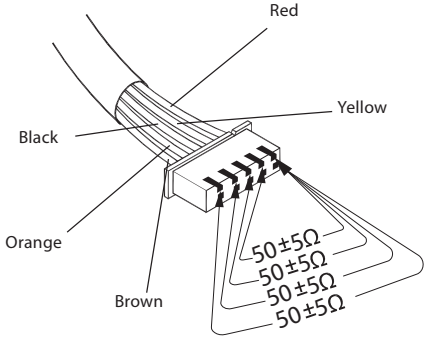
N_2 gas from opposite side of soldering point.

4 Assembling



5 Connection

JST XHP-5



JST XHP-6

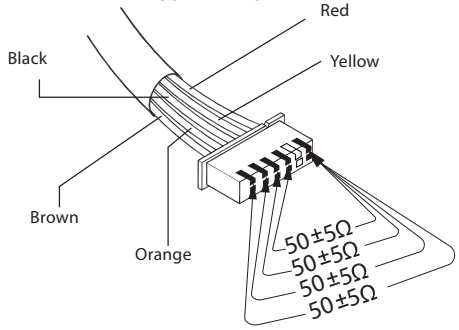
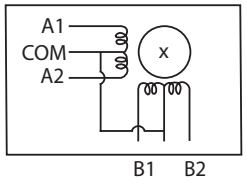
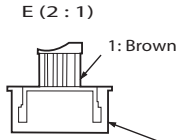


Table:1 Stepper motor open and close sequence

	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	





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

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