

## Installation guide

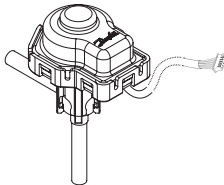


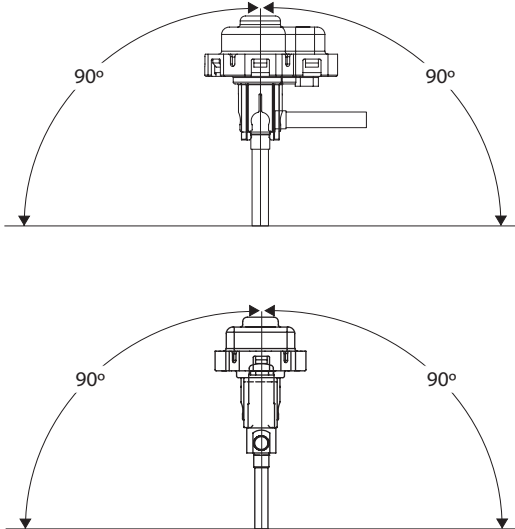

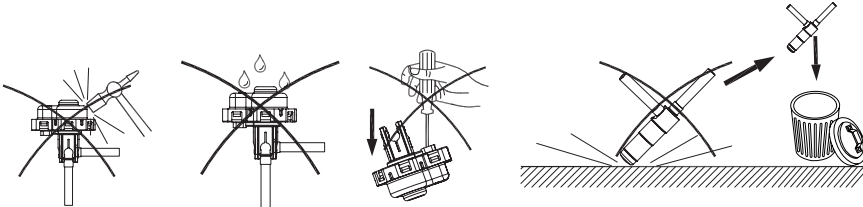
# Electric expansion valve

## Type ETS 5M



034R9819  
 Importer: ТОВ з іі "Данфосс ТОВ" 04080, Київ 80, п/с 168, Україна

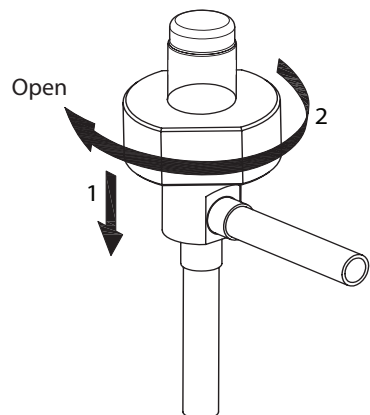
034R9819  
 Info for UK customers only: Danfoss Ltd., 22 Wycombe End, HP9 1NB, GB

<b>Refrigerants</b> R410A, R22, R32, R290, R454C, R515B, R1234ze, R452B, R1234yf, R452A, R454B, R454A, R455A, R449A, R407C, R134a, R407H, R513A, R449B, R404A, R448A, R463A	<b>Max. working pressure</b> PS / MWP: 4.55 MPa / 45.5 barg / 660 psig			
	<b>Refrigerant temperature</b> $t_{Min.} : -30\text{ }^{\circ}\text{C} / -22\text{ }^{\circ}\text{F}$ , $t_{Max.} : 70\text{ }^{\circ}\text{C} / 158\text{ }^{\circ}\text{F}$			
 <b>Safety notes for flammable refrigerants (R454C, R454A, R1234ze, R290, R32, R452B, R454B, R455A, R1234yf)</b> - 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.	<b>Allowable ambient temperature</b> $-30\text{ }^{\circ}\text{C} / -22\text{ }^{\circ}\text{F} - 60\text{ }^{\circ}\text{C} / 140\text{ }^{\circ}\text{F}$		<b>Phase current</b> 240 mA	<b>Resistance</b> 50 $\Omega$
	<b>Stepper motor type</b> Unipolar			
	<b>Nominal voltage</b> 12 V DC			
 <b>Safety notes:</b> - 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.	<b>1 Mounting Angle</b> 			
 <b>Warning!</b>   Do not connect directly to AC / DC power source. Connect valve to appropriate controller / driver only. Do not operate valve while assembling or disassembling.				

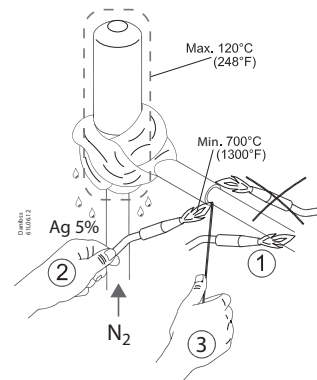
## 2 Open position

Always open valve to overdrive before brazing using manual coil.

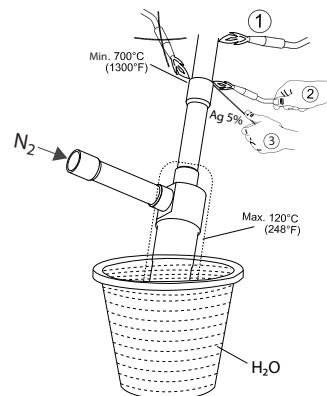
ETS 5M manual coil: Code no. 034G3803



## 3 Brazing option 1

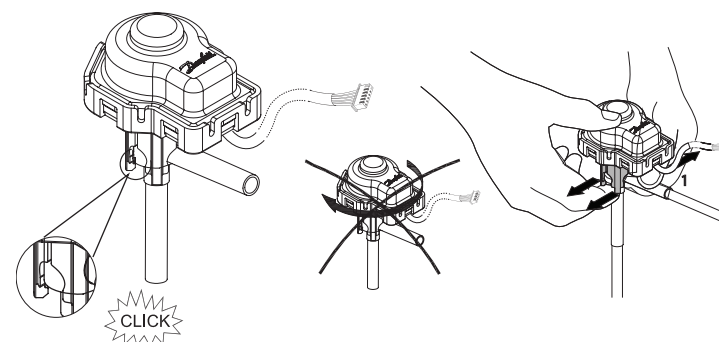


## Brazing option 2



N<sub>2</sub> gas from opposite side of soldering point.

## 4 Assembling



## 5 Connection

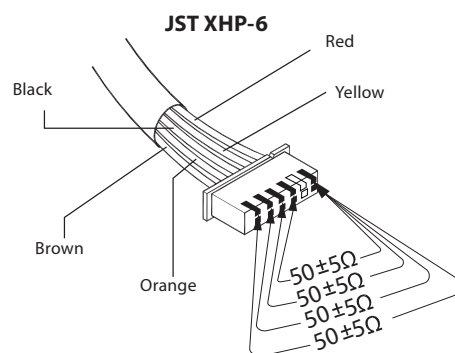
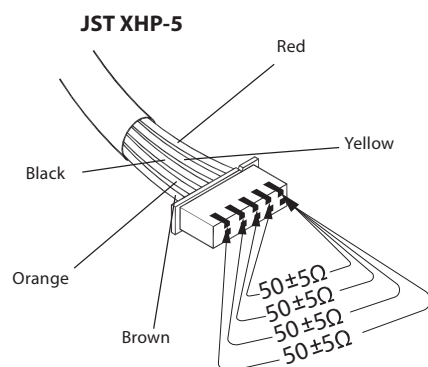
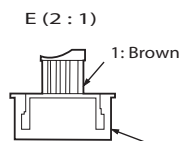
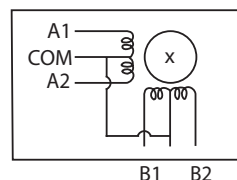


Table:1 Stepper motor open and close sequence

	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	



### 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