

**Installation guide**  
**Electric Expansion Valve**

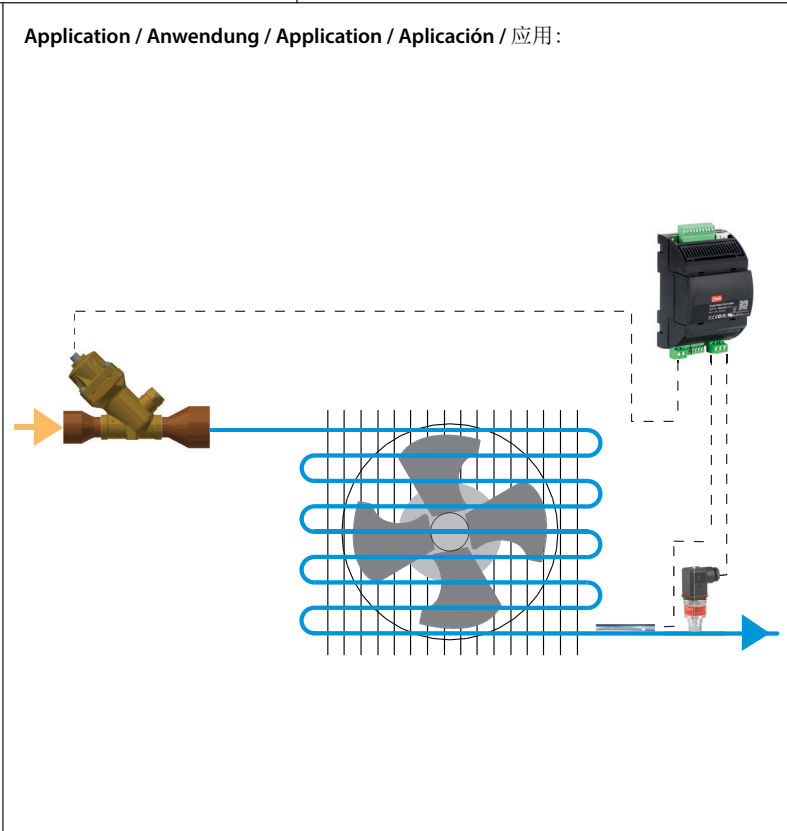
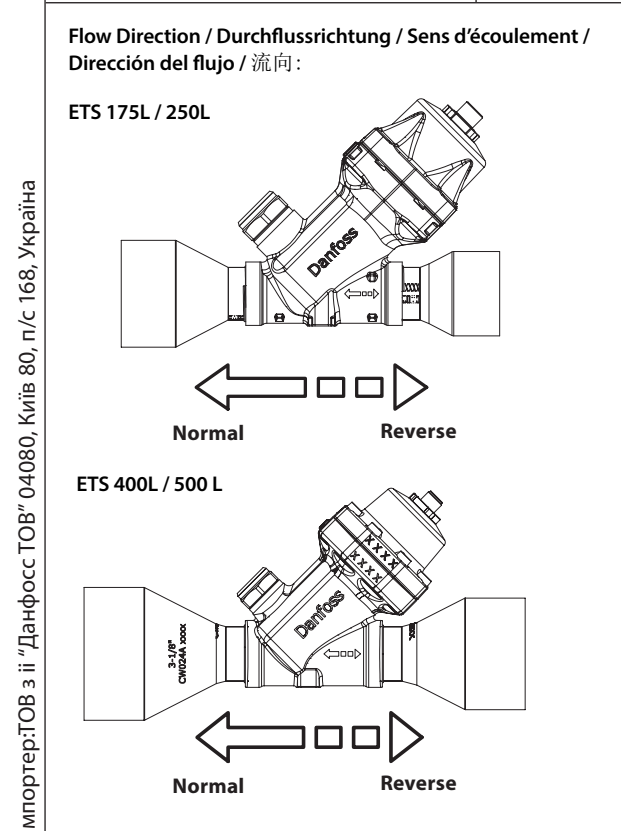
Type ETS 175L, ETS 250L, ETS 400L, ETS 500L

UK  
CA

<p><b>Compatible refrigerants /</b> Kältemittel Kompatibilität / Fluides compatibles / Compatibilidad de refrigerantes / 适用的冷媒:</p> <p>R134a, R404A, R407A, R407C, R407F, R407H, R410A, R417A, R422A, R422B, R422D, R438A, R442A, R448A, R449A, R449B, R450A, R452A, R463A, R507A, R513A, R513B, R515A, R515B, R1234ze(E), R1234yf*, R516A*</p> <p>NOTE: For more details check datasheet. * only for oil free valves ETS 175L and 250L</p>	<p><b>Inlet fluid temperature /</b> Eingangstemperaturbereich / entrée température du fluide / entrada temperatura líquida / 入口流体温度:</p> <p>Min. -40 °C / -40 °F Max. 70 °C / 158 °F Max. 95 °C / 203 °F for ETS 500L and oil free valves</p>	<p><b>Max. working pressure /</b> Max. zul. Betriebsüberdruck / Pression de service max. / Presión de trabajo máx. / 最大工作压力 (gauge):</p> <p>MWP = 37 bar / 536 psig</p>
<p><b>Stepper motor type /</b> Schrittmotortype / Type de moteur pas à pas / Tipo de motor a pasos / 步进电机形式:</p> <p>Bipolar</p>	<p><b>Allowable ambient temperature /</b> Zulässige Umgebungstemperatur / Température ambiante admissible / Temperatura ambiente permisible / 允许的环境温度:</p> <p>Min. -40 °C / -40 °F Max. 70 °C / 158 °F</p>	<p><b>Total number of steps /</b> Max. Schritte: / Nombre de pas total: / Número de pasos total: / 总步数:</p> <p>ETS 175L, ETS 250L, ETS 400L 3810 full steps ETS 500L 4999 full steps</p>
<p><b>Nominal voltage /</b> Nennspannung / Tension nominale / Voltaje nominal / 名义电压:</p> <p>12 V DC</p>	<p><b>Resistance /</b> Widerstand / résistance électrique / Resistencia / 电阻:</p> <p>52.4 Ohm ±10% @ 25 °C</p>	<p><b>Phase current /</b> Phasenstrom / Phase électrique / Corriente de fase / 相电流:</p> <p>Recommended: 200 mA at 200 pps</p>

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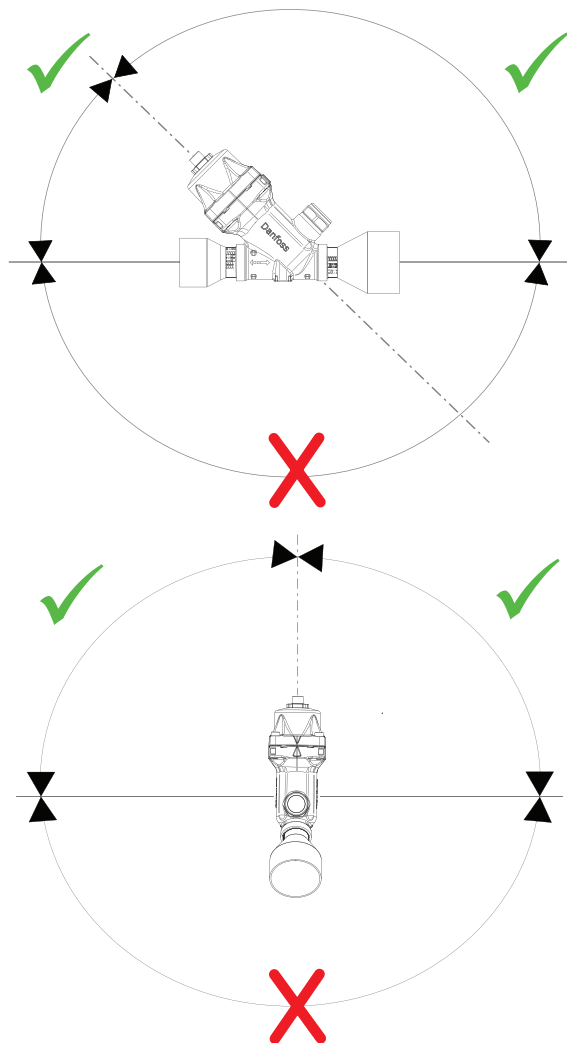
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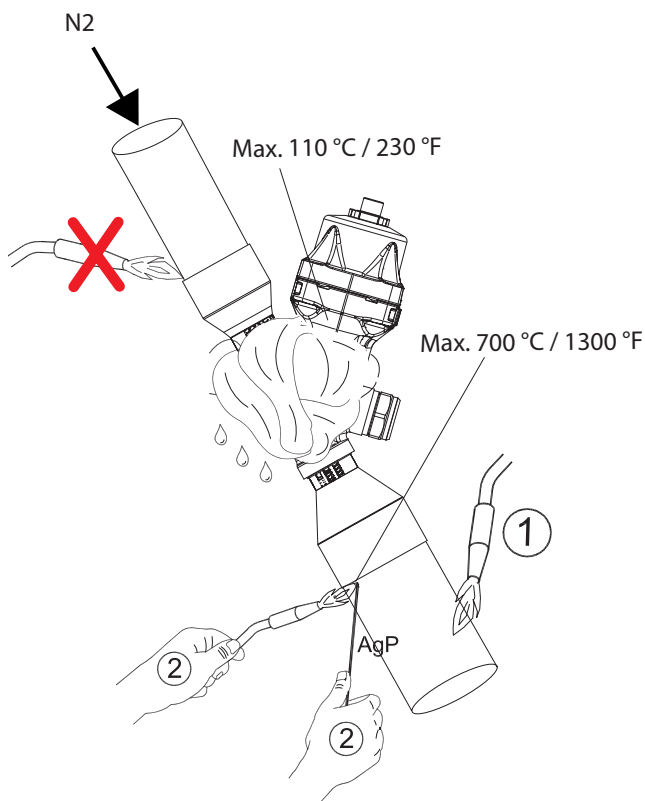
Імпортёр:ТОВ з іі "Данфосс ТОВ" 04080, Київ 80, п/с 168, Україна

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

Mounting / Einbau / Montage / Instalación / 安装:



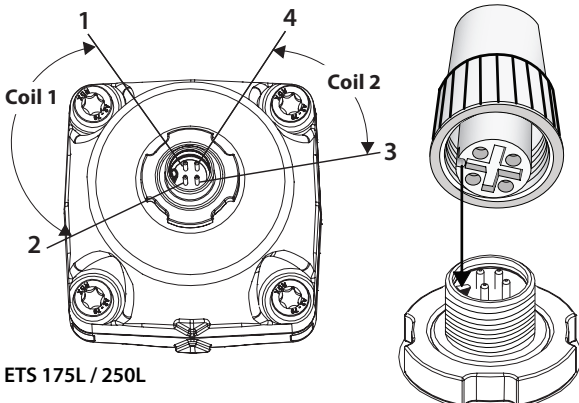
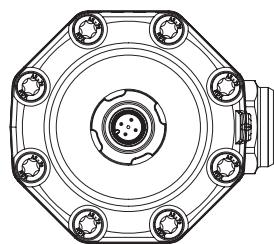
Brazing / Einbau / Montage / Instalación / 安装:



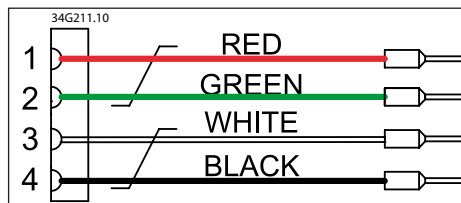
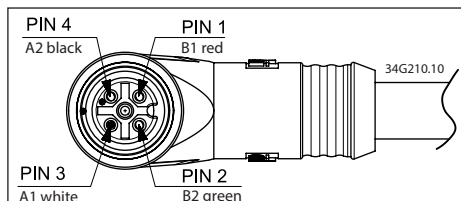
N2 gas from opposite side of soldering point.  
 Schutzgas gegenüber der Lötstelle einströmen lassen.  
 Refroidissement gaz ci-contre site de point de soudure.  
 Corriente de N2 desde el lado opuesto a la soldadura.  
 氮气保护从阀门焊接口的另一侧通入。

Electrical connections / Elektrische Anschlüsse / Connexions électriques / Conexiones eléctricas/ 电气连接:

ETS 400L / 500L



	STEP	Coil I		Coil II		
		Red	Green	White	Black	
<b>CLOSING</b> 	1	+	-	+	-	<b>OPENING</b> 
	2	+	-	-	+	
	3	-	+	-	+	
	4	-	+	+	-	
	1	+	-	+	-	



Disassembling / Zerlegung / Désassemblage / Desmontaj / 拆卸:

<p><b>1</b></p> <p>ETS 400L / 500L</p> <p>Screw x8 Screw T30</p> <p>Screw x4 Screw T30</p> <p>A</p> <p>ETS 175L / 250L</p>	<p><b>2</b></p> <p>ETS 175L / 250L</p> <p>ETS 400L / 500L</p>	<p><b>3</b></p>
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Assembling / Zusammenbau / Assemblage / Montaje / 安装:

<p><b>1</b></p> <p>New</p>	<p><b>2</b></p>
<p><b>3</b></p>	<p><b>4</b></p> <p>6 ±0.5 Nm (for ETS 175L/250L) 5.3 ±0.5 Nm (for ETS 400L / 500L)</p> <p>ETS 400L / 500L</p> <p>Screw x8 Screw T30</p> <p>Screw x4 Screw T30</p> <p>ETS 175L / 250L</p>



**Warning! / Achtung! / Attention! / Advertencia! / 警告!**

- Do not connect directly to AC/DC power source. Connect valve to appropriate controller/driver only. Do not operate valve while assembling or disassembling
- Bitte den ETS nicht direkt mit einer Spannungsquelle (Gleich- oder Wechselstrom) verbinden. Schließen Sie das Ventil nur an geeignete Regler/Steuergeräte an. Ventil bitte nicht in zerlegtem Zustand ansteuern.
- Ne pas raccorder directement le moteur à une alimentation AC / DC. Raccorder la vanne au régulateur approprié. Ne pas actionner la vanne pendant le montage ou le démontage.
- No aplicar tensión directamente a la válvula. Conectar la válvula a un controlador/driver adecuado. No haga funcionar la válvula durante el montaje o desmontaje.
- 请仅将阀门连接于合适的控制器/驱动器，勿直接与交流或直流电源连接。在安装和拆卸阀门时请勿操作电子膨胀阀。

**Special note for R1234ze(E), R1234yf and R516A:**

Ignition risk is evaluated in accordance to ISO5149/EN378 and IEC60335-2-40.

- Do not use valve outside of the stated temperature limits.
- Do not unplug when energized
- Must be installed in a suitable end use enclosure to protect the valve electrical plug against moisture, dust, dirt and impact.
- 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.

