



Danfoss Type BI Solenoid Coil for Control in Potentially Explosive Areas Installation Guide

[Home](#) » [Danfoss](#) » Danfoss Type BI Solenoid Coil for Control in Potentially Explosive Areas Installation Guide



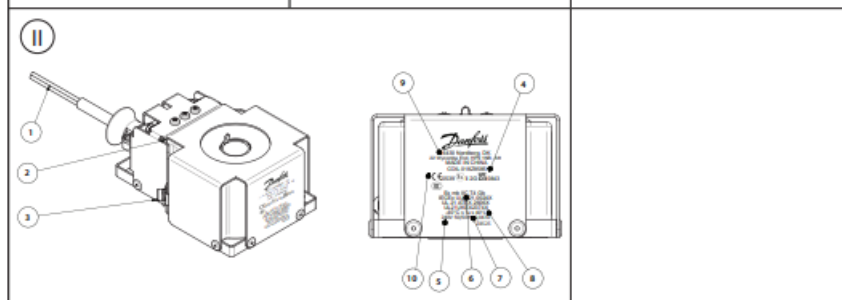
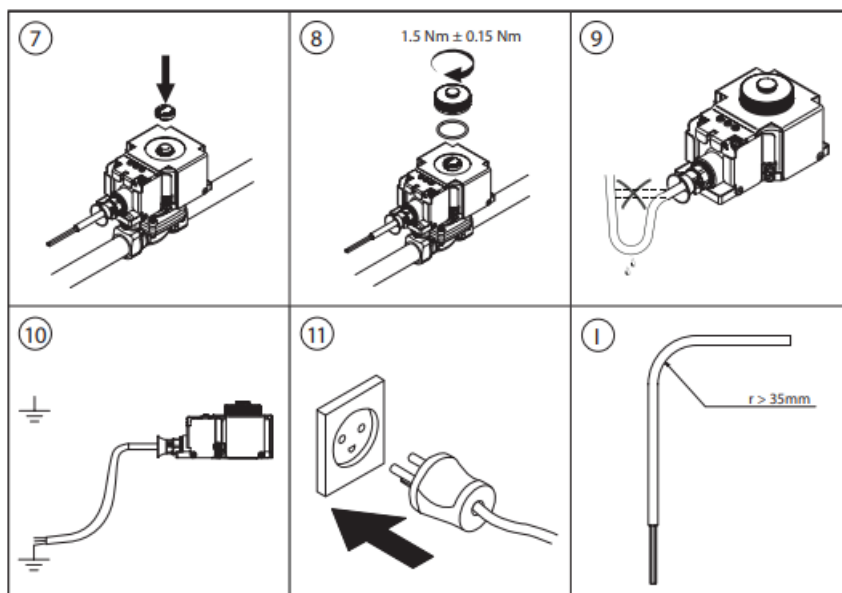
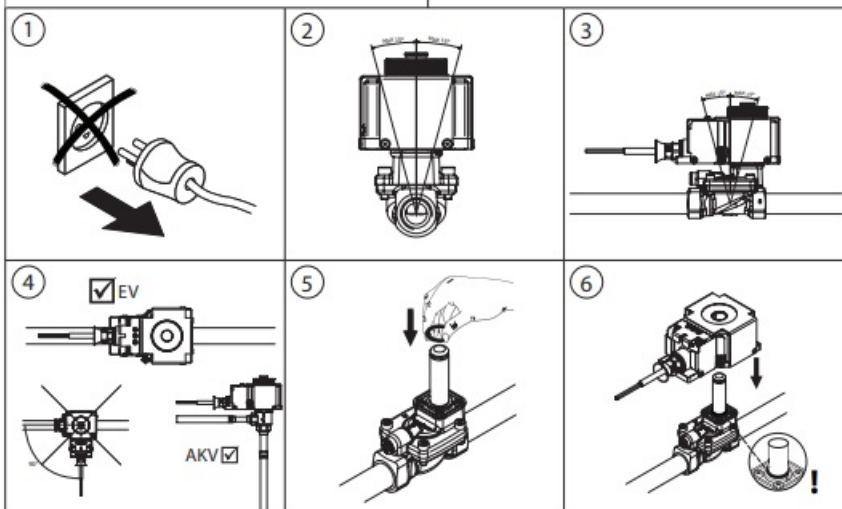
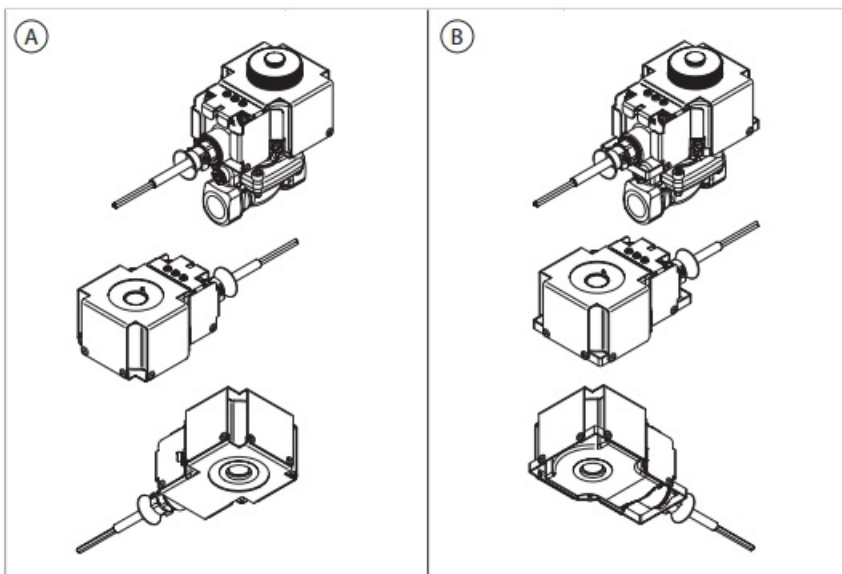
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Contents

- [1 Figures](#)
- [2 Identification](#)
- [3 Application and specification](#)
- [4 Safety instruction](#)
- [5 Documents / Resources](#)
- [6 Related Posts](#)

Figures



Identification

1. Green/Yellow cord for earthing
2. Week and date of manufacturing
3. External earth terminal
4. Code number
5. Voltage
6. Approval/Certificate number
7. Frequency
8. Ambient temperature range
9. Country of manufacturing
10. Approval logos

EX Certifications

Ex mb IIC T4 Gb
IECEX ULD 21.0024X
UL 21 ATEX 2606X
UL21UKEX2374X

The coil may only be installed with following valve combinations

Valves works with A:

- EVM-EVRF-EVRP-EVRB
- AKV, AKVA
- EVR 2, 3, 6
- EVRS(T) 3
- EV210BW, EV210B
- ICLX
- VDH, VDHT EAM, VDHT
- VPH
- EVRA 3, EVRA(T) 3

Valves works with B:

- EV220B 6, 10, 12, 14, 18, 22
- EV221BW
- EV251B
- EVRS(T) 10-20
- ICF
- EV227B
- EVRA 10, 15, 20 (Before 1996)
- EVRA(T) 10, 15, 20 (Before 1996)

Valves works with both:

- EVR 10, 15, 20, 22, 25, 32, 40
- EV220B 15, 20, 25, 32, 40, 50
- EV220BW
- EV220B 65, 80, 100
- EV250BW, EV250B
- VDH 30 EC
- EV222B
- EV224B
- EVRA 10, 15, 20, 25, 32, 40 (After 1996)
- EVRA(T) 10, 15, 20 (After 1996)

Application and specification

Nominal voltage	Frequency	Nominal current	Code no. with cover and bottom		Code no. with cover and frame	
[V]	[Hz]	[A]	5m cable	10m cable	5m cable	10m cable
24	DC	0.46	018Z8589	018Z8569	018Z8596	018Z8575
24	50/60	0.48	018Z8588	018Z8568	018Z8595	018Z8574
110	50/60	0.102	018Z8587	018Z8567	018Z8593	018Z8573
230	50/60	0.053	018Z8586	018Z8566	018Z8592	018Z8572
240	50/60	0.047	018Z8585	018Z8565	018Z8591	018Z8571

Ambient temp.	$40\text{ }^{\circ}\text{C} \leq T_{\text{ambient}} \leq +40\text{ }^{\circ}\text{C}$	Protection degree	IP67(Evaluated by Danfoss)
Media	$-40\text{ }^{\circ}\text{C} < T_{\text{media}} < +90\text{ }^{\circ}\text{C}$	Polution degree	3 (EN60730-1)
Humidity	0 – 97 %	Over voltage category	II (2.5 kV)
Voltage	+6 / -10 %	Mode of operation	Type 1 action (EN60730-1)
Connection	3-Wire cable 3 x 0.75mm ²	External earth wire	Minimum wire gauge > 4mm
Weight	1.0 kg	Purpose of control	incorporated class I control

Safety instruction

All national safety regulations must be complied with in connection with installation, start-up and operation of Danfoss solenoid valve. Furthermore, the requirements of the declaration of conformity and national regulations for installation in explosion area. Disregarding such regulations involves a risk of serious personal injury or extensive material damage. Work in connection with the solenoid valve mentioned must be performed only by suitable qualified persons.

Safety requirements for use in explosive atmospheres are fulfilled through compliance certificates:

- Ex mb IIC T4 Gb
- IECEx ULD 21.0024X
- UL 21 ATEX 2606X
- UL21UKEX2374X

Specific Condition of Safe Use

- The solenoid coil shall be protected against impact during use
- Protect the coil against direct sunlight and other ultraviolet sources
- Disconnect the power before dismantling the coil
- Install the coil and cable according to IEC/EN/ EN BS 60079-14
- The cable supplied with the solenoids must not be handled or flexed, and shall be protected against impact if the ambient temperature is below 0 °C
- The coils must be installed in the orientation shown in page 1
- The permitted process medium temperature range is -40 °C to +90 °C
- The capacitance of exposed, isolated, metallic parts is 7pF
- The cable is only for fixed installation and the minimum bending diameter for fixed installation: $r \geq 35 \text{ mm}$ (ⓘ)
- The cable jacket material is PVC
- The cable operating temperature range is -40 – 90 °C
- The product is provided with a yellow/green PE Conductor as well as an external earth terminal. These shall not be used simultaneously.
If the external earth connection is connected to earth or bonding system, the PE Conductor must be cut off, isolated and not connected. If the PE Conductor is connected to earth, the external earth terminal must be left without any connection. For the external earth terminal the size of the earth core shall be minimum 4 mm² and the installer shall use a suitable method e.g. crimp terminal to ensure secureness of the external earth connection. The screw for external PE shall be mounted with 1.2 Nm ± 0.2. The external earth conductors shall be physically secured close to the coil connection to ensure that the conductors cannot be readily loosened or twisted
- The end user must ensure the earthing of the coil is maintained
- Non-detachable cords method Z repairing not allowed. If the coil failed, it must be replaced by a new coil

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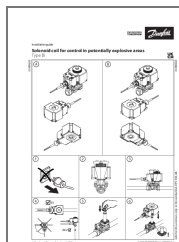
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Documents / Resources



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