

Installation guide

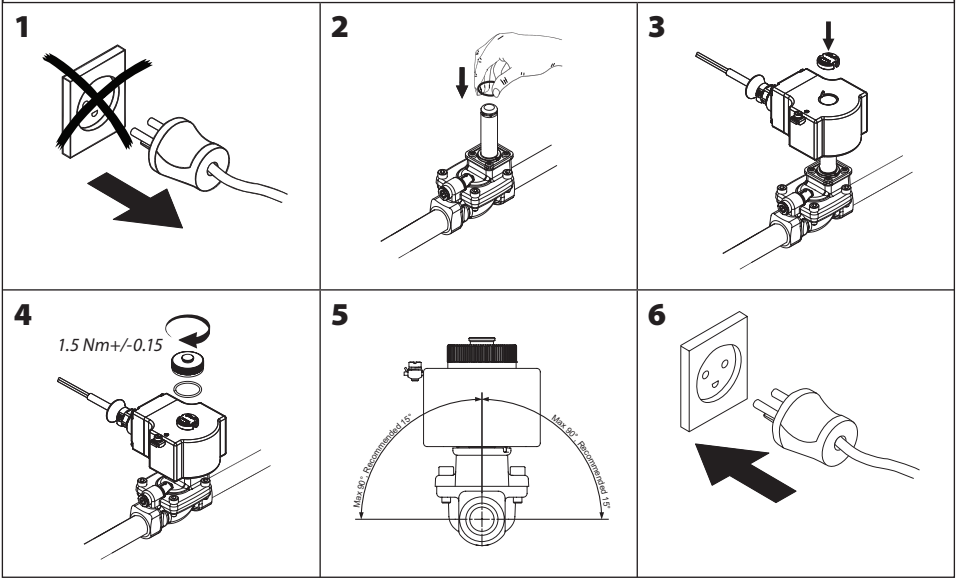
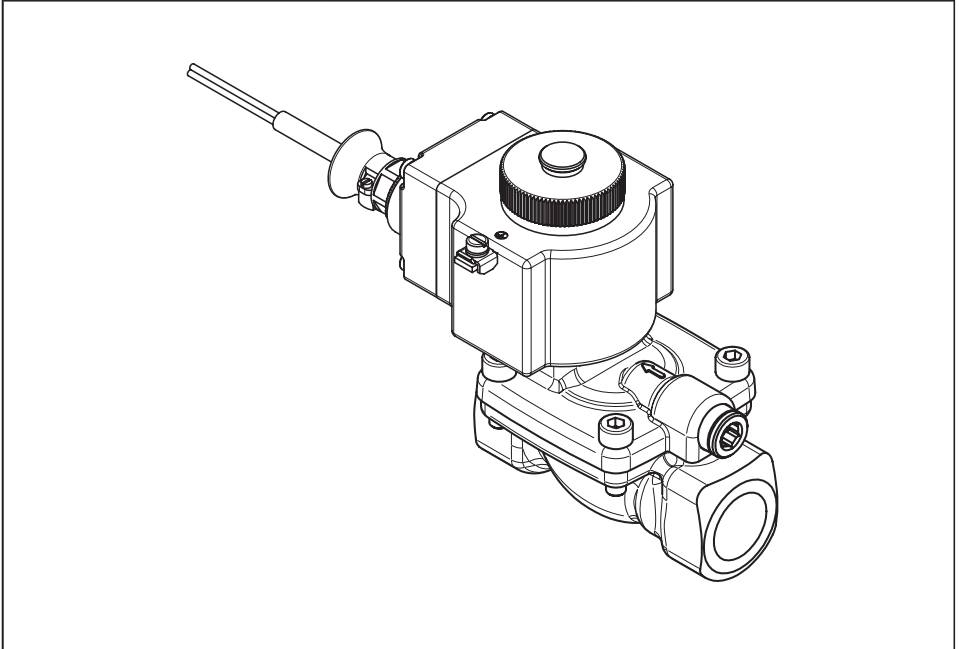
# Solenoid coil for control in potentially explosive areas

Type B0



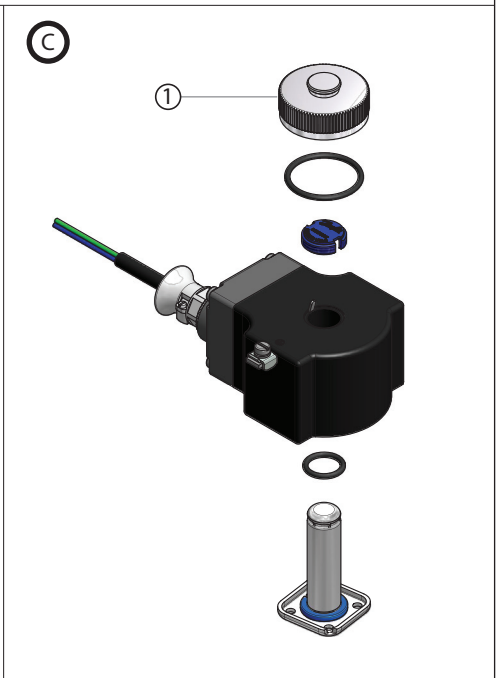
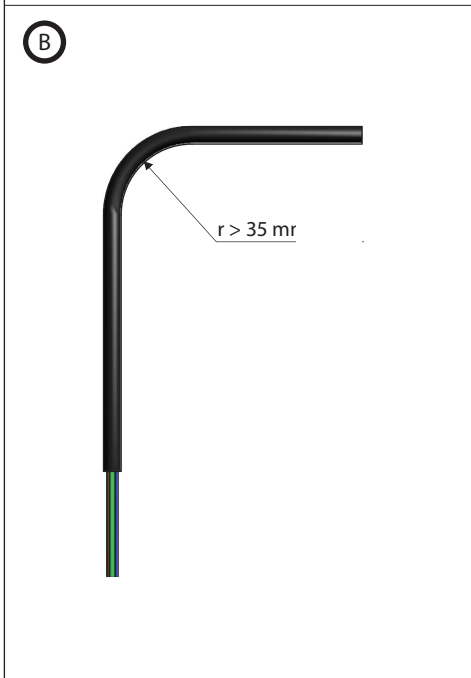
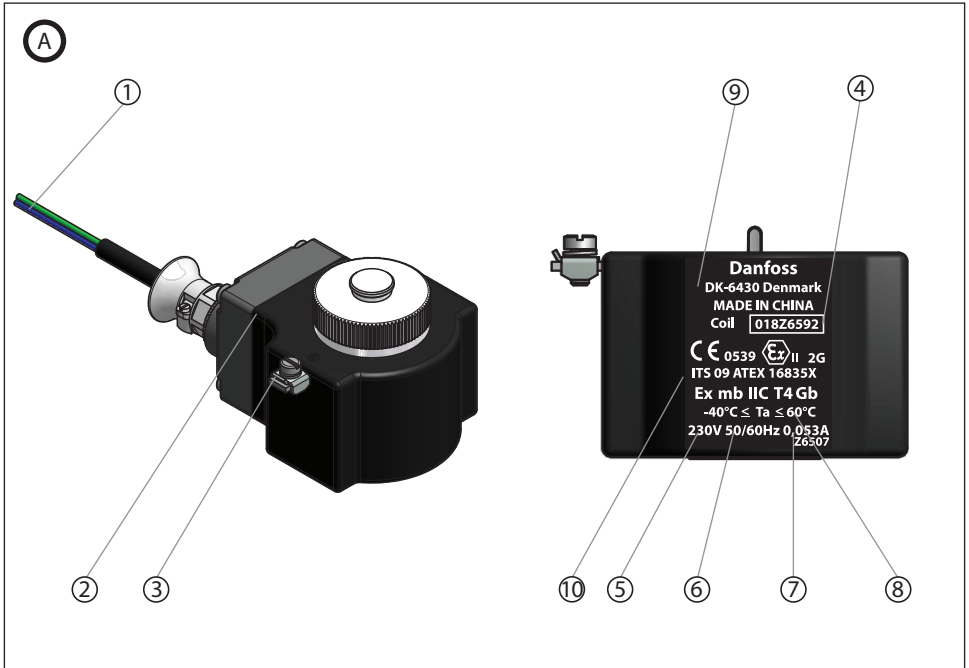
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Імпортер: ТОВ з іл "Данфосс ТОВ" 04080, Київ 80, п/с 168, Україна

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



## **A Identification**

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

## **Description and approval**

Solenoid valve for control in potentially explosive area.

### **Approval**

EMC 2014/30/EU  
ROHs 2011/65/EU

ATEX 2014/34/EU  
Ex mb IIC T4 Gb  
ITS 09 ATEX 16835X

### **The coil may only be installed with following valve combinations**

- EVR NC 2 - 40
- EVR NO 3 - 40
- EVRH NO and NC 10 - 20
- EVRA(T) 3 - 40
- EVRS(T) 3 - 20
- EVM-EVRF-EVRP-EVRB
- GPLX
- EVM NO and NC
- EV210B 1.5 - 25
- EV310B 1.5 - 3.5
- EV220B 6 - 100
- EV250B 6 - 22
- EV251B 10 - 22
- EV222B 15 - 50
- EV224B 15-32
- EV227B 6 - 22
- VDH
- VDHT
- VPH

### **Application and specification:**

|                   |  |                       |                             |
|-------------------|--|-----------------------|-----------------------------|
| Ambient media     | $-40\text{ }^{\circ}\text{C} \leq T_{\text{ambient}} \leq +60\text{ }^{\circ}\text{C}$ | Protection degree     | IP67                        |
| Media             | $-40\text{ }^{\circ}\text{C} < T_{\text{media}} < +90\text{ }^{\circ}\text{C}$         | Polution degree       | 3 (EN60730-1)               |
| Humidity          | $0\% \leq \text{RH} \leq 100\%$  | Over voltage category | 2.5 kV (EN60730-1)          |
| Voltage variation | $\pm 10\%$   | Mode of operation     | Type 1 action (EN60730-1)   |
| Connection        | 3-core cable $3 \times 0.75\text{ mm}^2$   | External earth core   | Minimum $A > 4\text{ mm}^2$ |
| Weight            | 1.0 kg   | Incorporated control  | –                           |
|                   |  | 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.

Basic safety and health requirements are fulfilled through complians with:

- EN60079-0: 2012 + A11: 2013  
EN60079-0: 2018  
EN60079-18: 2015 + A1: 2017

### Installation, operation and maintenance:

- The coil must be protected against external impact.
- If the coil is installed in wet environment (pollution degree 3) the coil shall be mounted with wet kit accession 018Z0090.
- Always install a fuse in front of the coil.  
DIN 41571-2  
High breaking capacity 1500 A  
Medium Time lag  
Minimum voltage 250 V
- Ensure that the o-ring is proper mounted. This is done by position the O-ring in the middle of the armature tube, and let the coil push the O-ring into position at the bottom of the armature tube (Ⓞ).
- The cable supplied with the solenoids must not be handled or flexed and protected against impact if the ambient temperature is below 0 °C or similar. Minimum bending diameter for fixed installation:  
 $r \geq 35 \text{ mm}$  (Ⓞ).
- Mount the aluminum cap with 1.5 Nm $\pm$ 0.15 (Ⓞ) and ensure that the O-ring is placed correct.
- 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.

### Special Conditions of Certification/Use:

- For Solenoid in use under -30 °C the cable must be protected from impact

- The Solenoid is manufactured with a permanently connected cable. The connection of this cable supplying the solenoid must be done in accordance with the appropriate electrical code and good engineering practice
- The product is provided with a Y/G coloured earth wire for internal earthing. This internal earth connection shall not be used if the external earth connection is connected to the earth or bounding system and must be cut off, isolated and not connected.
- The solenoid must not be removed from the valve when energized. This would otherwise impair the surface temperature specifications.
- Enclosures or parts of enclosure are non-conducting and may generate an ignition capable level of discharge under certain extreme conditions. The user shall ensure that the equipment is not installed or used in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charge or non-conducting surfaces. Additionally, cleaning of the equipment shall only be done with a damp cloth.
- The solenoid must be protected against direct sunlight and ultraviolet sources.
- The power supplying the solenoid must be limited to a prospective short circuit current of 1500 A according to EN 60079-18:2015 clause 7.9.2.1
- Each product shall be subjected to a visual inspection according to EN 60079-18:2015 clause 9.1
- Each product shall be subjected to a Dielectric strength test according to EN 60079-18:2015 clause 9.2

### Warning:

Potential Electrostatic Charging Hazard. The solenoid valve must only be installed in surroundings with low wind speed, and where rubbing the coil is unlikely. Cleaning with damp cloth is recommended. To avoid buildup of electrostatic discharge it must be ensured the coil is having a reliable connection to earth with an impedance no exceeding 1 GΩ.

**In case of problems, contact:**  
**Danfoss A/S**  
**DK-6430 Nordborg**  
**Denmark**

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