

042R0151

Installation guide



**Solenoid coil for control in potentially explosive areas** Type BO

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IC.PI.200.Y2.02 | 1

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# (A) Identification

- ① Green/Yellow cord for earthing
- <sup>②</sup> Week and date of manufacturing
- ③ External earth terminal
- ④ Code number
- ⑤ Voltage
- 6 Frequency
- Ø Current
- 8 Ambient temperature range
- ③ Country of manufacturing
- O 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 • EV210B 1.5 - 25 • FVR NO 3 - 40 • EV310B 1.5 - 3.5 • EVRH NO and NC 10 - 20 • EV220B 6 - 100 • EVRA(T) 3 - 40 • EV250B 6 - 22 • EVRS(T) 3 - 20 • FV251B 10 - 22 EVM-EVRF-EVRP-EVRB • EV222B 15 - 50 • GPLX • EV224B 15-32 EVM NO and NC • EV227B 6 - 22

### **Application and specification:**

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

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## 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 complains with:

- IEC60079-0, 6th Edition, EN60079-0: 2012
- IEC60079-18, 3rd Edition, EN60079-18: 2009

### Installation, operation and maintenance:

- The coil must be protected against external impact.
- The coil must not be exposed to sun light and other ultraviolet sources.
- Do not dismount the coil while it is under power.
- 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 (C).
- 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 ≥ 35 mm (F).

- Mount the aluminum cap with 1.5Nm+/-0.15
  (①①) and ensure that the O-ring is placed correct.
- The product is provided with a yellow/green earth wire 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 Y/G earth wire must be cut off, isolated and not connected.

It the Y/G wire 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 mm<sup>2</sup>. 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.

### 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 G $\Omega$ .

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