



Solenoid coil

BZ

For control in potentially explosive areas

Description

BZ is a solenoid coil with ATEX / IECEx approval, applicable for zone 1 and 2 Ex environments. The coils are designed to be used with Danfoss solenoid valves.

Features & benefits

- Embedded coils with long lifetime, even under extreme conditions
- High reliability and long lifetime
- Easy mounting and dismounting
- Covering multiple voltages and frequencies
 - 110 V 50 Hz, 120 V 60 Hz
 - 230 V 50 Hz, 240 V 60 Hz

Ordering

Product code numbers

Parts Program name	Type	Supply voltage 50Hz Max [V]	Supply voltage 60Hz Max [V]	Frequency [Hz]	Code number
EV227B	BZ120C	110	120	50/60 Hz	018F4703
EV224B	BZ240C	230	240	50/60 Hz	018F4704

Product details

General data

Table: Technical data

Features	Description				
Mode of operation	Type 1 action (EN60730-1)				
Protection against electrical shock	Class I (EN60730-1)				
Humidity	0 – 100% RH				
Enclosure	IP65				
Pollution degree	1+2+3 (EN60730-1)				
Max. altitude above sea level	2000 m				
Permissible voltage variation	110 / 120 V AC: -10%, +6% 230 / 240 V AC: -10%, +6%				
Rated impulse voltage	4 kV				
Over voltage category	III (EN60730-1)				
Nominal current		Power consumption holding		Inrush current	
		[W]	[VA]	[A]	[ms]
	110 V AC 50 Hz	8.6	16	0.46	0.034
	120 V AC 60 Hz	9.0	16	0.43	0.028
	230 V AC 50 Hz	9.5	18	0.26	0.034
240 V AC 60 Hz	9.0	16	0.26	0.034	
Duty rating	100%				
Ambient temperature	-40 – 45 °C				
Media temperature	-40 – 70 °C				
Insulation of coil windings	CA 200-1				
Connection	9 m 3-core flexible cable 3 x 0.75 mm ² (cable length maximum 15 m)				
Outside diameter sheet	Ø 6.6 mm				
Size of fuse in front of the coil	Thermal fuse 130 °C 110 / 120 V AC: 250 mA 230 / 240 V AC: 150 mA				
External earth core	Minimum area > 4 mm ²				

Classification EN 60079

Table: Classification EN60079

Features	Description
Media	Gas, vapors and mists
Explosion proof area	Zone 2 and Zone 1
Product group	II
Product category	2G
Product niveau EPL	Gb
Explosion group	IIC
Temperature class	T4
Type of protection	mb
Exposed to Sun / UV light	No
Impact height	Max. 0.4 m

NOTE:

Always install a fuse in front of the coil.

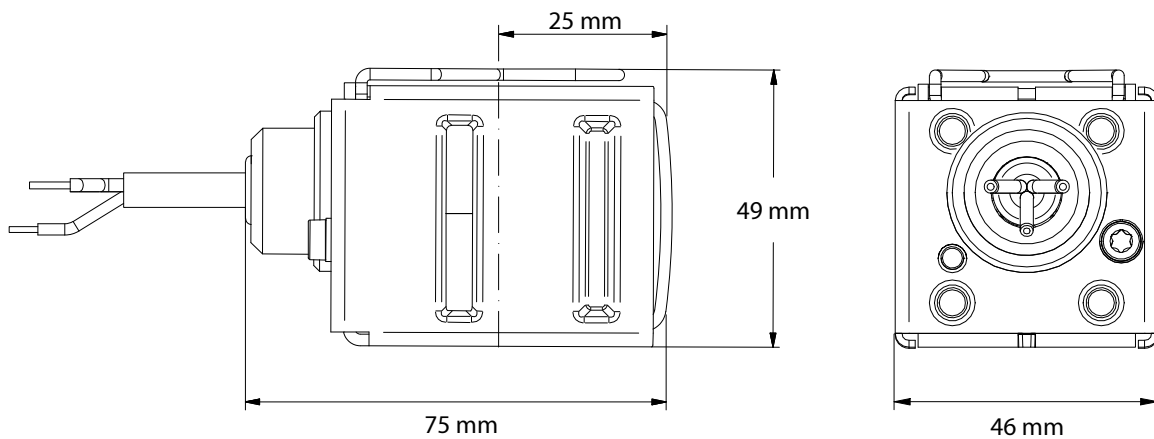
- Medium time lag
- Size sees product label

Must be protected against ultraviolet sources.

Moist-clean only. The cable must be protected according to IEC 60079-14.

- Use only for system in compliance with ATEX. Ignition risk is evaluated in accordance to ATEX.
- Coil type BZ can be applied on systems with R290, R600, R600a and R1270 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.
- Please follow specific selection criteria stated in the datasheet for these particular refrigerants.

Dimensions



Danfoss
18F7.3.10

Weight 1.0 kg

Installation

Installation, operation and maintenance

- Protect the coil against external impact.
- Protect the coil against direct sunlight and other ultraviolet sources.
- Disconnect the power before dismantling the coil.
- Always install a fuse in front of the coil.
 - DIN 41571-2
 - Rated breaking capacity 1500 A
 - Medium time lag
 - Minimum voltage 250 V for AC and 24 V for DC
- Install the coil and cable according to EN60079-14.
- 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.
- Installation and handling of the cable shall be done at temperature above 0 °C.
- The cable is only for fixed installation and the minimum bending diameter for fixed installation: $r \geq 55$ mm.
- The cable jacket material is PVC.
- The cable operating temperature range is -40 – 90 °C.
- The product is provided with a yellow (Y) / green (G) PE 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. If 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 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 \pm 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.

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Explosive Safety Certificate	DEMKO 14 ATEX 1314X Rev.7	UL Demko - UL International DEMKO A - S	ATEX
Explosive Safety Certificate	IECEX ULD 14.0001X Rev. 7	UL Demko - UL International DEMKO A - S	Explosive
Explosive Safety Certificate	KTL 2019-049811-01-1	KTL - Korea Testing Laboratory	Explosive
Explosive Safety Certificate	CCC 2020312307000171	CCC - China Compulsory Certification	Explosive
EU-UK Declaration	Danfoss EU-UK 032R9255.AI	Danfoss	EMC, EU RoHS, ATEX, UK RoHS
Explosive Safety Certificate	KGS 16-0768	KGS - Korea Gas Safety Corporation	Explosive
Explosive Safety Certificate	UL21UKEX2020X Rev.1	UL - Underwriters Laboratories inc.	Explosive
Export Control Declaration	Solenoid Coils	Danfoss	
UA Declaration	Danfoss UA 8505	Danfoss	UA RoHS
Quality Assurance Certificate	DEMKO 12 ATEX Q1209493 Rev. 13	UL Demko - UL International DEMKO A - S	ATEX, Explosive
Explosive Safety Certificate	IECEX DK/ULD/QAR12.0002/11	UL Demko - UL International DEMKO A - S	Explosive
Quality Assurance Certificate	UL21UKQAN2258 Rev. 5	UL - Underwriters Laboratories inc.	Explosive
Explosive Safety Certificate	KTL 2019-049808-01-1	KTL - Korea Testing Laboratory	Explosive

Contact details

Online support

Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.



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