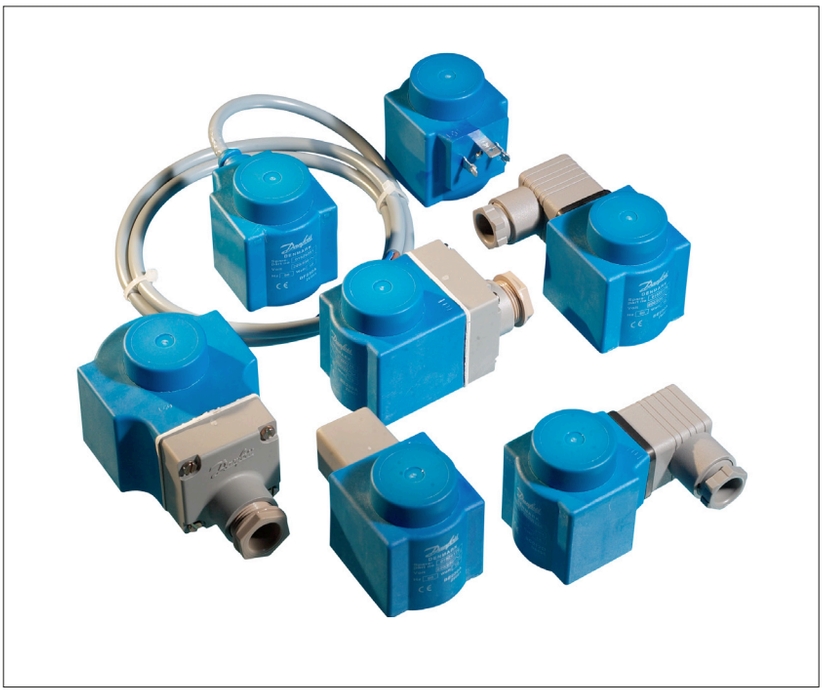
ENGINEERING
TOMORROW

Data sheet

Solenoid coil
Types BB, BE, BF, BG, and BN



The coils are specially designed to operate in the aggressive environment of high humidity and temperature fluctuations that you find in most refrigeration systems.

The Clip-on fastening system ensures a faultless installation and makes the coils easy to mount and dismount. A Danfoss Clip-on coil can be mounted without any tools at all, and it is simple to dismount the coil by means of a screwdriver.

The Clip-on coils are available for the entire range of Danfoss solenoid valves for refrigeration, freezing and air conditioning purposes.

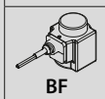
Features

- Encapsulated coils with long operating life, even under extreme conditions.
- Standard coils for AC or DC
- Standard coils available with 3-core cable, terminal box or DIN plugs.
- Standard coils from 12 V to 420 V, 50, 60 or 50/60 Hz.
- Standard coils dimensioned for max. opening differential pressure (MOPD) of up to 38 bar.
- Coils can be fitted without the use of tools.

Approvals

- RoHS Directive 2011/65/EU
- Low Voltage Directive (LVD) 2014/35/EU
- EMC Directive 2014/30/EU

Technical data

Data	Solenoid coil type										
	1m 3-core cable	Terminal box			DIN spade and protection cap	DIN spade	1m 3-core cable	Terminal box	DIN spade and protection cap	DIN spade	Terminal box IP67
											
	BF	BE	BG	BG	BE	BB	BF	BE	BE	BB	BN
Enclosure	IP67	IP67	IP67	IP67	IP20	IP00	IP67	IP67	IP20	IP00	IP67
Polution degree	4	4	4	4	3	3	4	4	3	3	3
Conductor area [mm²]	0.75	0.75 - 1.5	0.75 - 1.5	0.75 - 1.5	0.75 - 1.5	0.75 - 1.5	0.75	0.75 - 1.5	0.75 - 1.5	0.75 - 1.5	0.75 - 1.5
Cable size [mm]	Ø6.6	Ø6.0 - Ø11	Ø6.0 - Ø11	Ø6.0 - Ø11	Ø6.0 - Ø11	Ø6.0 - Ø11	Ø6.6	Ø6.0 - Ø11	Ø6.0 - Ø11	Ø6.0 - Ø11	Ø6.0 - Ø11
Rated impulse voltage [kV], if altitude < 4000 m	4	4	4	4	4	4	4	4	4	4	4
Humidity [R.H.]	0 – 100%	0 – 100%	0 – 100%	0 – 100%	0 – 97% non-con-densation condition	0 – 97% non-con-densation condition	0 – 100%	0 – 100%	0 – 97% non-con-densation condition	0 – 97% non-con-densation condition	0 – 100%
Type of control	1	1	1	1	1	1	1	1	1	1	1
Safety classification	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I
Max. altitude above sea level [m]	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000

Note:
For DIN plug, impulse withstand voltage is 3.1 kV for 2000 m < Altitude < 4000 m

Approvals

See under the required solenoid valve.

Connection

3-core cable
The external thread in the screwed cable entry suits flexible steel hose or corresponding cable protection (3 x 0.75 mm²).

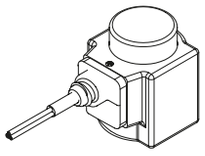
Terminal box
Leads are connected to terminal screws in the terminal box. The box is fitted with a Pg 13.5 screwed entry for 6 – 14 mm cable.
Max. lead cross section: 2.5 mm².

DIN plugs
The three pins on the coil can be fitted with spade tabs, 6.3 mm wide (to EN175301-803A).
The two current carrying pins can also be fitted with spade tabs, 4.8 mm wide.
Max. lead cross section: 1.5 mm².
Use of the protective cap supplied will prevent inadvertent contact with live parts.

DIN socket
(to EN175301-803A)
Leads are connected in the socket. The socket is fitted with a Pg 11 screwed entry for 6 – 12 mm.

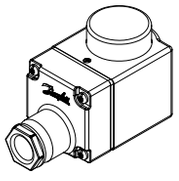
Ordering

BF solenoid coil with 1m 3-core cable IP67



Type	Valve type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption [W]	Power consumption [VA]	Code no.
BF024AS	EVR 2 – EVR 40 (NC) EVR 6 – EVR 22 (NO) EVRH 10 – EVR 40 EVRC EVRA EVRAT EVRS / EVRST EVM (NC)	-40T80	24	-15%, +10%	50	12	20	**018F6257**
BF230AS		-40T80	230	-15%, +10%	50	12	22	**018F6251**
		-40T80	220	-15%, +10%	50	11	20	
BF240AS		-40T80	240	-15%, +10%	50	11	19	**018F6252**
BF400AS		-40T80	380 / 400	±10%	50	10	21	**018F6253**
BF024BS		-40T80	24	-15%, +10%	60	14	25	**018F6265**
BF115CS		-40T80	115	-15%, +10%	60	13	22	**018F6260**
		-40T80	100	-15%, +10%	50	11	19	
BF220BS		-40T80	220	-15%, +10%	60	14	23	**018F6264**
BF110CS		-40T50	110	±10%	50	15	29	**018F6280**
			110	±10%	60	13	23	
BF230CS		-40T50	220 – 230	±10%	50	16	31	**018F6282**
			220 - 230	±10%	60	14	24	

BE solenoid coil with terminal box IP67

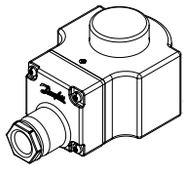


Type	Valve type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption [W]	Power consumption [VA]	Code no.
BE012AS	EVR 2 – EVR 40 (NC) EVR 6 – EVR 22 (NO) EVRH 10 – EVRH 40 EVRC EVRA EVRAT EVRS / EVRST EVM (NC)	-40T80	12	-15%, +10%	50	10	18	**018F6706**
BE024AS		-40T80	24	-15%, +10%	50	12	21	**018F6707**
BE042AS		-40T80	42	-15%, +10%	50	10	21	**018F6708**
BE048AS		-40T80	48	-15%, +10%	50	10	21	**018F6709**
BE115AS		-40T80	115	-15%, +10%	50	11	19	**018F6711**
BE230AS		-40T80	230	-15%, +10%	50	12	22	**018F6701**
		-40T80	220	-15%, +10%	50	11	19	
BE240AS		-40T80	240	-15%, +10%	50	11	19	**018F6702**
BE440CS		-40T80	380 – 400	-15%, +10%	50	13	23	**018F6703**
			440	-15%, +10%	60	14	24	
BE440AS		-40T80	420	-15%, +10%	50	11	21	**018F6704**
BE024BS		-40T80	24	-15%, +10%	60	14	25	**018F6715**
BE115CS		-40T80	100	-15%, +10%	50	11	19	**018F6710**
			115	-15%, +10%	60	13	22	
BE220BS		-40T80	220	-15%, +10%	60	13	23	**018F6714**
BE240CS		-40T80	200	-15%, +10%	50	11	20	**018F6713**
		-40T80	240	-15%, +10%	60	15	25	
BE110CS		-40T50	110	±10%	50	15	28	**018F6730**
		-40T50	110	±10%	60	13	22	
BE230CS		-40T50	220 - 230	±10%	50	17	31	**018F6732**
			220 - 230	±10%	60	14	24	

See „Opening differential pressure" under „Technical data" for the valve concerned.
When replacing a coil with terminal box, it is sufficient to change the coil unit itself. Therefore, order coil with DIN plugs and protective cap.

Ordering

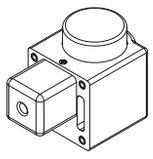
BG solenoid coil with terminal box IP67



Type	Valve type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption [W]	Power consumption [VA]	Code no.
BG024AS	EVR 3 – EVR 40 EVRC EVRA EVRAT EVRS/ EVRST EVM (NC/ NO)	-40T80	24	-15%, +10%	50	11	21	**018F6807**
BG048AS		-40T80	48	-15%, +10%	50	12	26	**018F6809**
BG110AS		-40T80	110	-15%, +10%	50	13	25	**018F6811**
BG230AS		-40T80	230	-15%, +10%	50	15	28	**018F6801**
		-40T80	220	-15%, +10%	50	13	25	
BG240AS		-40T80	240	-15%, +10%	50	13	25	**018F6802**
BG400AS		-40T80	380 / 400	-15%, +10%	50	12	26	**018F6803**
BG024BS		-40T80	24	-15%, +10%	60	12	26	**018F6815**
BG110BS		-40T80	110	-15%, +10%	60	16	29	**018F6813**
BG220BS		-40T80	220	-15%, +10%	60	16	29	**018F6814**
BG012DS	EVR 2 – EVR 15 (NC) EVR 25 – EVR 40 (NC/NO) EVR 6 – EVR 15 (NO) EVRC 10 – EVRC 15 EVRA 3 – EVRA 15 (NC) EVRA 25 – EVRA 40 (NC) EVRAT 10 – EVRAT 15 (NC) EVRS/ EVRST 3 – EVRS/ EVRST 15 EVM (NC/ NO)	-40T50	12	±10%	DC	20	–	**018F6856**
BG024DS		-40T50	24	±10%	DC	16	–	**018F6857**
BG048DS		-40T50	48	±10%	DC	20	–	**018F6859**
BG110DS		-40T50	110	±10%	DC	16	–	**018F6860**
BG115DS		-40T50	115	±10%	DC	19	–	**018F6861**
BG220DS		-40T50	220	±10%	DC	20	–	**018F6851**
BG012DS	EVR 20 to 22 (NC/ NO) EVRC 20 EVRA 20 EVRAT 20 EVRST 20	-40T50	12	±10%	DC	20	–	**018F6886**
BG024DS		-40T50	24	±10%	DC	20	–	**018F6887**
BG048DS		-40T50	48	±10%	DC	20	–	**018F6889**
BG110DS		-40T50	110	±10%	DC	20	–	**018F6890**
BG220DS		-40T50	220	±10%	DC	20	–	**018F6881**

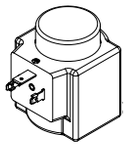
See „Opening differential pressure" under „Technical data" for the valve concerned.
When replacing a coil with terminal box, it is sufficient to change the coil unit itself. Therefore, order coil with DIN plugs and protective cap.

Ordering
BE solenoid coil with DIN spade and protection cap IP20



Type	Valve type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
						[W]	[VA]	
BE024AS	EVR 2 – EVR 40 (NC) EVR 6 – EVR 22 (NO) EVRH 10 – EVRH 40 EVRC EVRA EVRAT EVRS/ EVRST EVM (NC)	-40T80	24	-15%, +10%	50	12	21	**018F6182**
BE230AS		-40T80	230	-15%, +10%	50	12	22	**018F6176**
		-40T80	220	-15%, +10%	50	11	19	
BE240AS		-40T80	240	-15%, +10%	50	11	19	**018F6177**
BE420AS		-40T80	420	-15%, +10%	50	10	21	**018F6179**
BE115CS		-40T80	100	-15%, +10%	50	11	19	**018F6185**
		-40T80	115	-15%, +10%	60	13	22	
BE220BS		-40T80	220	-15%, +10%	50	13	23	**018F6189**
BE110CS		-40T50	110	±10%	50	15	28	**018F6192**
		-40T50	110	±10%	60	13	22	
BE230CS		-40T50	220-230	±10%	50	17	31	**018F6193**
		-40T50	220-230	±10%	60	14	24	

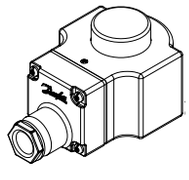
BB solenoid coil with DIN spade*)



Type	Valve type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
						[W]	[VA]	
BB024AS	EVR 2 – EVR 40 (NC) EVR 6 – EVR 22 (NO) EVRH 10 – EVRH 40 EVRC EVRA EVRAT EVRS/ EVRST EVM (NC)	-40T80	24	-15%, +10%	50	11	19	**018F7358**
BB115AS		-40T80	115	-15%, +10%	50	11	19	**018F7361**
BB230AS		-40T80	220 - 230	-15%, +10%	50	11	19	**018F7351**
BB240AS		-40T80	240	-15%, +10%	50	11	19	**018F7352**
BB024BS		-40T80	24	-15%, +10%	60	14	23	**018F7365**
BB110CS		-40T50	110	±10%	50	15	28	**018F7360**
			110	±10%	60	13	22	
BB230CS		-40T50	220 - 230	±10%	50	16	31	**018F7363**
			220 - 230	±10%	60	13	24	

See „Opening differential pressure" under „Technical data" for the valve concerned.
When replacing a coil with terminal box, it is sufficient to change the coil unit itself. Therefore, order coil with DIN plugs and protective cap.
***)** Can only be used with DIN plug.*

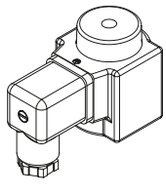
BN special solenoid coil with terminal box IP67



Type	Valve type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no. [1])
						[W]	[VA]	
BN024AS	EVR 2 – EVR 40 (NC) EVR 6 – EVR 22 (NO) EVRH 4 – EVRH 40 EVRC/ EVRA/ EVRAT/ EVRS/ EVRST/EVM (NC)	-40T50	24	-15%, +10%	50	24	49	**018F6903**
BN024BS		-40T50	24	-15%, +10%	60	22	42	**018F6906**
BN230AS		-40T50	230	-15%, +10%	50	19	43	**018F6905**

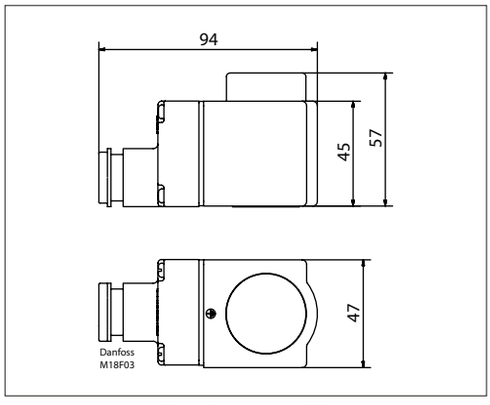
[1]) Recommended use for EVRH with high MOPD (38 bar).

Coil with DIN plug

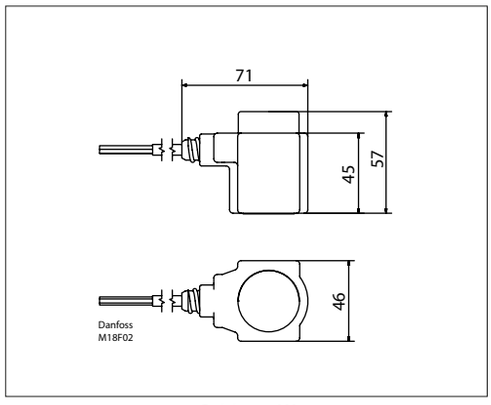


Terminal box	With built-in light emitting indicator diode for solenoid valves	**018Z0089**
DIN plug	Enclosure IP65, EN 175301-803A	**042N0156**

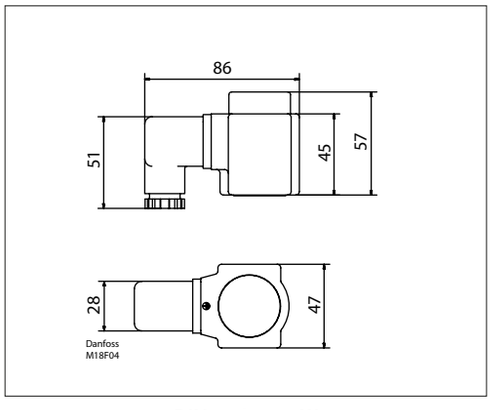
Dimension and weight



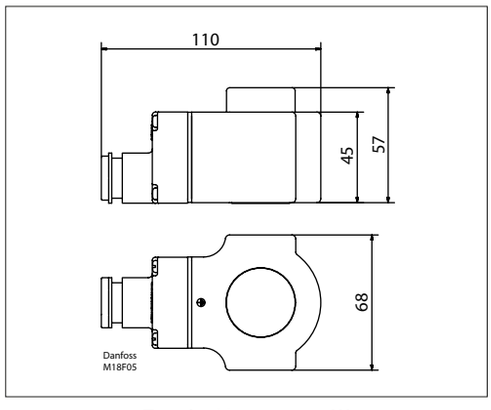
Terminal box 10 W
Weight 0.29 Kg



Cable 10 W
Weight 0.29 Kg



DIN socket 10 W
Weight 0.24 Kg



Terminal box 12 - 20 W
Weight 0.55 Kg