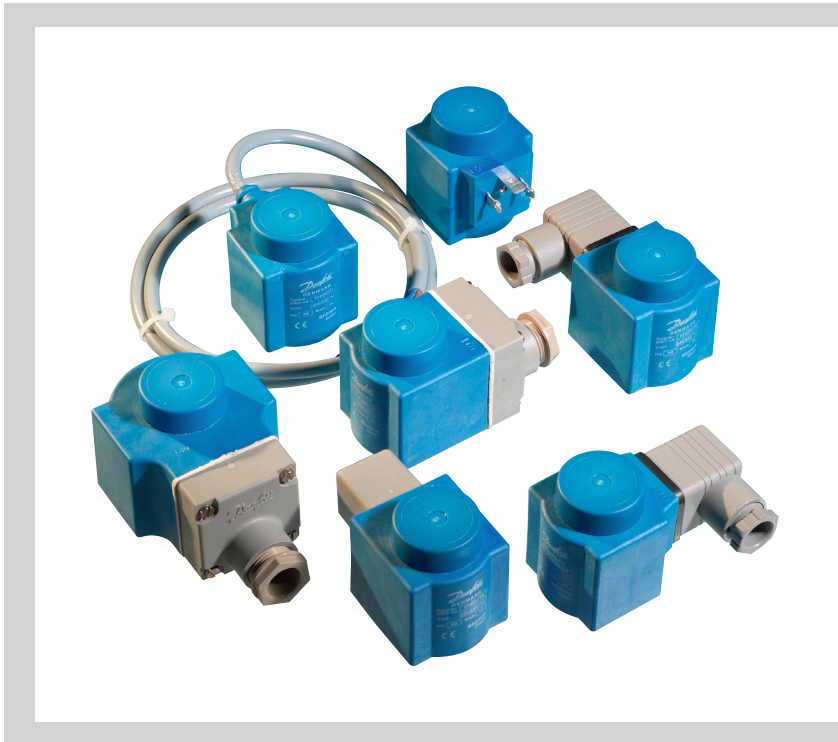


Technical brochure

Coils for solenoid valves



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 new 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 a.c. or d.c.
- 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 21 bar
- Coils can be fitted without the use of tools

Technical data

Ambient temperature

10 or 12 W a.c. coil for NC (normally closed) valve:

–40 → +80°C

10 W a.c. coil

for NO (normally open) valve:

–40 → +55°C

20 W d.c. coil for NC and NO valve:

–40 → +50°C

Permissible voltage variation

10 and 12 W a.c. coils: +10 → –15% and as

double frequency coils: ±10%

a.c. coils for 220-230 / 380-400 V: +6 → –15%

and as double frequency coils: +6 → –10%

20 W d.c. coils: ±10%.

Enclosure

IP 67 with cable or terminal box

IP 20 with DIN plugs and protective cap

IP 65 with DIN socket

IP 00 with DIN plugs.

Approvals

See under the required solenoid valve.

Coils for solenoid valves

Connection

3-core cable

The external thread in the screwed cable entry suits flexible steel hose or corresponding cable protection.

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 DIN 46247).

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 DIN 43650)


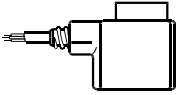
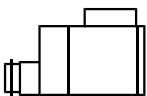
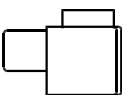
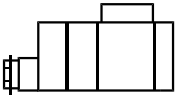
Leads are connected in the socket. The socket is fitted with a Pg 11 screwed entry for 6 → 12 mm.

Ordering

Clip-on coils

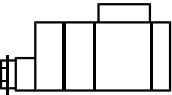
Valve type	Voltage V	Frequency Hz	Code no.				Appendix no.)*	Power consumption
			With 1 m 3-core cable IP 67	With terminal box IP 67	With DIN plugs and protect. cap IP 20	With DIN plugs**)		

Alternating current a.c.

    	EVR 2 → 40 (NC)	12	50		018F6706			15	Holding: 10 W 21 VA Inrush: 44 VA
	EVR 6 → 22 (NO)	24	50	018F6257	018F6707	018F6182	018F7358	16	
	EVRH 4 → 40	42	50		018F6708			17	
	EVRC	48	50		018F6709			18	
	EVRA	115	50	018F6261	018F6711	018F6186	018F7361	22	
	EVRAT	220-230	50	018F6251	018F6701	018F6176	018F7351	31	
	EVRS / EVRST	240	50	018F6252	018F6702	018F6177	018F7352	33	
	PKVD	380-400	50	018F6253	018F6703	018F6178		37	
	EVM (NC)	420	50		018F6704	018F6179		38	
		24	60	018F6265	018F6715			14	
		115	60	018F6260	018F6710	018F6185		20	
		220	60	018F6264	018F6714	018F6189		29	
		240	60		018F6713			30	
		110	50/60	018F6280	018F6730	018F6192	018F7360	21	
		220-230	50/60	018F6282	018F6732	018F6193	018F7363	32	

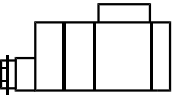
Direct current d.c.

Coil type I

	EVR 2 → 15 (NC)	12		018F6856			01	20 W
	EVR 25 → 40 (NC/NO)	24		018F6857			02	
	EVR 6 → 15 (NO)	48		018F6859			04	
	EVRC 10 → 15	110		018F6860			06	
	EVRA 3 → 15 (NC)	115		018F6861			07	
	EVRA 25 → 40 (NC)	220		018F6851			09	
	EVRAT 10 → 15 (NC)							
	EVRS / EVRST 3 → 15							
	PKVD							
EVM (NC/NO)								

Direct current d.c.

Coil type II

	EVR 20 → 22 (NC/NO)	12		018F6886			01	20 W
	EVRC 20	24		018F6887			02	
	EVRA 20	48		018F6889			04	
	EVRAT 20	110		018F6890			06	
	EVRST 20	220		018F6881			09	

See "Opening differential pressure" under "Technical data" for the valve concerned.

*) Indicates voltage and frequency

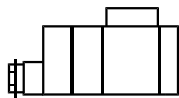
**) Can only be used with DIN socket

***) 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.

Coils for solenoid valves

Ordering (Continued)

Special coils



Valve type	Voltage V	Frequency Hz	Code no.	Appendix no. Indicates voltage and frequency	Power consumption
			With terminal box IP 67		

Alternating current a.c.

EVR 3 → 40	24	50	018F6807	16	Holding: 12 W 26 VA Inrush: 55 VA
EVRC	42	50		17	
EVRA	48	50	018F6809	18	
EVRAT	110	50	018F6811	22	
EVRS / EVRST	220-230	50	018F6801	31	
PKVD	240	50	018F6802	33	
EVM (NC / NO)	380-400	50	018F6803	37	
	24	60	018F6815	14	
	110	60	018F6813	20	
	220	60	018F6814	29	

Alternating current a.c.

EVR 2 → 40 (NC)	24	50	018F6901		Holding: 20 W 45VA
EVR 6 → 22 (NO)	24	60	018F6902		
EVRH 4 → 40 (NO)	230	50	018F6905		
EVRC					Inrush: 65VA
EVRA/EVRAT					
EVR/EVRST					
PKVD					
EVM (NC)					

Recommended use for EVRH with high MOPD (38 bar)

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.



Accessories

Description	Code no.
DIN socket	042N0156
Terminal box with build-in light emitting indicator diode for solenoid valves	018Z0089

Dimensions and weights

See under the required solenoid valve.

Coils for solenoid valves

Introduction

Danfoss has developed a series of ATEX approved coils for use in EX zone 2. The coils are equipped with clip-on fastening system for easy and faultless installation. Thus the coil can be installed without use of tools and easily dismantled by means of a screwdriver.



Features

- ATEX approved for use in EX zone 2
- Embedded coils with long lifetime - even under extreme conditions
- Available with 1 m 3-core cable or terminal
- Quick and safe mounting with "clip-on" coil
- Mounting on valve without use of tools
- Standard coils for a.c. and d.c.
- Standard coils from 24 to 240 V
- Standard coils dimensioned to max. opening differential pressure (MOPD) up to 21 bar

Approval

EExnAII T3 DEMKO 01 ATEX 130591X

Technical data

Ambient temperature

- 11 or 14 W, 50 Hz a.c. coil $-20 \rightarrow +80^{\circ}\text{C}$
- 13 W, 50/60 Hz a.c. coil $-20 \rightarrow +50^{\circ}\text{C}$
- 20 W d.c. coil $-20 \rightarrow +50^{\circ}\text{C}$

Temperature of medium
max. 105°C

Enclosure for coil

- IP 67

Permissible voltage variation

- 11 and 14 W a.c. coils: $+10 \rightarrow -15\%$ and as double frequency coils: $\pm 10\%$
- 20 W d.c. coils: $\pm 10\%$

Connections

3-core cable

The external thread of the cable entry is suitable for flexible steel hose or similar cable protection

Terminal box

The cables are connected with the terminal screws in the terminal box which is equipped with a Pg 13.5 cable gland for $6 \rightarrow 14$ mm cable. Max. cable diam.: 2.5 mm²

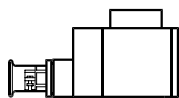
Note:

Always install a fuse ahead of the coil.
It should not exceed 2 A for coils rated less than 50 V and it should not exceed 1 A for coils rated 50 V or more.

Coils for solenoid valves

Ordering

Coils



Type	Voltage V	Frequency Hz	Code no.		Power consumption
			With 1 m 3-core cable IP 67	With terminal box IP 67	

Alternating current a.c.

EVR 2 → 40 (NC)	24	50		018F5707	Holding: 11 W 21 VA
EVR 6 → 22 (NO)	230	50		018F5701	
EVRC	240	50		018F5702	
EVRA/ EVRAT					Inrush: 44 VA
EVRS / EVRST					
PKVD					
EVM (NC / NO)	230	50/60		018F5732	Holding: 13 W
	224	50/60		018F5727	
					25 VA Inrush: 48 VA

Alternating current a.c.

EVR 2 → 40 (NC)	24	50		018F5807	Holding: 14 W 26 VA
EVR 6 → 22 (NO)	110	50		018F5811	
EVRC	230	50		018F5801	
EVRA/ EVRAT					Inrush: 55 VA
EVRS / EVRST					
PKVD					
EVM (NC)					

Direct current d.c.

EVR 2 → 15 (NC)	24			018F5857	20 W
EVR 25 → 40 (NC/NO)					
EVR 6 → 15 (NO)					
EVRC 10 → 15					
EVRA 3 → 15 (NC)					
EVRA 25 → 40 (NC)					
EVRAT 10 → 15 (NC)					
EVRS/ EVRST					
3 → 15					
PKVD					
EVM (NC/NO)					

Must always be installed with fuse ahead of coil

