ENGINEERING
TOMORROW

Data Sheet

Coils
for VDH and VDHT valves



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1. Introduction

The coils for the Danfoss High-Pressure Pumps valves are high-performance and reliable coils based on more than 50 years manufacturing of solenoid valves.

The coils are designed for the VDH and VDHT High-Pressure solenoid valve program and are available with many different options.

For information about other coil types not listed in this data sheet, please contact the Danfoss High-Pressure Systems sales department.

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

2. BB Coil



2.1 Features

- 11 W AC
- 16 W DC
- Clip-on version
- Windings of class H insulated wire moulded in the coil body
- Ambient temperature: Up to +80 °C
- All usual AC and DC voltages
- IP00 version with spade connector in accordance with DIN 43650, form A.
- IP20 version with protective cap
- IP65 version with mounted cable plug
- Standard coils available with 3 core cable, for DIN plugs
- Coils can be fitted without the use of tools
- Coils can only be removed with the use of tools

2.2 Technical data

Design	In accordance with VDE 0580
Voltage tolerance	220/380V AC coils: +15%, -15%. 230/400V AC coils: +6%, -10%. Other AC coils with NC valve: +10%, -15% Other AC coils with NO valve and all DC coils: ± 10%
Power consumption, cut-in	AC: 44 VA
Power consumption, holding	AC: 19 VA, 11 W / DC: 16 W
Insulation of coil windings	Class H according to IEC 85
Connection	Spade connector in accordance with DIN 43650 form A
Enclosure, IEC 529	IP00 with spade connec., IP20 with protective cap, IP65 with cable plug
Ambient temperature	Max. +50 °C /+80 °C - see table below for details
Duty rating	Continuous

2.3 Code numbers

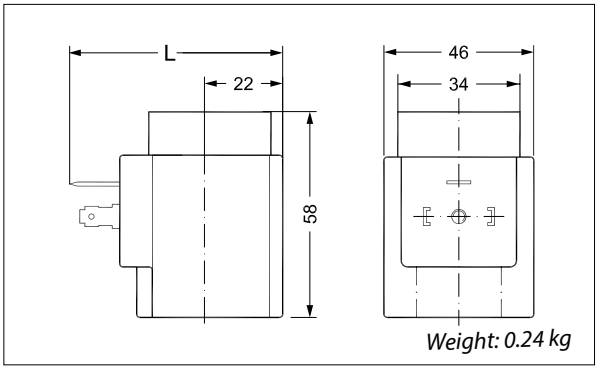
Power consumption holding	Coil type	Ambient temperature	Supply voltage	Code no.
11 W AC	BB024AS	max. +80 °C	24 V, 50 Hz	**018F7905**
	BB240AS	max. +80 °C	240 V, 50 Hz	**018F7906**
16 W DC	BB024DS	max. +50 °C	24 V DC	**018F7928**

Contact Danfoss for delivery of coils for other voltages

	Description	Enclosure	Code no.
	Cable plug according to EN175301-803A, PG 9	IP67	042N1256[1)]
	Cable plug according to EN175301-803A, PG 8	IP65	042N1278[1)]

[1)] Code nos. to be ordered in Danfoss Sensing Solutions (PL04)

2.4 Dimensions and weight



	L
Without cable plug	62 mm
With protective cap	77 mm
With cable plug	85 mm

3. BY, High performance coil for UL recognized valves



3.1 Features

- Encapsulated coils with long operation life, even under extreme conditions
- Standard coils for AC
- Standard coils available with DIN spade terminals
- Standard coils from 24 V to 240 V and 50/60 Hz
- Coils can be fitted without the use of tools
- Cable plugs must be ordered separately from the coils

3.2 Technical data

Approvals	UL recognized with VDH and VDHT	
Permissible voltage variation	12- 16 W AC coils:	±10%
Enclosure, IEC 529	IP65 (≈ NEMA 4X) with DIN plug 042N0156	
Ambient temperature	14 W AC coil for NC valve:	-40 --> +122 °F (-40 --> +50 °C)

3.3 Code numbers

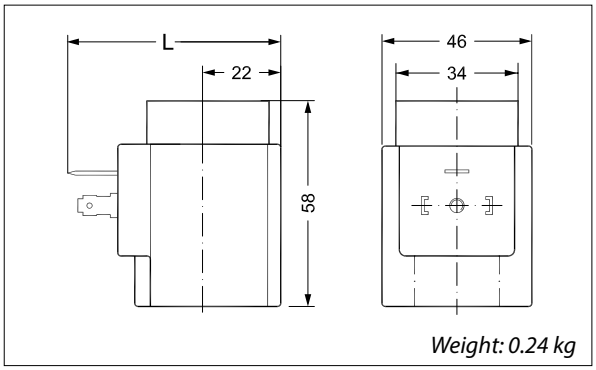
Power consumption holding	Coil type	Ambient temperature	Supply voltage	Code no.
14/12 W AC	BY024CS	max. +122 °F	24 V, 50/60 Hz	**018F7907**
14 W AC	BY120CS	max. +122 °F	110 V,110-120V 50/60 Hz	**018F7909**
16/14 W AC	BY240CS	max. +122 °F	230V, 208–240 V, 50/60 Hz	**018F7908**

Contact Danfoss for delivery of coils for other voltages

	Description	Enclosure	Code no.
	Cable plug according to EN175301-803A, PG 9	IP67	042N1256[1)]
	Cable plug according to EN175301-803A, PG 8	IP65	042N1278[1)]

[1)] Code nos. to be ordered in Danfoss Sensing Solutions (PL04)

3.4 Dimensions and weight



	L
Without cable plug	62 mm
With protective cap	77 mm
With cable plug	85 mm

4. BE Coil



4.1 Features

- 10 W AC
- 16 W DC
- Clip-on version
- Encapsulated coils with long operation life
- Ambient temperature: Up to +80 °C
- Suitable for moist environments
- All usual AC and DC voltages
- IP67 version with terminal box
- IP67 version with 3-core flying lead
- Coils can be fitted without the use of tools
- Coils can only be removed with the use of tools

4.2 Technical data

Design	In accordance with VDE 0580
Voltage tolerance	220/380V AC coils: +10%, -15%. 230/400V AC coils: +6%, -10%. Other AC coils with NC valve: +10%, -15% Other AC coils with NO valve and all DC coils: ± 10%
Power consumption, cut-in	AC: 44 VA
Power consumption, holding	AC: 21 VA, 10 W / DC: 16 W
Insulation of coil windings	Class H according to IEC 85
Connection	Terminal box; PG 13.5 - on 3-core fl ying lead
Enclosure, IEC 529	IP67
Ambient temperature	Max. +50 °C / +80 °C - see table below for details
Duty rating	Continuous

4.3 Code numbers

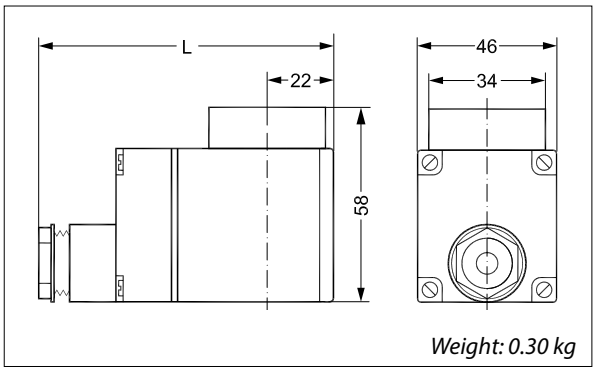
Power consumption holding	Coil type	Ambient temperature	Supply voltage	Code no. With terminal box	Code no. With cable	Code no. Without terminal box
12 W AC	BE024AS	max. +80 °C	24 V, 50 Hz	**018F7920**		
10 W AC	BE042AS	max. +80 °C	42 V, 50 Hz	**018F7927**		
10 W AC	BE048AS	max. +80 °C	48 V, 50 Hz		**018F7915 (4 m)**	
12 W AC	BE230AS	max. +80 °C	220–230 V, 50 Hz	**018F7921**		
11 W AC	BE240AS	max. +80 °C	240 V, 50 Hz	**018F7924**	**018F8205 (3 m)**	**018F7917**
14 W AC	BE024BS	max. +80 °C	24 V, 60 Hz	**018F7922**		
13 W AC	BE220BS	max. +80 °C	220 V, 60 Hz	**018F7925**		
11/15 W AC	BE240BS	max. +80 °C	200-240 V, 50/60 Hz	**018F7926**		
15/13 W AC	BE110CS	max. +50 °C	110 V, 50/60 Hz	**018F7923**		
10 W AC	BE200CS	max. +50 °C	200 V, 50/60 Hz	**018F7929**		**018F7918**
17/14 AC	BE230CS	max. +50 °C	220–230 V, 50/60 Hz	**018F7919**		
15 W DC	BE012DS	max. +50 °C	12 V	**018F7913**		
16 W DC	BE024DS	max. +50 °C	24 V	**018F7914**		**018F7912**

Contact Danfoss for delivery of coils for other voltages

	Description	Code no.
Terminal box with LED indication	48–220 V DC 24–250 V AC, 50/60 Hz	**018Z0089** [1]
Terminal box	100 pcs package	**018Z0279**

[1] Code nos. to be ordered in Danfoss Sensing Solutions (PL04)

4.4 Dimensions and weight



	L
With terminal box	94 mm
With 1m cable	65 mm

5. BO Coil



5.1 Features

- 10 W DC
- For explosion-risk environments, such as where fl ammable liquids and gases are produced, transported or tapped
- Approvals for use in Zone 1 according to Directive 2014/34/EU
- Medium temperature: Up to +90 °C
- Ambient temperature: Up to +60 °C
- IP67 version with 5m 3-core flying lead
- Seal kit as accessory for extremely wet and aggressive environments (please contact Danfoss)

5.2 Technical data

Voltage tolerance	± 10%
Power consumption, holding	DC: 10 W
Insulation of coil windings	Class H according to IEC 85
Connection	5 m 3-core fl ying lead
Enclosure, IEC 529	IP67
Media temperature	Max. +90 °C
Ambient temperature	Max. +60 °C
Duty rating	Continuous

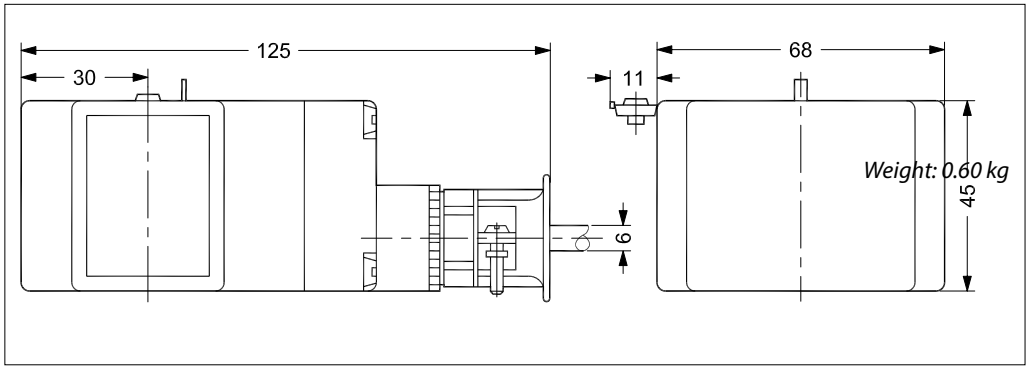
5.3 Code numbers

Power consumption holding	Coil type	Supply voltage	Code no.
10 W AC	BO024C	24 V, 50/60 HZ	**018Z6595**[1)]
10W AC	BO110C	110 V, 50/60 Hz	**018Z6593**[1)]
10 W AC	BO230C	230 V, 50/60Hz	**018Z6592**[1)]
10 W AC	BO240C	240V, 50/60 Hz	**018Z6591**[1)]
10 W DC	BO024D	24 V DC	**018Z6596**[1)]

NC/NO Seal kit included

[1)] Code nos. to be ordered in Danfoss Sensing Solutions (PL04)

5.4 Dimensions and weight



6. Permanent magnet

	Coil type	Code no.
	Permanent magnet for testing	**180Z0212**

Code no. show on the coil	Coil type	Comment	High pressure pumps ordering Code no.
		Terminal box incl screws and seal	**018Z0279**
	Spare parts	Seal kit NC	**018Z0093**
018F6032	BE230CS		**018F7919**
018F6715	BE024BS		**018F7922**
018F6081	BE200CS		**018F7929**
018F6081	BE200CS	Excl. terminal box	**018F7918**
018F6708	BE042AS		**018F7927**
018F6176	BE230AS		**018F7921**
018F6177	BE240AS		**018F7924**
018F6177	BE240AS	Excl. terminal box	**018F7917**
018F6182	BE024AS		**018F7920**
018F6709	BE048AS	With 4 m cable	**018F7915**
018F6713	BE240BS		**018F7926**
018F6189	BE220BS		**018F7925**
018F6192	BE110CS		**018F7923**
018F6756	BE012DS		**018F7913**
018F6757	BE024DS		**018F7914**
018F7352	BB240AS	For DIN plug (excl. plug) hirshman	**018F7906**
018F7358	BB024AS	For DIN plug (excl. plug) hirshman	**018F7905**
018F7397	BB024DS	For DIN plug (excl. plug) hirshman	**018F7928**
018F7655	BY024CS	UL recognized	**018F7907**
018F7658	BY240CS	UL recognized	**018F7908**
018F7663	BY	UL recognized	**018F7909**
018Z6591	BO240C	Ex mb IIC T4 Gb / ITS 09 ATEX 16835X	**018Z6591** [1]
018Z6592	BO230C	Ex mb IIC T4 Gb / ITS 09 ATEX 16835X	**018Z6592** [1]
018Z6593	BO110C	Ex mb IIC T4 Gb / ITS 09 ATEX 16835X	**018Z6593** [1]
018Z6595	BO024C	Ex mb IIC T4 Gb / ITS 09 ATEX 16835X	**018Z6595** [1]
018Z6596	BO024D	Ex mb IIC T4 Gb / ITS 09 ATEX 16835X	**018Z6596** [1]
042N1256	Cable plug	DIN plug for BY and BB (hirshman)	**042N1256** [1]
042N1278	Cable plug	DIN plug for BY and BB (hirshman)	**042N1278** [1]

[1] Code nos. to be ordered in Danfoss Sensing Solutions (PL04)

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