

Data sheet

## Solenoid coils



Danfoss solenoid valves and coils are usually ordered separately to allow maximum flexibility, enabling you to select a valve and coil combination to best suit your needs.

The Danfoss coil program consists of both the easy-to-handle Clip-On system and traditional coils with threaded fastener.

Danfoss offer a wide range of application specific coils for e.g. steam or hazardous areas. The coils are available with approvals such as EN60730-1, EEx/ATEX and UL.

### Features

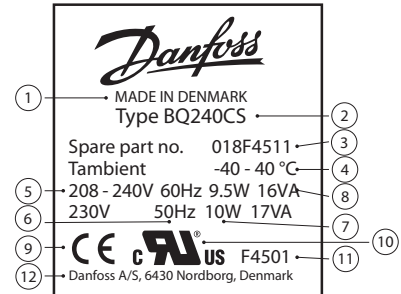
- Encapsulated coils with long operating life, even under extreme conditions
- Standard coils for AC or DC
- Standard coils from 12 V – 400 V, 50, 60 or 50 / 60 Hz
- Coils can be fitted without use of tools
- Coils can only be removed with use of tools
- Standard coils available with:
  - Cable plugs
  - Industrial plugs
  - Terminal box
  - 3 core cable
  - Junction box
  - Conduit hub

**Data sheet | Solenoid coils**

**Coil identification**

Technical data is printed directly on the coil:

- ① Country of origin
- ② Coil type
- ③ Spare part no. (code no.)
- ④ Ambient temperature  
(-40 – 40 °C = Ambient temperature range: -40 °C – 40 °C)
- ⑤ Supply voltage [V]
- ⑥ Frequency [Hz]
- ⑦ Power consumption [W]
- ⑧ Power consumption [VA]
- ⑨ CE marking
- ⑩ UL recognized coil
- ⑪ Raw coil number  
(F4501=Raw coil number 018F4501)
- ⑫ Point of contact



**Data sheet | Solenoid coils**
**BA, High performance coils**


- Cable plug enclosure:
  - IP00 version with DIN 43650 A spade connectors
  - IP20 version with protective cap
  - IP65 version with cable plug
- Nut and snap fastener included
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

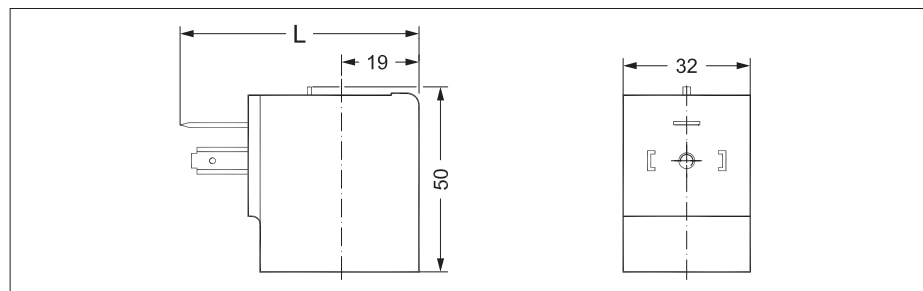
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BA024A	-40 – 40	24	-15%, 10%	50	8.5	17	042N7508
BA048A	-40 – 40	48	-15%, 10%	50	9.5	18	042N7510
BA115A	-40 – 40	115	-15%, 10%	50	9.0	18	042N7512
BA230A	-40 – 40	220 – 230	-15%, 6%	50	12	22	042N7501
BA240A	-40 – 40	240	-15%, 10%	50	10	20	042N7502
BA400A	-40 – 40	380 – 400	-15%, 6%	50	12	22	042N7504
BA024B	-40 – 40	24	-15%, 10%	60	9.5	19	042N7520
BA115B	-40 – 40	115	-15%, 10%	60	12	23	042N7522
BA220B	-40 – 40	220	-15%, 10%	60	11	21	042N7523
BA012D	-40 – 40	12	±10%	DC	14	–	042N7550
BA024D	-40 – 40	24	±10%	DC	14	–	042N7551

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	IP00 with spade connector, IP20 with protective cap, IP65 with cable plug
<b>Duty rating</b>	Continuous
<b>Plug type</b>	Cable plug (042N0156)

**Dimensions and weight**

Type	L without cable plug [mm]	L with protective cap [mm]	L with cable plug [mm]	Weight [kg]
BA	54	71	79	0.16



**Data sheet | Solenoid coils**
**BD, High performance coils**


- Cable plug enclosure:
  - IP00 version with DIN 43650 A spade connectors
  - IP20 version with protective cap
  - IP65 version with cable plug
- Nut and snap fastener included
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

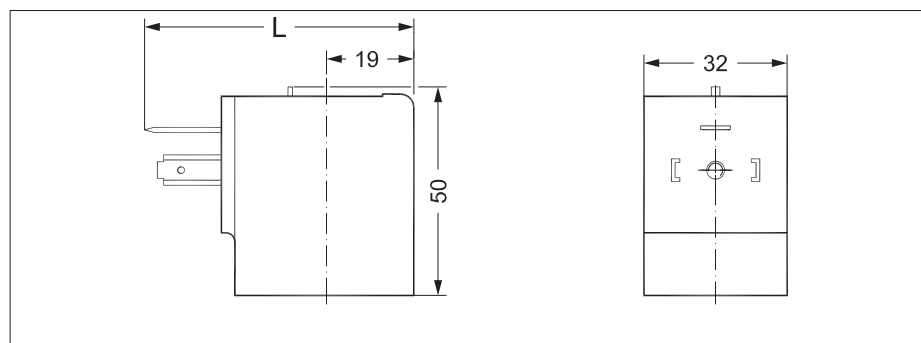
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BD024A	-40 – 40	24	-15%, 10%	50	15	29	042N7597
BD230A	-40 – 40	230	-10%, 6%	50	14	28	042N7591

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	IP00 with spade connector, IP20 with protective cap, IP65 with cable plug
<b>Duty rating</b>	Continuous
<b>Plug type</b>	Cable plug (042N0156)

**Dimensions and weight**

Type	L without cable plug [mm]	L with protective cap [mm]	L with cable plug [mm]	Weight [kg]
BD	54	71	79	0.16



## Data sheet | Solenoid coils

**BB, High performance coils**


- Enclosure:
  - IP00 version with DIN 43650 A spade connectors
  - IP20 version with protective cap
  - IP65 version with mounted cable plug
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

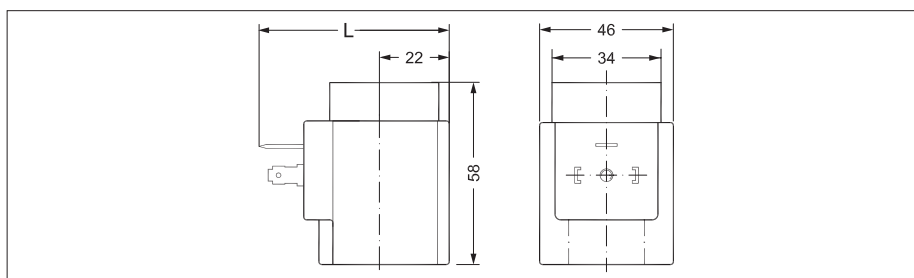
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BB024AS	-40 – 80	24	-15%, 10%	50	11	19	018F7358
BB115AS	-40 – 80	115	-15%, 10%	50	11	19	018F7361
BB230AS	-40 – 80	220 – 230	-15%, 10%	50	11	19	018F7351
BB240AS	-40 – 80	240	-15%, 10%	50	11	19	018F7352
BB440CS	-40 – 50	380 – 400	-15%, 10%	50	14	24	018F7353
		440	-15%, 10%	60	15	24	
BB024BS	-40 – 80	24	-15%, 10%	60	14	23	018F7365
BB110CS	-40 – 50	110	±10%	50	15	28	018F7360
		110	±10%	60	13	22	
BB230CS	-40 – 50	220 – 230	±10%	50	16	31	018F7363
		220 – 230	±10%	60	13	24	
BB012DS	-40 – 50	12	±10%	DC	14	-	018F7396
BB024DS	-40 – 50	24	±10%	DC	16	-	018F7397

**Technical data**

Design	In accordance with VDE 0580
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 connector, IP20 with protective cap, IP65 with cable plug
Duty rating	Continuous
Plug type	Cable plug (042N0156)

**Dimensions and weight**

Type	L without cable plug [mm]	L with protective cap [mm]	L with cable plug [mm]	Weight [kg]
BB	62	77	85	0.24



**Data sheet | Solenoid coils**
**BE, High performance coils**


- Enclosure:  
IP67 for moist environments with terminal box
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

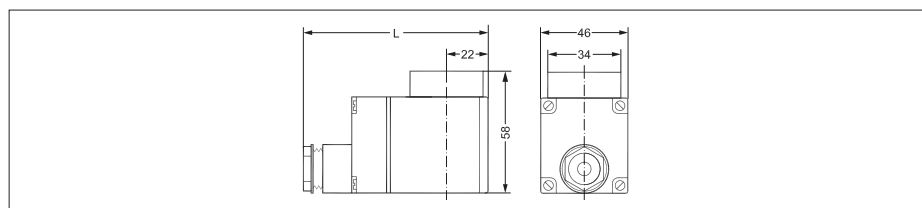
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BE024AS	-40 – 80	24	-15%, 10%	50	12	21	018F6707
BE048AS	-40 – 80	48	-15%, 10%	50	11	20	018F6709
BE115AS	-40 – 80	115	-15%, 10%	50	11	19	018F6711
BE230AS	-40 – 80	220 – 230	-15%, 10%	50	12	22	018F6701
BE240AS	-40 – 80	240	-15%, 10%	50	11	19	018F6702
BE440CS	-40 – 80	380 – 400	-15%, 10%	50	13	23	018F6703
		440	-15%, 10%	60	14	24	
BE024BS	-40 – 80	24	-15%, 10%	60	14	25	018F6715
BE115CS	-40 – 80	100	-15%, 10%	50	11	19	018F6710
		115	-15%, 10%	60	13	22	
BE220BS	-40 – 80	220	-15%, 10%	60	13	23	018F6714
BE110CS	-40 – 50	110	±10%	50	15	28	018F6730
		110	±10%	60	13	22	
BE230CS	-40 – 50	220 – 230	±10%	50	17	31	018F6732
		220 – 230	±10%	60	14	24	
BE012DS	-40 – 50	12	±10%	DC	15	–	018F6756
BE024DS	-40 – 50	24	±10%	DC	16	–	018F6757

**Technical data**

Design	In accordance with VDE 0580
Insulation of coil windings	Class H according to IEC 85
Connection	Terminal box
Enclosure, IEC 529	IP67
Duty rating	Continuous
Plug type	Terminal box

**Dimensions and weight**

Type	L with terminal box [mm]	L with 1m cable [mm]	Weight [kg]
BE	94	65	0.30



**Data sheet | Solenoid coils**
**BF, High performance coils**


- Enclosure: IP67 for moist environments with molded-in cable
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

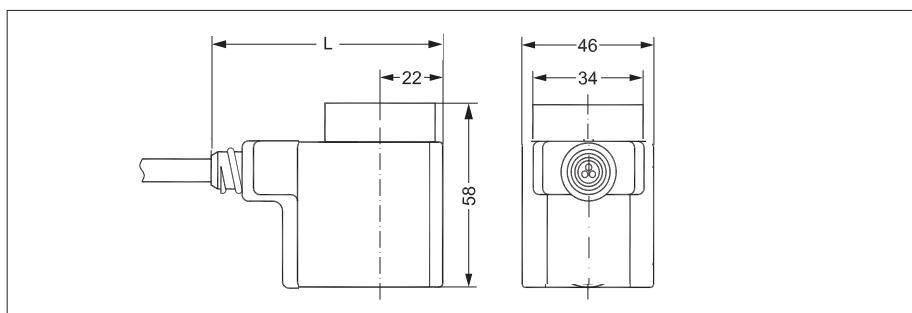
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BF230AS	-40 – 80	220 – 230	-15%, 10%	50	12	22	018F6251
BF240AS	-40 – 80	240	-15%, 10%	50	11	19	018F6252
BF440CS	-40 – 80	380 – 400	-15%, 10%	50	14	24	018F6253
		440	-15%, 10%	60	15	24	
BF024AS	-40 – 80	24	-15%, 10%	50	12	20	018F6257
BF115CS	-40 – 80	100	-15%, 10%	50	11	19	018F6260
		115	-15%, 10%	60	13	22	
BF220BS	-40 – 80	220	-15%, 10%	60	14	23	018F6264
BF024BS	-40 – 80	24	-15%, 10%	60	14	25	018F6265
BF110CS	-40 – 50	110	±10%	50	15	29	018F6280
		110	±10%	60	13	23	
BF230CS	-40 – 50	220 – 230	±10%	50	16	31	018F6282
		220 – 230	±10%	60	14	24	

**Technical data**

Design	In accordance with VDE 0580
Insulation of coil windings	Class H according to IEC 85
Connection	1 m 3-core flying lead
Enclosure, IEC 529	IP67
Duty rating	Continuous

**Dimensions and weight**

Type	L with 1 m cable [mm]	Weight [kg]
BF	67	0.30



## Data sheet | Solenoid coils

## BG, High performance coils



- Enclosure: IP67 for moist environments with terminal box
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

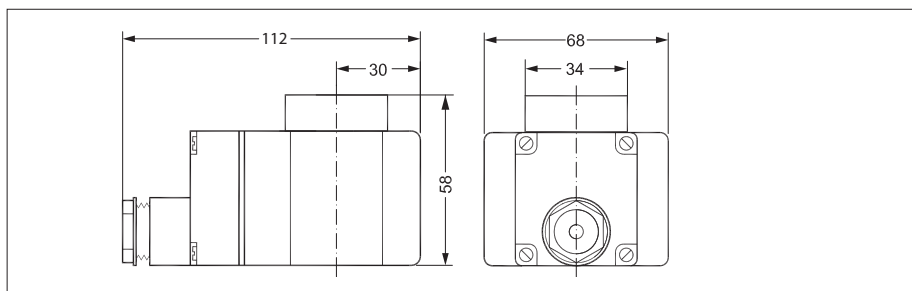
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BG024AS	-40 – 80	24	-15%, 10%	50	11	21	018F6807
BG110AS	-40 – 80	110	-15%, 10%	50	13	25	018F6811
BG230AS	-40 – 80	220 – 230	-15%, 10%	50	15	28	018F6801
BG240AS	-40 – 80	240	-15%, 10%	50	13	25	018F6802
BG400AS	-40 – 80	380 – 400	-15%, 10%	50	15	29	018F6803
BG024BS	-40 – 80	24	-15%, 10%	60	15	29	018F6815
BG110BS	-40 – 80	110	-15%, 10%	60	16	29	018F6813
BG220BS	-40 – 80	220	-15%, 10%	60	16	29	018F6814
BG012DS	-40 – 50	12	±10%	DC	20	–	018F6856
BG024DS	-40 – 50	24	±10%	DC	16	–	018F6857

## Technical data

Design	In accordance with VDE 0580
Insulation of coil windings	Class H according to IEC 85
Connection	Terminal box
Enclosure, IEC 529	IP67
Duty rating	Continuous
Plug type	Terminal box

## Dimensions and weight

Type	L with terminal box [mm]	Weight [kg]
BG	112	0.50





**Data sheet | Solenoid coils**
**BN, High performance coils  
Hum-free**


- Hum-free
- Enclosure:  
IP67 for moist environments with flying lead
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

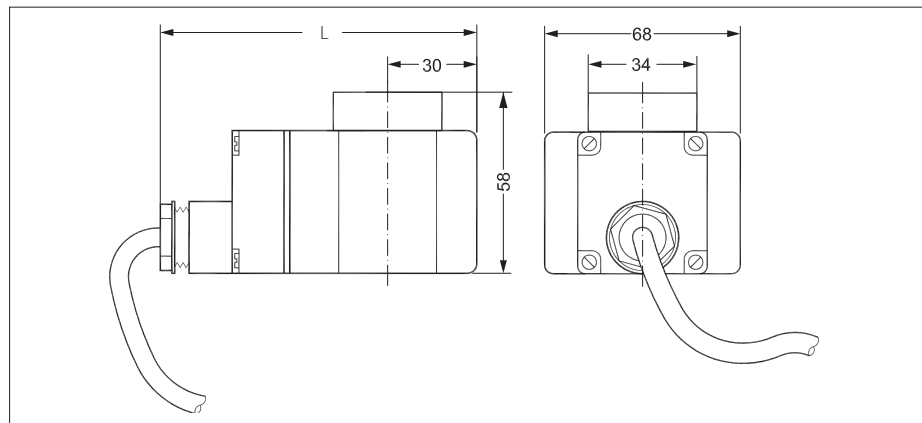
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BN230CS	-40 – 50	220 – 230	±10%	50	22	24	018F7301
		220 – 230	±10%	60	22	24	

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	1 m 3-core flying lead
<b>Enclosure, IEC 529</b>	IP67
<b>Duty rating</b>	Continuous


**Dimensions and weight**

Type	L with 1 m cable [mm]	Weight [kg]
BN	112	0.60



**Data sheet | Solenoid coils**
**BN, High performance coils  
Center boss**


- Enclosure:
  - Center boss for mounting IP65 cable plug in accordance with DIN43650 form A (042N0156)
  - IP67 for moist environments with terminal box
- Used with EV215B, EV225B, and EV245B up to 160 °C low pressure steam and max. ambient temperature 40 °C (see additional information in the respective solenoid valve data sheets)
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8
- Mounted with the solenoid valves EV210B, EV220B, EV215B and EV225B, the assembly is UL recognized

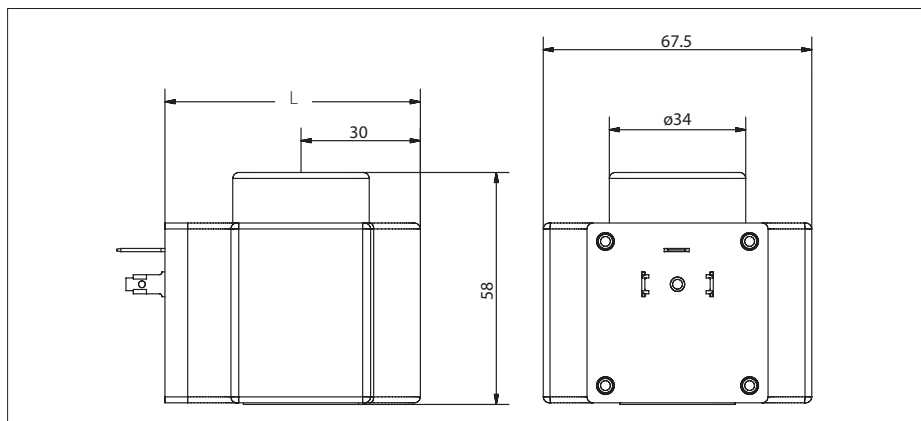
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Approval	Code no.
					[W]	[VA]		
BN024DS	-40 – 50	24	±10%	DC	20	–		018F6968

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Cable plug in accordance with DIN43650 form A or terminal box
<b>Enclosure, IEC 529</b>	IP65, IP67
<b>Duty rating</b>	Continuous

**Dimensions and weight**

Type	L [mm]	Weight [kg]
BN	64	0.47



**Data sheet | Solenoid coils**
**BO, High performance coils**


- ATEX Zone 1
- Enclosure:  
IP67 seal kit for moist environment included
- Approved in accordance with
  - ATEX 2014/34/EU
  - Ex mb IIC T4 Gb
  - ITS 09 ATEX 16835X
- Media temperature: Up to 90 °C

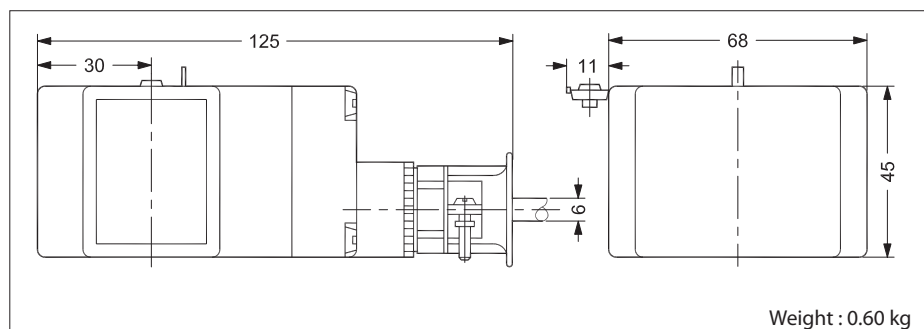
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BO024C	-40 – 60	24	±10%	50 / 60	10	21	018Z6595
BO110C	-40 – 60	110	±10%	50 / 60	10	21	018Z6593
BO230C	-40 – 60	230	±10%	50 / 60	10	21	018Z6592
BO240C	-40 – 60	240	±10%	50 / 60	10	21	018Z6591
BO024D	-40 – 60	24	±10%	DC	10	–	018Z6596

**Technical data**

<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	5 m 3 x 0.75 mm <sup>2</sup> flexible cord
<b>Enclosure, IEC 529</b>	IP67 including seal kit
<b>Media temperature</b>	-40 °C – 90 °C
<b>Duty rating</b>	Continuous
<b>Humidity</b>	0 – 100%
<b>Pollution degree</b>	3 (EN60730-1)
<b>Impulse withstand voltage</b>	2.5 kV (EN60730-1)

**Accessory**

Description	Application	Code no.
Seal kit (included as standard)	Wet environment (pollution degree 3)	018Z0090

**Dimensions and weight**


## Data sheet | Solenoid coils

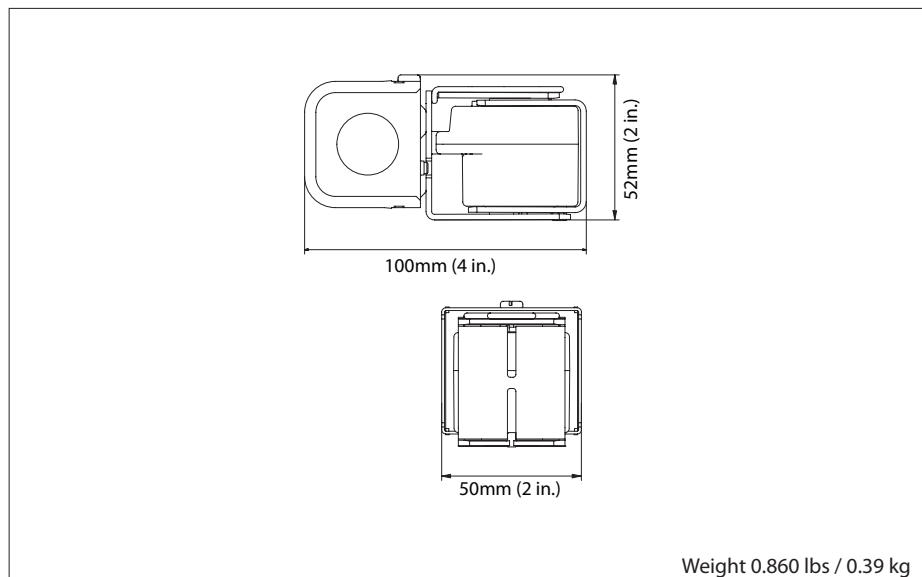
**BJ, High performance coils  
Junction box**


- Enclosure:  
IP30 / NEMA 2
- For UL listed valves (UL 429 and CSA)
- Ambient temperature:  
Up to 50 °C / 122 °F
- Media temperature:  
Up to 185 °C / 364 °F steam

Valve type	Coil type	Voltage tolerance	Supply voltage [V]	Frequency [Hz]	Power consumption [W]	Wire length		Code no.
						[in.]	[cm]	
EV220B 6-50	BJ024CS	±10%	24	50 / 60	14	7	18	<b>018F4100</b>
EV210B EV215B	BJ120CS	±10%	110	50 / 60	16	7	18	<b>018F4110</b>
EV225B EV250B			120	60	15			
	BJ240CS	±10%	208 – 240	60	14	7	18	<b>018F4120</b>
			230	50	17			

**Technical data**

<b>Design</b>	In accordance with UL 429
<b>Power consumption, cut in</b>	49 VA
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Junction box
<b>Enclosure, IEC 529</b>	Junction box NEMA 2 ~ IP12 – 30
<b>Ambient temperature</b>	-40 – 50 °C / -40 – 122 °F

**Dimensions and weight**


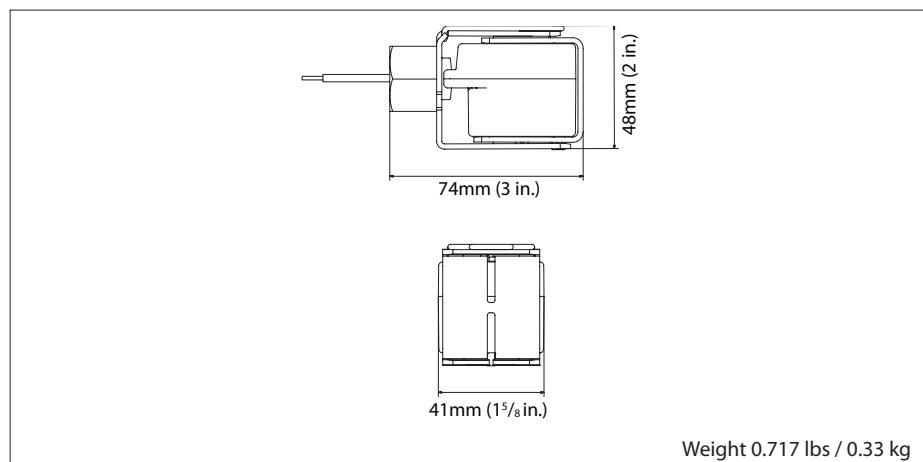
**Data sheet | Solenoid coils**
**BX, High performance coils  
Conduit hub**


- Enclosure:  
IP54 / NEMA 4
- For UL listed valves (UL 429 and CSA)
- Ambient temperature:  
Up to 50 °C / 122 °F
- Media temperature:  
Up to 185 °C / 364 °F steam


Valve type	Coil type	Voltage tolerance	Supply voltage [V]	Frequency [Hz]	Power consumption [W]	Wire length		Code no.
						[in.]	[cm]	
EV220B 6-50 EV210B EV215B EV225B EV250B	BX024CS	±10%	24	50 / 60	14	18	46	<b>018F4102</b>
	BX024CS	±10%	24	50 / 60	14	71	180	<b>018F4103</b>
	BX024CS	±10%	24	50 / 60	14	98	250	<b>018F4104</b>
	BX120CS	±10%	110 120	50 / 60 60	16 15	18	46	<b>018F4112</b>
	BX120CS	±10%				36	91	<b>018F4113</b>
	BX120CS	±10%				71	180	<b>018F4114</b>
	BX120CS	±10%	208 – 240 230	60 50	14 17	98	250	<b>018F4115</b>
	BX240CS	±10%				18	46	<b>018F4122</b>
	BX240CS	±10%				98	250	<b>018F4123</b>




**Technical data**

<b>Design</b>	In accordance with UL 429
<b>Power consumption, cut in</b>	49 VA
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Conduit hub
<b>Enclosure, IEC 529</b>	Conduit hub NEMA 4 ~ IP54
<b>Ambient temperature</b>	-40 – 50 °C / -40 – 122 °F

**Dimensions and weight**


**Data sheet | Solenoid coils**
**BY, High performance coils**


- Enclosure:  
Up to IP65 / NEMA 4
- For UL recognised valves 
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

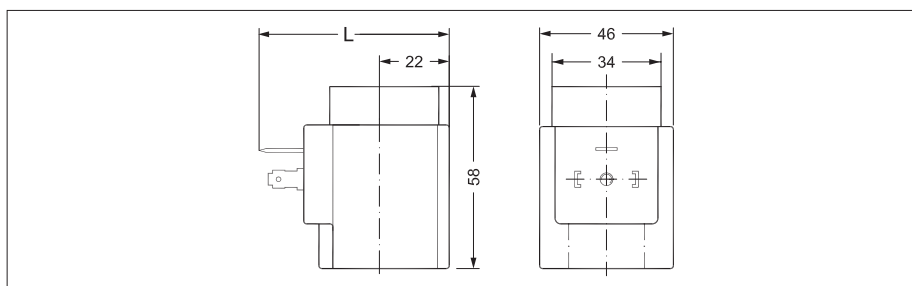
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Approval	Code no.
					[W]	[VA]		
BY024CS	-40 – 50	24	±10%	50	14	26		018F7655
		24	±10%	60	12	21		
BY240CS	-40 – 50	230	±10%	50	16	32		018F7658
		208 – 240	±10%	60	14	28		
BY120CS	-40 – 50	110	±10%	50	14	27		018F7663
		110 – 120	±10%	60	14	27		

**Technical data**


<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	Up to IP65 / NEMA 4
<b>Plug type</b>	Cable plug (042N0156)




**Dimensions and weight**

Type	L without cable plug [mm]	L with protective cap [mm]	L with cable plug [mm]	Weight [kg]
BY	62	77	85	0.24



**Data sheet | Solenoid coils**
**BQ, High performance coils**


- Enclosure:  
Up to IP65 / NEMA 4
- Max. media temperature:  
185 °C steam
- For UL recognised valves 
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

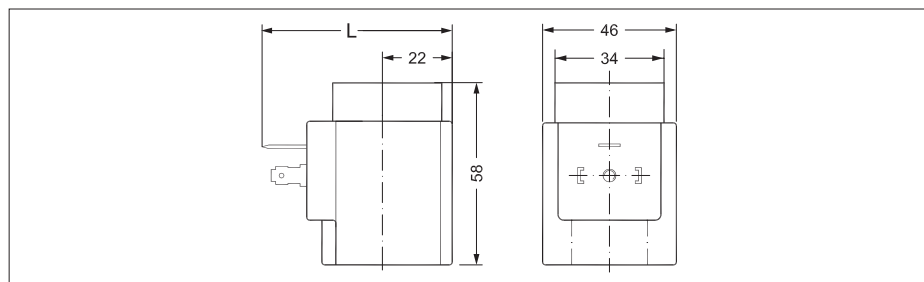
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Approval	Code no.
					[W]	[VA]		
BQ024CS	-40 – 40	24	-15%, 10%	50	10	17		018F4517
		24	-15%, 10%	60	9.0	16		
BQ120BS	-40 – 40	110 / 120	-15%, 6%	60	13.5	19		018F4519
BQ240CS	-40 – 40	230	-15%, 6%	50	10	17		018F4511
		208 / 240	-6%, 6%	60	9.5	16		

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	Up to IP65 / NEMA 4
<b>Plug type</b>	Cable plug (042N0156)

**Dimensions and weight**

Type	L without cable plug [mm]	L with protective cap [mm]	L with cable plug [mm]	Weight [kg]
BQ	62	77	85	0.24



**Data sheet | Solenoid coils**
**AM coil**


- Cable plug enclosure:
  - IP00 version with DIN 43650 A spade connectors
  - IP20 version with protective cap
  - IP65 version with cable plug
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

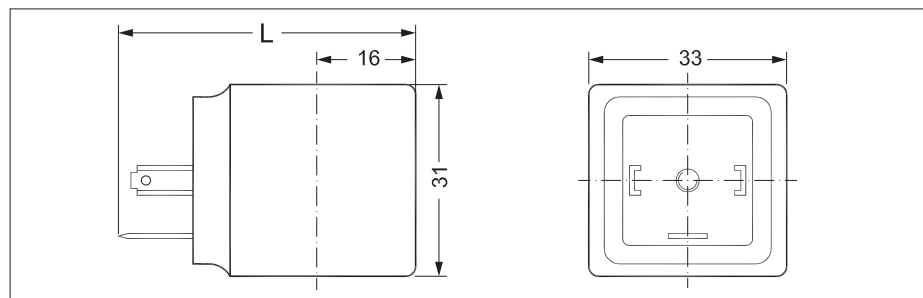
Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
AM024C	-40 – 50	24	±10%	60	5.5	11	042N0842
		24	±10%	50	7.5	14	
AM110C	-40 – 50	110	±10%	60	5.5	11	042N0845
		110	±10%	50	7.5	14	
AM230C	-40 – 50	230	±10%	60	6.5	13	042N0840
		230	±10%	50	9.5	18	
AM240C	-40 – 50	240	±10%	60	5.5	11	042N0841
		240	±10%	50	7.5	15	
AM012D	-40 – 50	12	±10%	DC	8.5	-	042N0848
AM024D	-40 – 50	24	±10%	DC	9.0	-	042N0843

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Power consumption, cut in</b>	22.5 VA AC coils only
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	IP00 with spade connector, IP65 with cable plug
<b>Duty rating</b>	Continuous
<b>Plug type</b>	Cable plug (042N0156)


**Dimensions and weight**




Type	L without cable plug [mm]	L with cable plug [mm]	L with protective cap [mm]	Weight [kg]
AM	48	72	64	0.10





**Data sheet | Solenoid coils**
**AP, Compact UL recognised coils**


- Cable plug enclosure:
  - IP00 version with DIN 43650 A spade connectors
  - IP20 version with protective cap
  - IP65 version with cable plug
- For UL recognised valves 
- Ambient temperature:
  - Up to 50 °C / 122 °F
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

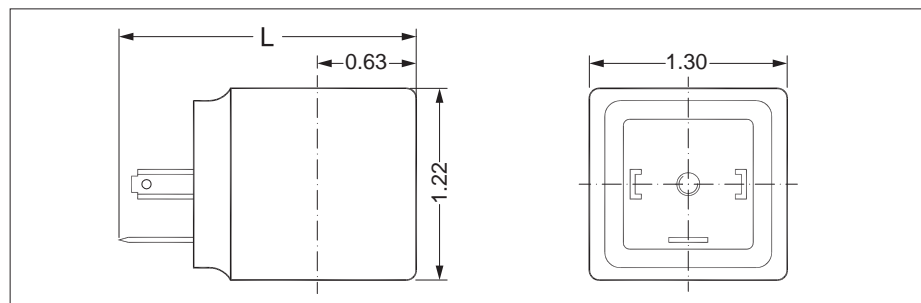
Type	Tambient [°C / °F]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Approval	Code no.
					[W]	[VA]		
AP240C	-40 – 50 / -40 – 122	208 – 240	±10%	60	5.5	11		042N4291
		230	±10%	50	7.5	15		
AP120B	-40 – 50 / -40 – 122	110 – 120	±10%	60	5.0	11		042N4292
AP024B	-40 – 50 / -40 – 122	24	±10%	60	5.0	11		042N4293

**Technical data**


<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	IP00 with spade connector, IP65 / NEMA 2 with cable plug
<b>Duty rating</b>	Continuous
<b>Plug type</b>	Cable plug (042N0156)

**Dimensions and weight**

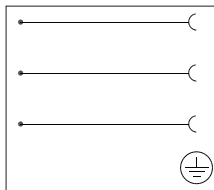
Type	L without cable plug [in]	L with cable plug [in]	L with protective cap [in]	Weight [kg / lbs]
AP	1.89	2.83	2.52	0.10 / 0.22




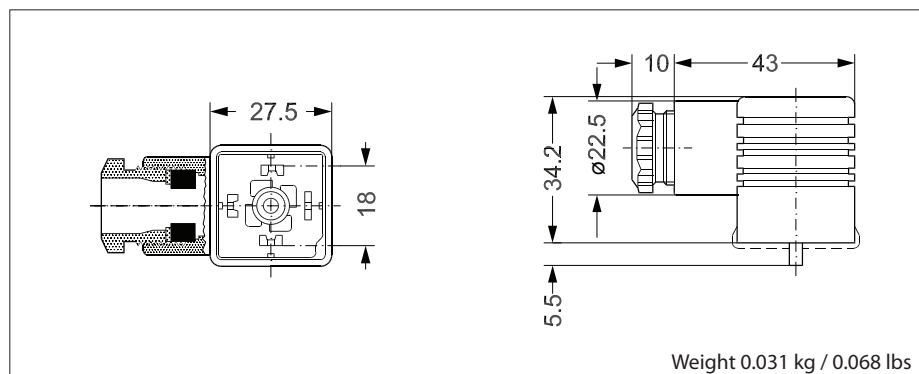
**Data sheet | Solenoid coils**
**Cable plug**


- Enclosure:  
Up to IP65
- For use with Danfoss coils type AL, AM, AS, AZ, BA, BB, BD, BN (Center boss), BQ, and BY
- AC / DC all voltages up to 250 V
- Approved in accordance with:
  -  US
  - CSA
  - VDE

Cable plug size	Description	Suitable for coil types	Code no.
DIN 18	Cable plug according to DIN 43650-A PG 11	AL, AM, AS, AZ, BA, BB, BD, BN (Center boss), BQ, BY	042N0156

**Technical data**


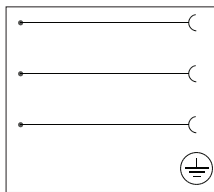
Type	GDM 2011 J (Grey)	
Design	DIN 43650-A	
Cable gland	PG 11	
Poles	2 + PE	
Max. voltage	250 V AC / DC	
Approvals	 US, CSA, VDE	
Enclosure	IP65 (IEC 60529)	
Max. operating current	16 A	
Contact resistance	< 10m Ω	
Cable diameter	Ø4.5 – 11 mm	
Wire cross section	Max. 1.5 mm <sup>2</sup>	
Ambient temperature	-30 – 90 °C / -22 – 194 °F	
Materials	Contacts:	CuSn (Tin plated)
	Terminal block:	PA 6 GF
	Profiled gasket:	NBR
	Housing:	PA 6 GF

**Dimensions and weight**


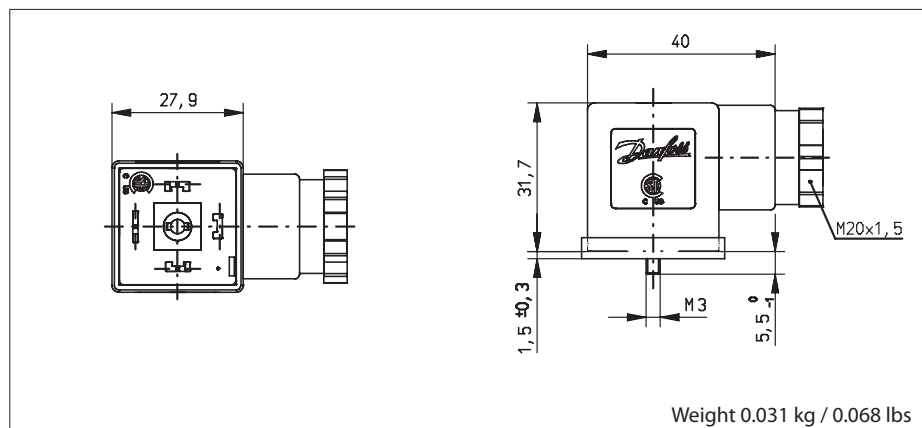
**Data sheet | Solenoid coils**
**Cable plug**


- Enclosure:  
Up to IP65
- For use with Danfoss coils type AL, AM, AS, AZ, BA, BB, BD, and BY
- AC / DC all voltages up to 250 V
- Approved in accordance with:  
CSA
- In accordance with:  
- RoHS 2011/65/EU  
- LVD 2014/35/EU

Cable plug size	Description	Suitable for coil types	Code no.
DIN 18	Cable plug with form A	AL, AM, AS, AZ, BA, BB, BD, BY	<b>042N0178</b>

**Technical data**


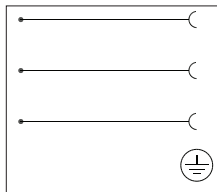
<b>Design</b>	EN 175301-803 Form A	
<b>Cable gland</b>	PG 11	
<b>Poles</b>	2 + PE	
<b>Max. voltage</b>	250 V AC / DC	
<b>Approvals</b>	CSA	
<b>Enclosure</b>	IP65	
<b>Max. operating current</b>	16 A	
<b>Contact resistance</b>	< 4m Ω	
<b>Cable diameter</b>	Ø6 – 8 / 8 – 10 mm	
<b>Wire cross section</b>	Max. 1.5 mm <sup>2</sup>	
<b>Ambient temperature</b>	-25 – 80 °C / -13 – 176 °F	
<b>Materials</b>	Contacts:	CuZn, Cu / Sn - plated
	Terminal block:	PA 6 GF
	Profiled gasket:	NBR
	Housing:	PA 6 GF

**Dimensions and weight**


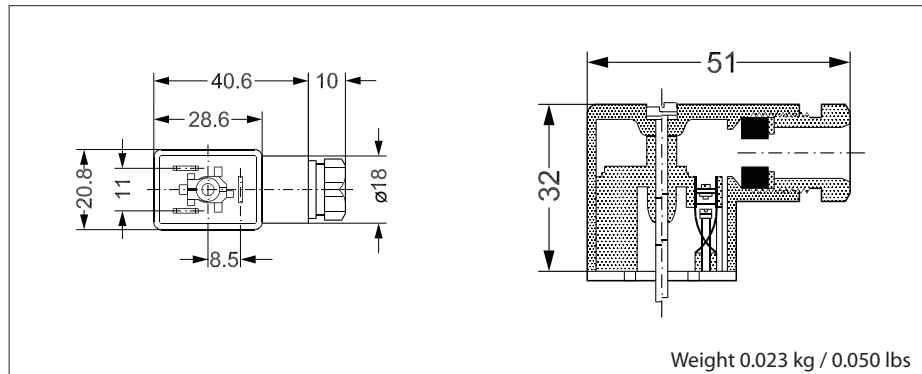
**Data sheet | Solenoid coils**
**Industrial plug**


- Enclosure:  
Up to IP65
- For use with Danfoss coils type AB and AC
- AC / DC all voltages up to 250 V
- Approved in accordance with:
  - cULus
  - CSA

Industrial plug size	Description	Suitable for coil types	Code no.
DIN 11	Cable plug for 6.3 x 0.8 mm spade connectors	AB, AC	<b>042N0139</b>

**Technical data**


Type	GM 209 J (Black)	
Design	DIN 43650-B	
Cable gland	PG 9	
Poles	2 + PE	
Max. voltage	250 V AC / DC	
Approvals	cULus CSA	
Enclosure	IP65 (IEC 60529)	
Max. operating current	16 A	
Contact resistance	< 10m Ω	
Cable diameter	Ø4.5 – 7 mm	
Wire cross section	Max. 1.5 mm <sup>2</sup>	
Ambient temperature	-30 – 90 °C / -22 – 194 °F	
Materials	Contacts:	CuSn (Tin plated)
	Terminal block:	PA 6 GF
	Flat gasket:	NBR
	Housing:	PA 6 GF

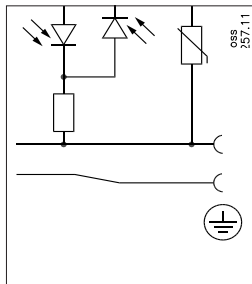
**Dimensions and weight**


**Data sheet | Solenoid coils**
**Cable plug (LED + Varistor)**

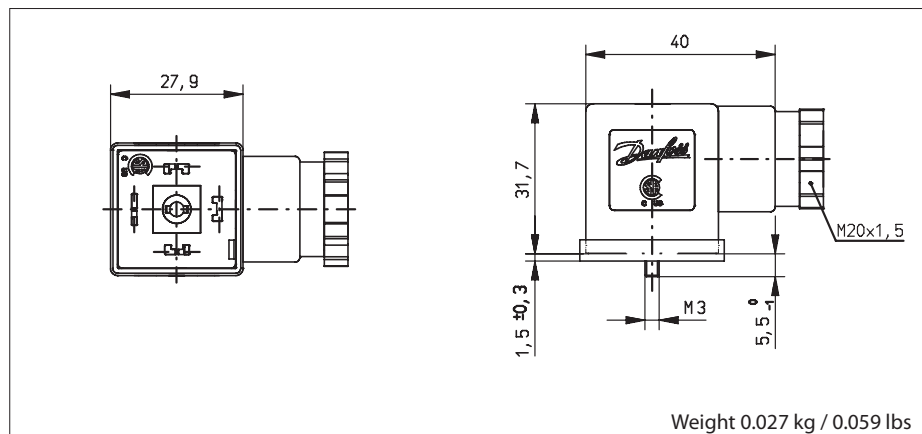

- Enclosure:  
Up to IP65
- For use with Danfoss coils type AM, AK, AL, AS, AZ, BA, BD, BB, and BY
- 24 V AC / DC and 230 V AC version
- DIN 18
- Approved in accordance with:  
CSA
- In accordance with:  
- RoHS 2011/65/EU  
- LVD 2014/35/EU

Cable plug size	Voltage		Voltage variation	Suitable for coil types	LED colour	Built-in VDR <sup>1)</sup> resistor	Code no.
	[V AC]	[V DC]					
DIN 18	24	24	±10%	AM, AL, AS, AZ, BA, BB, BD, BY	Red	Yes	<b>042N0263</b>
DIN 18	230	–	±10%	AM, AL, AS, AZ, BA, BB, BD, BY	Red	Yes	<b>042N0265</b>

<sup>1)</sup> Protects against voltage peaks.

**Technical data**


<b>Design</b>	EN 175301-803 A	
<b>Power consumption</b>	Max. 5 mA	
<b>Approval</b>	CSA	
<b>Enclosure</b>	IP65 (IEC 60529)	
<b>Max. operating current</b>	1.5 A clamping contact	
<b>Contact resistance</b>	≤ 4m Ω	
<b>Protection against wrong polarity</b>	Yes	
<b>Cable diameter</b>	6 – 8 mm and 8 – 10 mm	
<b>Wire cross section</b>	Max. 1.5 mm <sup>2</sup>	
<b>Ambient temperature</b>	-25 – 60 °C / -13 – 140 °F	
<b>Materials</b>	Contacts:	CuZn, Cu / Sn-plated
	Terminal block:	PA6 + 30% FG, black
	Flat gasket:	NBR LABS-free
	Housing:	PA6
	Wire holder:	PA6.6 + 50% FG P7,5 black

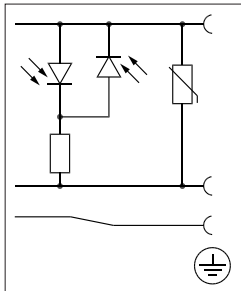
**Dimensions and weight**


**Data sheet | Solenoid coils**
**Industrial plug  
(LED + Varistor)**

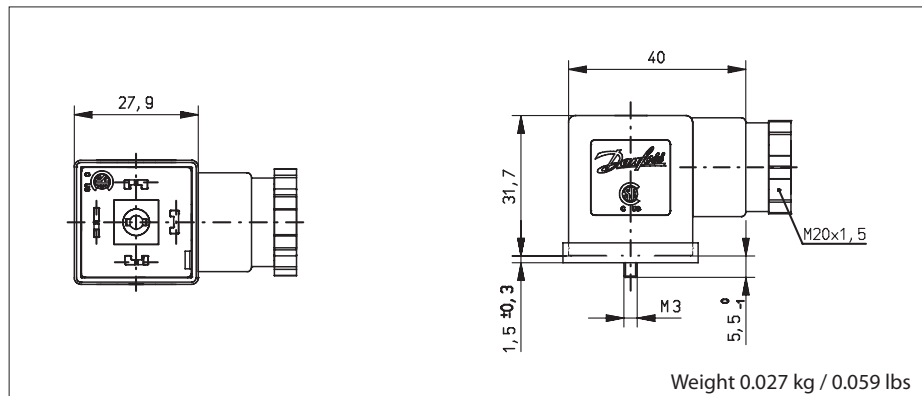

- Enclosure:  
Up to IP65
- For use with Danfoss coils type AB and AC
- 24 V AC
- Approved in accordance with:  
CSA
- In accordance with:  
- RoHS 2011/65/EU  
- LVD 2014/35/EU

Industrial plug size	Voltage		Suitable for coil types	LED colour	Built-in VDR <sup>1)</sup> resistor	Code no.
	[V AC]	[V DC]				
DIN 11	24	24	AB, AC	Red	Yes	<b>042N0267</b>

<sup>1)</sup> Protects against voltage peaks.

**Technical data**


<b>Design</b>	Industrial form	
<b>Supply voltage variation</b>	±10%	
<b>Power consumption</b>	Max. 5 mA	
<b>Approval</b>	CSA	
<b>Enclosure</b>	IP65 (IEC 60529)	
<b>Max. operating current</b>	1.5 A clamping contact	
<b>Contact resistance</b>	≤ 4m Ω	
<b>Protection against wrong polarity</b>	Yes	
<b>Cable diameter</b>	5 – 6 mm and 6 – 9 mm	
<b>Wire cross section</b>	Max. 1 mm <sup>2</sup>	
<b>Ambient temperature</b>	-25 – 60 °C / -13 – 140 °F	
<b>Materials</b>	Contacts:	CuZn, Cu/Sn-plated
	Terminal block:	PA6 + 30% FG, black
	Flat gasket:	NBR LABS-fre
	Housing:	PA6
	Wire holder:	PA6.6 + 50% FG P7,5 black

**Dimensions and weight**


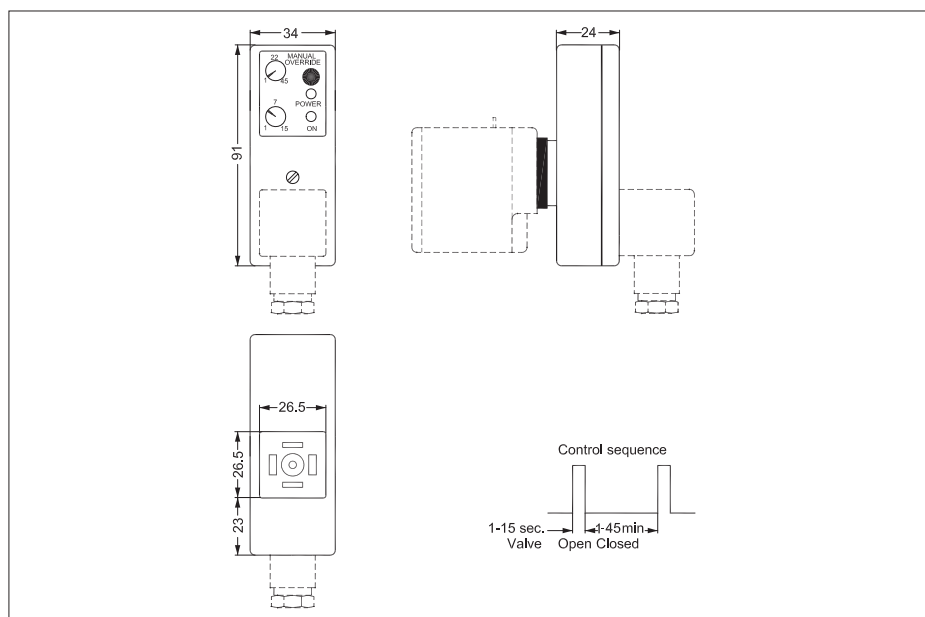
**Universal electronic  
 multi-timer Type ET 20 M**


- Outside adjustments
- Light weight and small size
- External adjustable timing from 1 minute to 45 minutes with 1 to 15 seconds drain open
- One solid state timer fits all coil voltages from 24 – 240 V AC
- Light diodes for indication
- All in one unit
- Manual override (test button).

Type	Voltage [V]	Suitable for coil types	Code no.
BA024A	24 – 240	AL, AM, AS, AZ, BA, BD, BB	042N0185

**Technical data**

Type	ET 20 M
Voltage	24 – 240 V AC / 50 – 60 Hz
Power rating	Max. 20 W
Enclosure	IP00, IP65 with cable plug
Electrical connection	DIN connector (DIN 43650-A)
Ambient operating temperature range	-10 – 50 °C
Function	Start with pulse
Interval timer	0 – 45 min.
"On" timer	0 – 15 sec.

**Dimensions and weight**


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