

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. Also, with approvals such as EEx/ATEX and UL, we offer a wide range of application specific coils for e.g. steam or hazardous areas.

## Features

- Encapsulated coils with long operating life, even under extreme conditions
- Standard coils for AC or DC
- Standard coils from 12 V to 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

**BA, High performance coils**



- Ambient temperature: Up to 40 °C
- IP00 version with DIN 43650 A spade connectors
- IP20 version with protective cap
- IP65 version with mounted cable plug

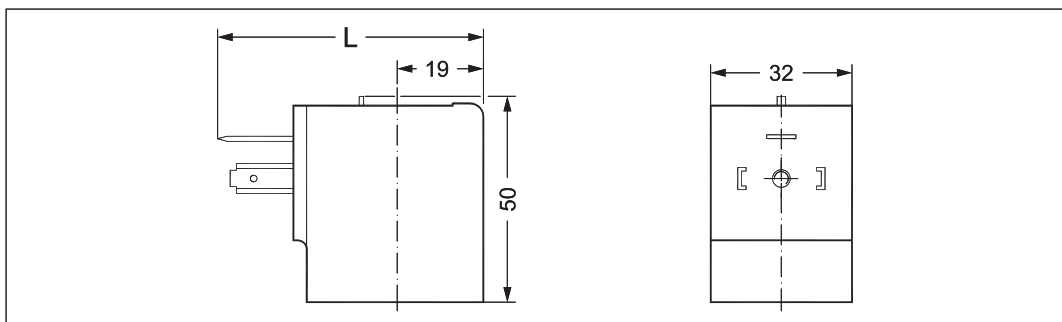
| Coil type | Supply voltage |        | Frequency [Hz] | Power consumption holding [W] | Code no. |
|-----------|----------------|--------|----------------|-------------------------------|----------|
|           | [V AC]         | [V DC] |                |                               |          |
| BA024A    | 24             | –      | 50             | 9                             | 042N7508 |
| BA048A    | 48             | –      | 50             | 9                             | 042N7510 |
| BA115A    | 115            | –      | 50             | 9                             | 042N7512 |
| BA230A    | 220 – 230      | –      | 50             | 9                             | 042N7501 |
| BA240A    | 240            | –      | 50             | 9                             | 042N7502 |
| BA400A    | 380 – 400      | –      | 50             | 9                             | 042N7504 |
| BA024B    | 24             | –      | 60             | 9                             | 042N7520 |
| BA115B    | 115            | –      | 60             | 9                             | 042N7522 |
| BA220B    | 220            | –      | 60             | 9                             | 042N7523 |
| BA012D    | –              | 12     | –              | 15                            | 042N7550 |
| BA024D    | –              | 24     | –              | 15                            | 042N7551 |

**Technical data**

|                             |  |            |
|-----------------------------|--|------------|
| Design                      | In accordance with VDE 0580  |            |
| Voltage variation           | 220/380 V AC   | -15%, +10% |
|                             | 230/400 V AC   | -10%, +6%  |
|                             | Other AC coils with NC valve   | -15%, +10% |
|                             | Other AC coils with NO valve and all DC                                | ±10%       |
| Power consumption, cut in   | 39 VA AC coils only  |            |
| 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. 40 °C   |            |
| Duty rating                 | Continuous   |            |
| Plug type                   | Cable plug   |            |

**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        |



**BD, High performance coils**



- Ambient temperature: Up to 40 °C
- IP00 version with DIN 43650 A spade connectors
- IP20 version with protective cap
- IP65 version with mounted cable plug

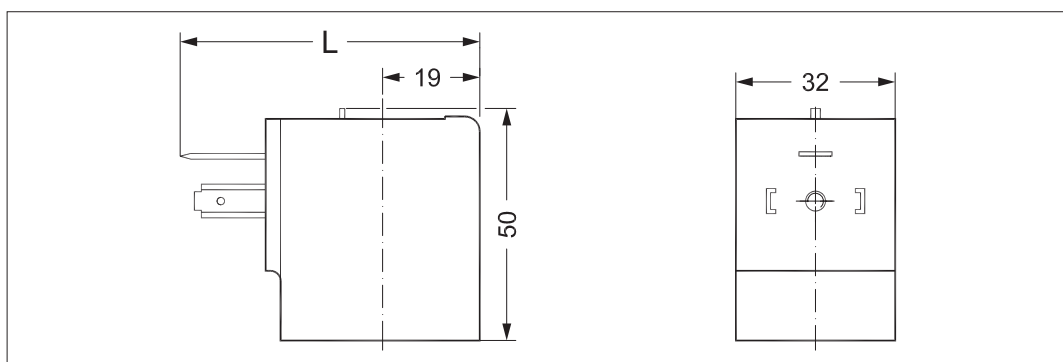
| Coil type | Supply voltage [V AC] | Frequency [Hz] | Power consumption holding [W] | Code no. |
|-----------|-----------------------|----------------|-------------------------------|----------|
| BD024A    | 24                    | 50             | 15                            | 042N7597 |
| BD230A    | 230                   | 50             | 15                            | 042N7591 |

**Technical data**

|                             |  |            |  |
|-----------------------------|--|------------|--|
| Design                      | In accordance with VDE 0580  |            |  |
| Voltage variation           | 230 V AC   | -10%, +6%  |  |
|                             | Other AC coils with NC valve   | -15%, +10% |  |
|                             | Other AC coils with NO valve and all DC                                | ±10%       |  |
| Power consumption, cut in   | 54 VA  |            |  |
| 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. 40 °C   |            |  |
| Duty rating                 | Continuous   |            |  |
| Plug type                   | Cable plug   |            |  |

**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        |



**BB, High performance coils**



- Ambient temperature: Up to 80 °C
- IP00 version with DIN 43650 A spade connectors
- IP20 version with protective cap
- IP65 version with mounted cable plug

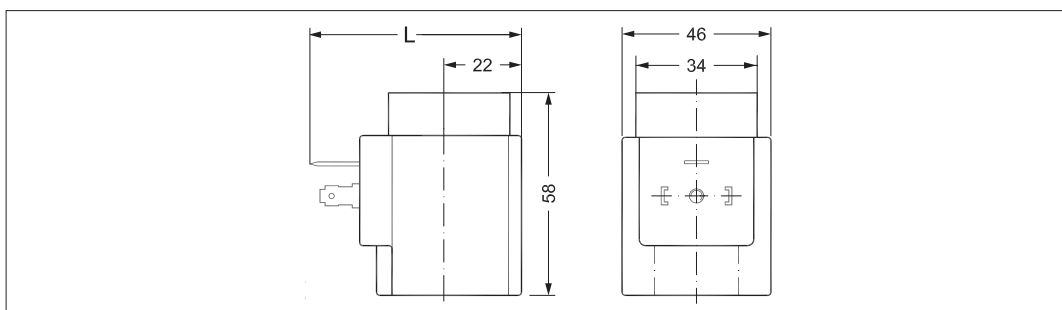
| Coil type | Supply voltage |        | Frequency [Hz] | Power consumption holding [W] | Ambient temperature [°C] | Code no. |
|-----------|----------------|--------|----------------|-------------------------------|--------------------------|----------|
|           | [V AC]         | [V DC] |                |                               |                          |          |
| BB024AS   | 24             | –      | 50             | 10                            | 80                       | 018F7358 |
| BB115AS   | 115            | –      | 50             | 10                            | 80                       | 018F7361 |
| BB230AS   | 220 – 230      | –      | 50             | 10                            | 80                       | 018F7351 |
| BB240AS   | 240            | –      | 50             | 10                            | 80                       | 018F7352 |
| BB400AS   | 380 – 400      | –      | 50             | 10                            | 80                       | 018F7353 |
| BB024BS   | 24             | –      | 60             | 10                            | 80                       | 018F7365 |
| BB110CS   | 110            | –      | 50 / 60        | 10                            | 50                       | 018F7360 |
| BB230CS   | 220 – 230      | –      | 50 / 60        | 10                            | 50                       | 018F7363 |
| BB012DS   | –              | 12     | –              | 18                            | 50                       | 018F7396 |
| BB024DS   | –              | 24     | –              | 18                            | 50                       | 018F7397 |

**Technical data**

|                             |  |            |
|-----------------------------|--|------------|
| Design                      | In accordance with VDE 0580  |            |
| Voltage variation           | 220/380 V AC   | -15%, +10% |
|                             | 230/400 V AC   | -10%, +6%  |
|                             | Other AC coils with NC valve   | -15%, +10% |
|                             | Other AC coils with NO valve and all DC coils                          | ±10%       |
| Power consumption, cut in   | 44 VA AC coils only  |            |
| 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   |            |
| Duty rating                 | Continuous   |            |
| Plug type                   | Cable plug   |            |

**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        |



BE, High performance coils



- Ambient temperature: Up to 80 °C
- IP67 for moist environments with terminal box

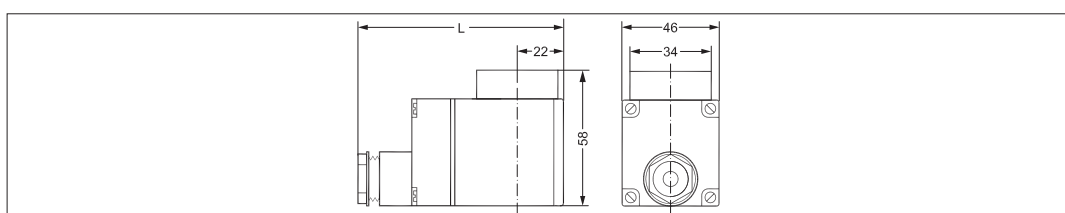
| Coil type | Supply voltage |        | Frequency [Hz] | Power consumption holding [W] | Ambient temperature [°C] | Code no. |
|-----------|----------------|--------|----------------|-------------------------------|--------------------------|----------|
|           | [V AC]         | [V DC] |                |                               |                          |          |
| BE024AS   | 24             | –      | 50             | 10                            | 80                       | 018F6707 |
| BE048AS   | 48             | –      | 50             | 10                            | 80                       | 018F6709 |
| BE115AS   | 115            | –      | 50             | 10                            | 80                       | 018F6711 |
| BE230AS   | 220 – 230      | –      | 50             | 10                            | 80                       | 018F6701 |
| BE240AS   | 240            | –      | 50             | 10                            | 80                       | 018F6702 |
| BE400AS   | 380 – 400      | –      | 50             | 10                            | 80                       | 018F6703 |
| BE024BS   | 24             | –      | 60             | 10                            | 80                       | 018F6715 |
| BE115BS   | 115            | –      | 60             | 10                            | 80                       | 018F6710 |
| BE220BS   | 220            | –      | 60             | 10                            | 80                       | 018F6714 |
| BE110CS   | 110            | –      | 50 / 60        | 10                            | 50                       | 018F6730 |
| BE230CS   | 230            | –      | 50 / 60        | 10                            | 50                       | 018F6732 |
| BE012DS   | –              | 12     | –              | 18                            | 50                       | 018F6756 |
| BE024DS   | –              | 24     | –              | 18                            | 50                       | 018F6757 |

Technical data

|                             |   |            |
|-----------------------------|---|------------|
| Design                      | In accordance with VDE 0580                   |            |
| Voltage variation           | 220/380 V AC                                  | -15%, +10% |
|                             | 230/400 V AC                                  | -10%, +6%  |
|                             | Other AC coils with NC valve                  | -15%, +10% |
|                             | Other AC coils with NO valve and all DC coils | ±10%       |
| Power consumption, cut in   | 44 VA AC coils only                           |            |
| Insulation of coil windings | Class H according to IEC 85                   |            |
| Connection                  | Terminal box                                  |            |
| Enclosure, IEC 529          | IP67  |            |
| Ambient temperature         | Max. 50 °C / 80 °C                            |            |
| 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        |



**BF, High performance coils**



- Ambient temperature: Up to 80 °C
- IP67 for moist environments with molded-in cable

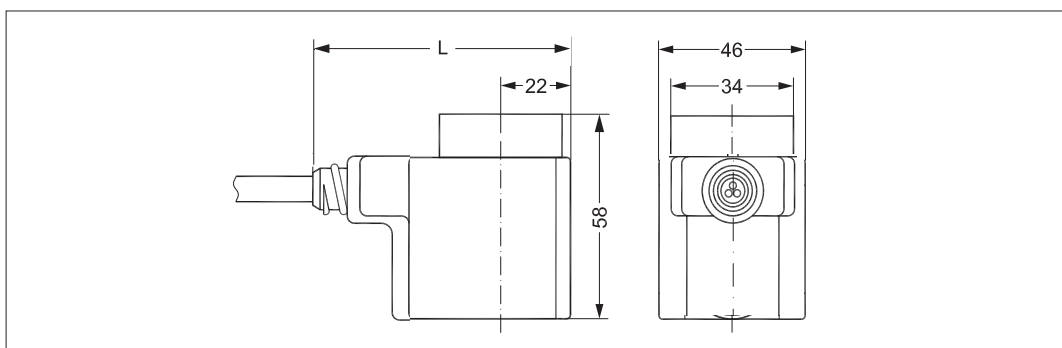
| Coil type | Supply voltage [V AC] | Frequency [Hz] | Power consumption holding [W] | Ambient temperature [°C] | Code no. |
|-----------|-----------------------|----------------|-------------------------------|--------------------------|----------|
| BF230AS   | 220 – 230             | 50             | 10                            | 80                       | 018F6251 |
| BF240AS   | 240                   | 50             | 10                            | 80                       | 018F6252 |
| BF400AS   | 380 – 400             | 50             | 10                            | 80                       | 018F6253 |
| BF024AS   | 24                    | 50             | 10                            | 80                       | 018F6257 |
| BF115BS   | 115                   | 60             | 10                            | 80                       | 018F6260 |
| BF220BS   | 220                   | 60             | 10                            | 80                       | 018F6264 |
| BF024BS   | 24                    | 60             | 10                            | 80                       | 018F6265 |
| BF110CS   | 110                   | 50 / 60        | 10                            | 50                       | 018F6280 |
| BF230CS   | 220 – 230             | 50 / 60        | 10                            | 50                       | 018F6282 |

**Technical data**

|                             |   |            |
|-----------------------------|---|------------|
| Design                      | In accordance with VDE 0580                   |            |
| Voltage variation           | 220/380 V AC                                  | -15%, +10% |
|                             | 230/400 V AC                                  | -10%, +6%  |
|                             | Other AC coils with NC valve                  | -15%, +10% |
|                             | Other AC coils with NO valve and all DC coils | ±10%       |
| Power consumption, cut in   | 44 VA AC coils only                           |            |
| Insulation of coil windings | Class H according to IEC 85                   |            |
| Connection                  | 1 m 3-core flying lead                        |            |
| Enclosure, IEC 529          | IP67  |            |
| Ambient temperature         | Max. 50 °C / 80 °C                            |            |
| Duty rating                 | Continuous                                    |            |

**Dimensions and weight**

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



**BG, High performance coils**



- Ambient temperature: Up to 80 °C
- IP67 for moist environments with terminal box

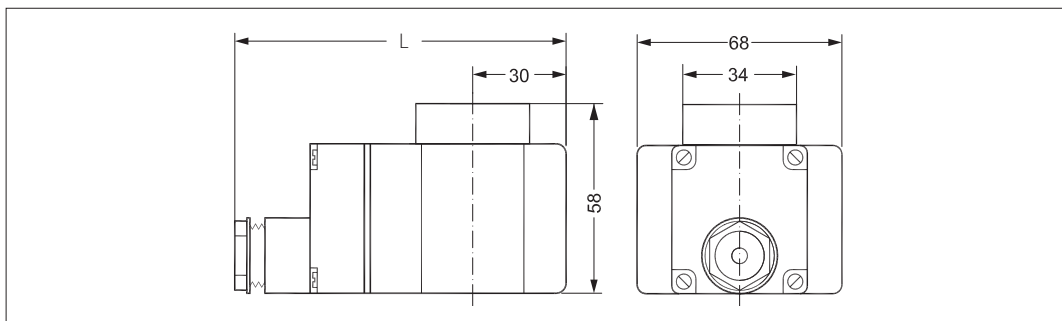
| Coil type | Supply voltage |        | Frequency [Hz] | Power consumption holding [W] | Ambient temperature [°C] | Code no. |
|-----------|----------------|--------|----------------|-------------------------------|--------------------------|----------|
|           | [V AC]         | [V DC] |                |                               |                          |          |
| BG024AS   | 24             | –      | 50             | 12                            | 80                       | 018F6807 |
| BG110AS   | 110            | –      | 50             | 12                            | 80                       | 018F6811 |
| BG230AS   | 220 – 230      | –      | 50             | 12                            | 80                       | 018F6801 |
| BG240AS   | 240            | –      | 50             | 12                            | 80                       | 018F6802 |
| BG400AS   | 380 – 400      | –      | 50             | 12                            | 80                       | 018F6803 |
| BG024BS   | 24             | –      | 60             | 12                            | 80                       | 018F6815 |
| BG110BS   | 110            | –      | 60             | 12                            | 80                       | 018F6813 |
| BG220BS   | 220            | –      | 60             | 12                            | 80                       | 018F6814 |
| BG012DS   | –              | 12     | –              | 20                            | 50                       | 018F6856 |
| BG024DS   | –              | 24     | –              | 20                            | 50                       | 018F6857 |

**Technical data**

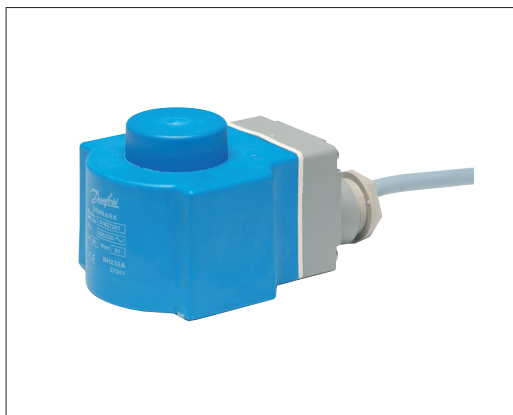
|                             |   |            |
|-----------------------------|---|------------|
| Design                      | In accordance with VDE 0580                   |            |
| Voltage variation           | 220/380 V AC                                  | -15%, +10% |
|                             | 230/400 V AC                                  | -10%, +6%  |
|                             | Other AC coils with NC valve                  | -15%, +10% |
|                             | Other AC coils with NO valve and all DC coils | ±10%       |
| Power consumption, cut in   | 55 VA AC coils only                           |            |
| Insulation of coil windings | Class H according to IEC 85                   |            |
| Connection                  | Terminal box                                  |            |
| Enclosure, IEC 529          | IP67  |            |
| Ambient temperature         | Max. 80 °C                                    |            |
| Duty rating                 | Continuous                                    |            |
| Plug type                   | Terminal box                                  |            |

**Dimensions and weight**

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



**BN, High performance coils**



- Hum-free
- Ambient temperature: Up to 50 °C
- IP67 for moist environments with flying lead

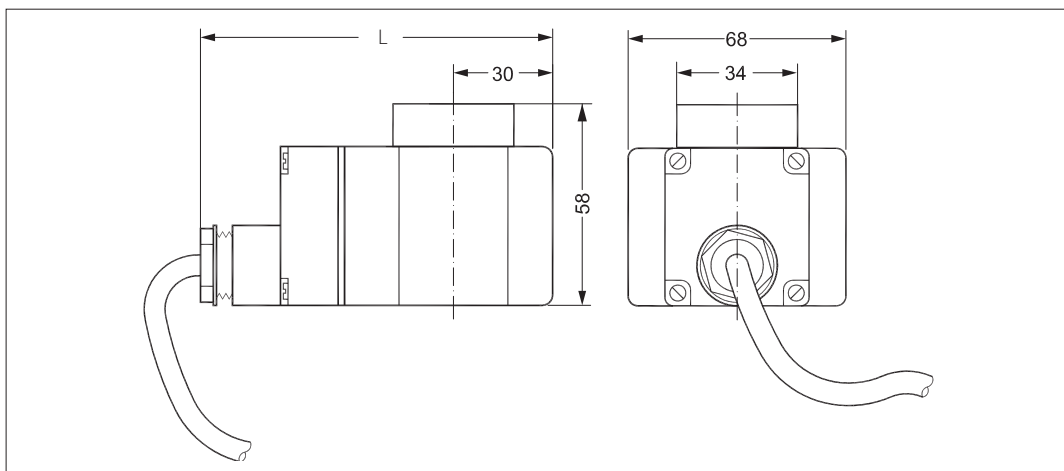
| Coil type | Supply voltage [V AC] | Frequency [Hz] | Power consumption holding [W] | Ambient temperature [°C] | Code no.        |
|-----------|-----------------------|----------------|-------------------------------|--------------------------|-----------------|
| BN230CS   | 220 - 230             | 50/60          | 20                            | 50                       | <b>018F7301</b> |

**Technical data**

|                             |                             |            |
|-----------------------------|-----------------------------|------------|
| Design                      | In accordance with VDE 0580 |            |
| Voltage variation           | 220 V AC                    | -15%, +10% |
|                             | 230 V AC                    | -10%, +6%  |
| Power consumption, cut in   | 24 VA                       |            |
| Insulation of coil windings | Class H according to IEC 85 |            |
| Connection                  | 1 m 3-core flying lead      |            |
| Enclosure, IEC 529          | IP67                        |            |
| Ambient temperature         | Max. 50 °C                  |            |
| Duty rating                 | Continuous                  |            |

**Dimensions and weight**

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





**BN, High performance coils**



- Center boss
- Ambient temperature: Up to 50 °C
- IP67 for moist environments with terminal box
- IP65 with mounted cable plug

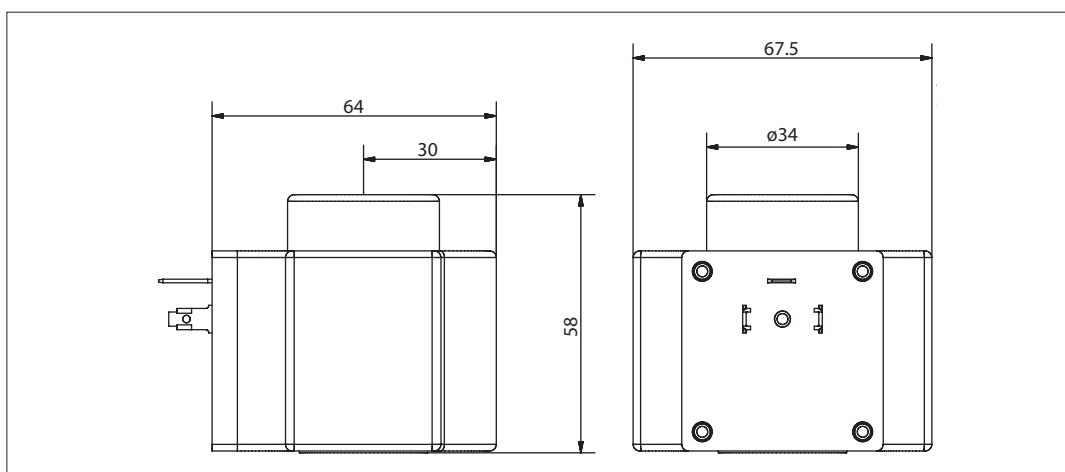
| Coil type | Supply voltage [V DC] | Power consumption holding [W] | Ambient temperature [°C] | Code no. |
|-----------|-----------------------|-------------------------------|--------------------------|----------|
| BN024DS   | 24                    | 19                            | 50                       | 018F6968 |

**Technical data**

|                             |   |
|-----------------------------|---|
| Design                      | In accordance with VDE 0580                                   |
| Voltage variation           | ±10%  |
| Power consumption, cut in   | 24 VA   |
| Insulation of coil windings | Class H according to IEC 85                                   |
| Connection                  | Terminal box or cable plug in accordance with DIN43650 form A |
| Enclosure, IEC 529          | IP65, IP67  |
| Ambient temperature         | Max. 50 °C  |
| Duty rating                 | Continuous  |

**Dimensions and weight**

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



**BO, High performance coils**



- With ATEX 94/9/EC approval  
Ex mb IIC T4 Gb  
ITS 09 ATEX 16835X
- Zone 1
- Ambient temperature: Up to 60 °C
- Medium temperature: Up to 90 °C
- IP67 for moist environments with seal kit  
Seal kit is not included as standard

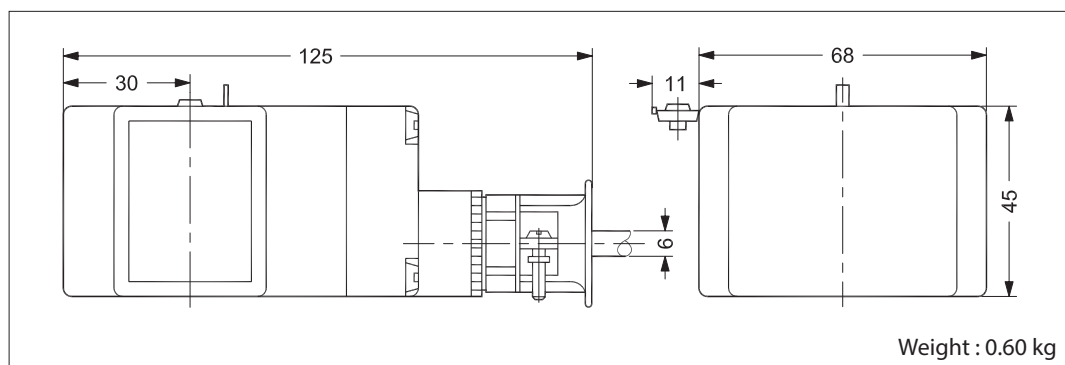
| Coil type | Supply voltage |        | Frequency [Hz] | Power consumption holding [W] | Code no. |
|-----------|----------------|--------|----------------|-------------------------------|----------|
|           | [V AC]         | [V DC] |                |                               |          |
|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

**Technical data**

|                             |  |
|-----------------------------|--|
| Voltage variation           | ±10%                                       |
| Insulation of coil windings | Class H according to IEC 85                |
| Connection                  | 5 m 3 x 0.75 mm <sup>2</sup> flexible cord |
| Enclosure, IEC 529          | IP67 including seal kit (018Z0090)         |
| Ambient temperature         | -40 °C – +60 °C                            |
| Media temperature           | -40 °C – +90 °C                            |
| Duty rating                 | Continuous                                 |
| Humidity                    | 0 – 100%                                   |
| Pollution degree            | 3 (EN60730-1)                              |
| Impulse withstand voltage   | 2.5 kV (EN60730-1)                         |

| Description | Application                          | Code no. |
|-------------|--------------------------------------|----------|
| Seal kit    | Wet environment (pollution degree 3) | 018Z0090 |

**Dimensions and weight**



AM coil



- Ambient temperature: Up to 50 °C
- IP00 version with terminals DIN 43650 form A
- IP20 version with protective cap
- IP65 version with mounted cable plug

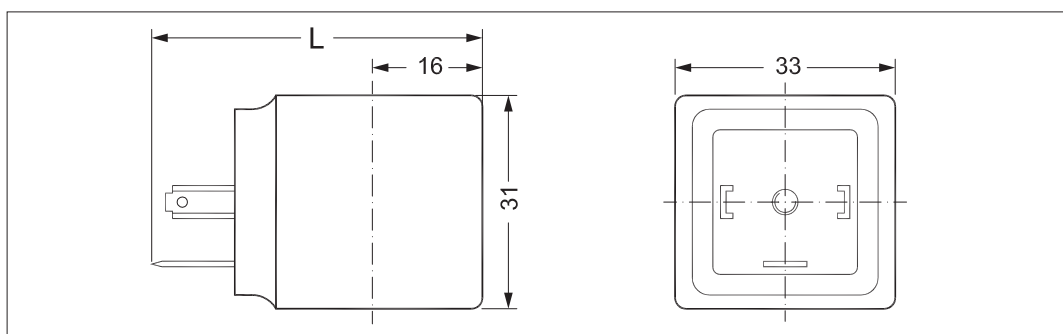
| Coil type | Supply voltage |        | Frequency [Hz] | Power consumption holding [W] | Code no. |
|-----------|----------------|--------|----------------|-------------------------------|----------|
|           | [V AC]         | [V DC] |                |                               |          |
| AM024C    | 24             | –      | 50 / 60        | 7.5                           | 042N0842 |
| AM110C    | 110            | –      | 50 / 60        | 7.5                           | 042N0845 |
| AM230C    | 220 – 230      | –      | 50 / 60        | 7.5                           | 042N0840 |
| AM240C    | 240            | –      | 50 / 60        | 7.5                           | 042N0841 |
| AM012D    | –              | 12     | –              | 9.5                           | 042N0848 |
| AM024D    | –              | 24     | –              | 9.5                           | 042N0843 |

Technical data

|                             |   |
|-----------------------------|---|
| Design                      | In accordance with VDE 0580                         |
| Voltage variation           | ±10%  |
| Power consumption, cut in   | 22.5 VA AC coils only                               |
| 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, IP65 with cable plug     |
| Ambient temperature         | Max. 50 °C  |
| Duty rating                 | Continuous  |
| Plug type                   | Cable plug  |

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        |



AP, Compact UL recognised coils



- Ambient temperature: Up to 50 °C / 122 °F
- IP65 / NEMA2
- For UL recognised valves

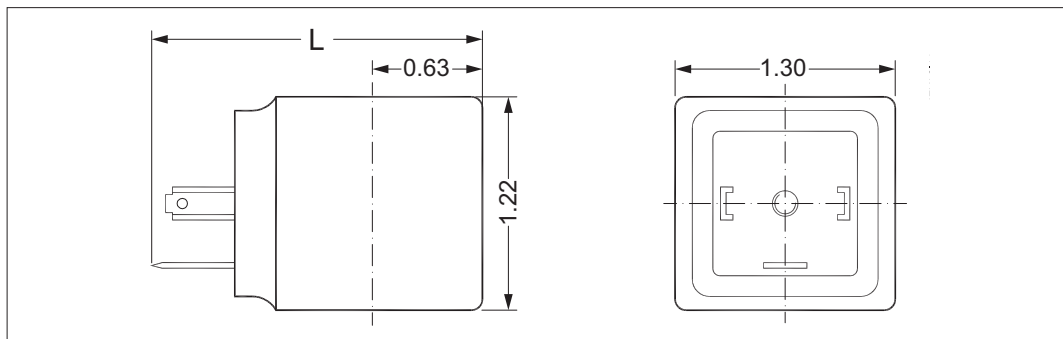
| Coil type | Supply voltage [V AC] | Frequency [Hz] | Power consumption holding [W] | Code no. |
|-----------|-----------------------|----------------|-------------------------------|----------|
| AP240C    | 208 – 240             | 60             | 5                             | 042N4191 |
| AP240C    | 230                   | 50             | 7                             | 042N4191 |
| AP120B    | 110 – 120             | 60             | 5                             | 042N4192 |
| AP024B    | 24                    | 60             | 5                             | 042N4193 |

Technical data

|                             |   |
|-----------------------------|---|
| Design                      | In accordance with VDE 0580                           |
| Voltage variation           | ±10%  |
| Power consumption, cut in   | 15 VA AC coils only                                   |
| 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, IP65/NEMA2 with cable plug |
| Ambient temperature         | Max. 50 °C / 122 °F                                   |
| Duty rating                 | Continuous  |
| Plug type                   | Cable plug  |

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       |



**BJ, High performance coils**



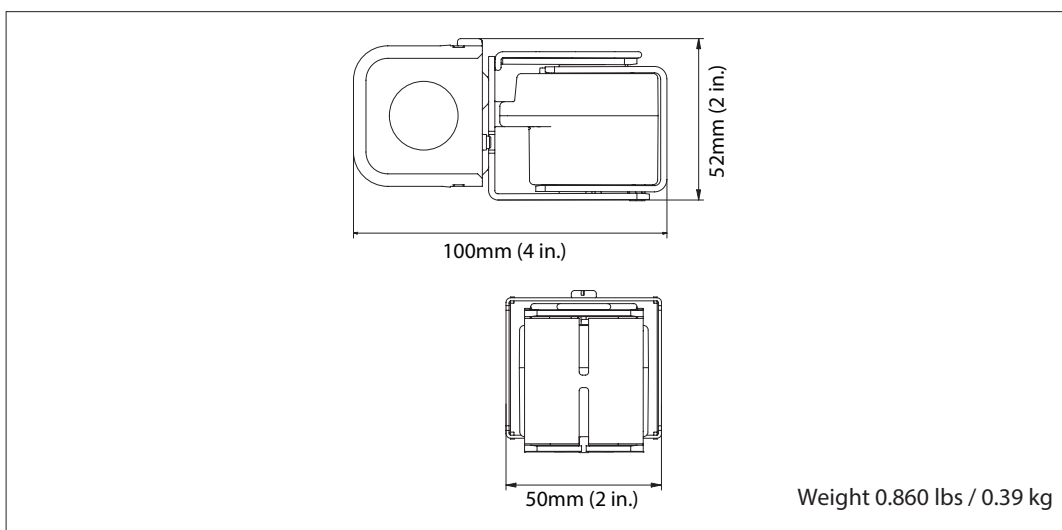
- Ambient temperature: Up to 50 °C / 122 °F
- IP32 / NEMA2 with junction box
- For UL listed valves

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

**Technical data**

|                             |                              |            |
|-----------------------------|------------------------------|------------|
| Design                      | In accordance with UL 429    |            |
| Voltage variation           | AC coils                     | -15%, +10% |
| Power consumption, cut in   | 49 VA                        |            |
| Insulation of coil windings | Class H according to IEC 85  |            |
| Connection                  | Junction box                 |            |
| Enclosure, IEC 529          | Junction box NEMA2 ~ IP12-32 |            |
| Ambient temperature         | -40 – 50 °C / -40 – 122 °F   |            |

**Dimensions and weight**



**BX, High performance coils**



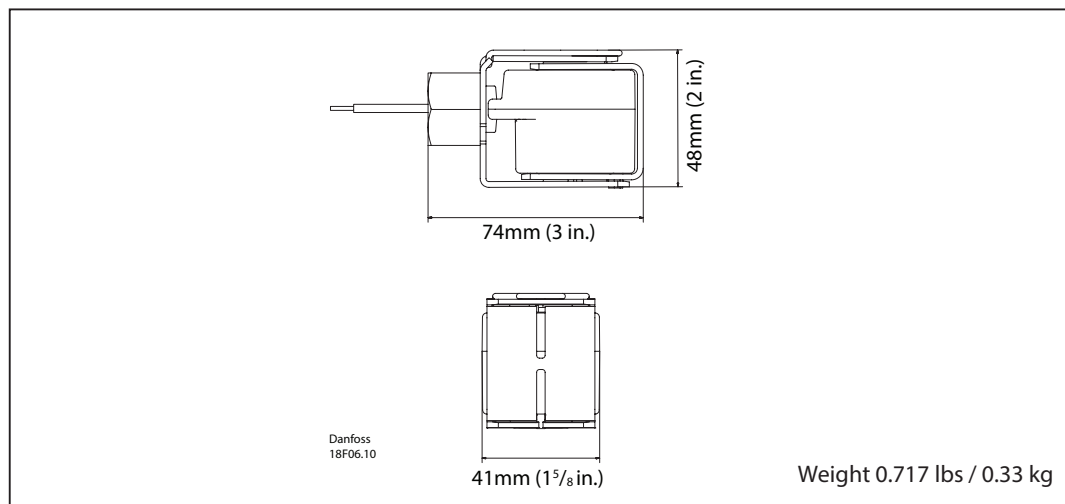
- Ambient temperature: Up to 50 °C / 122 °F
- IP54 / NEMA4 with conduit hub
- For UL listed valves

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

**Technical data**

|                             |                             |            |
|-----------------------------|-----------------------------|------------|
| Design                      | In accordance with UL 429   |            |
| Voltage variation           | AC coils                    | -15%, +10% |
| Power consumption, cut in   | 49 VA                       |            |
| Insulation of coil windings | Class H according to IEC 85 |            |
| Connection                  | Conduit hub                 |            |
| Enclosure, IEC 529          | Conduit hub NEMA4 ~ IP54    |            |
| Ambient temperature         | -40 – 50 °C / -40 – 122 °F  |            |

**Dimensions and weight**



**BY, High performance coils**



- Ambient temperature: Up to 50 °C / 122 °F
- Up to IP65 / NEMA4
- For UL recognised valves

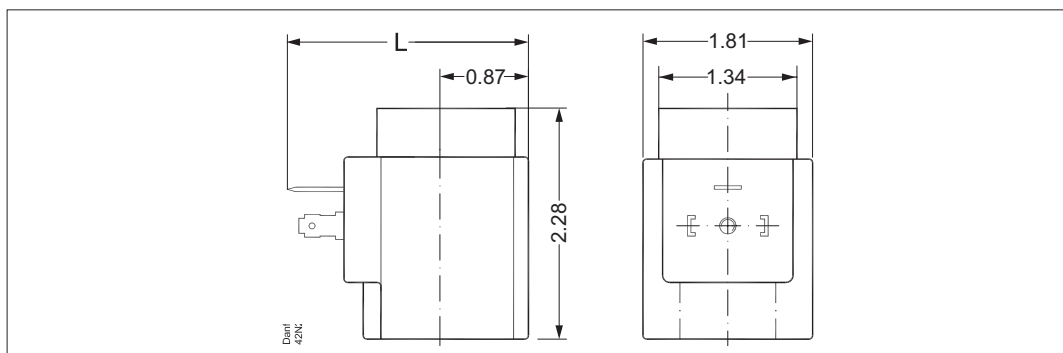
| Coil type | Supply voltage [V AC] | Frequency [Hz] | Power consumption holding [W] | Power consumption holding [VA] | Code no. |
|-----------|-----------------------|----------------|-------------------------------|--------------------------------|----------|
| BY024CS   | 24                    | 50             | 15                            | 26                             | 018F7655 |
| BY024CS   | 24                    | 60             | 13                            | 21                             |          |
| BY240CS   | 230                   | 50             | 16                            | 31                             | 018F7658 |
| BY240CS   | 208 - 240             | 60             | 15                            | 27                             |          |
| BY120CS   | 110                   | 50             | 14                            | 28                             | 018F7663 |
| BY120CS   | 110 - 120             | 60             | 15                            | 27                             |          |

**Technical data**

|                             |   |            |
|-----------------------------|---|------------|
| Design                      | In accordance with UL 429                           |            |
| Voltage variation           | AC coils  | -15%, +10% |
| Power consumption, cut in   | 49 VA   |            |
| Insulation of coil windings | Class H according to IEC 85                         |            |
| Connection                  | Spade connector in accordance with DIN 43650 form A |            |
| Enclosure, IEC 529          | Up to IP65 / NEMA4                                  |            |
| Ambient temperature         | -40 - 50 °C / -40 - 122 °F                          |            |
| Plug type                   | Cable plug  |            |

**Dimensions and weight**

| Type | L without cable plug [in] | L with protective cap [in] | L with cable plug [in] | Weight [kg / lbs] |
|------|---------------------------|----------------------------|------------------------|-------------------|
| BY   | 2.44                      | 3.03                       | 3.35                   | 0.24 / 0.53       |



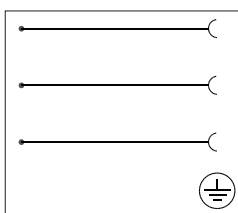
Cable plug



- For use with Danfoss coils type AM, BA, BB, BD and BY
- AC / DC all voltages up to 250 V
- Enclosure: Up to IP65
- Ambient temperature: Up to 90 °C / 194 °F

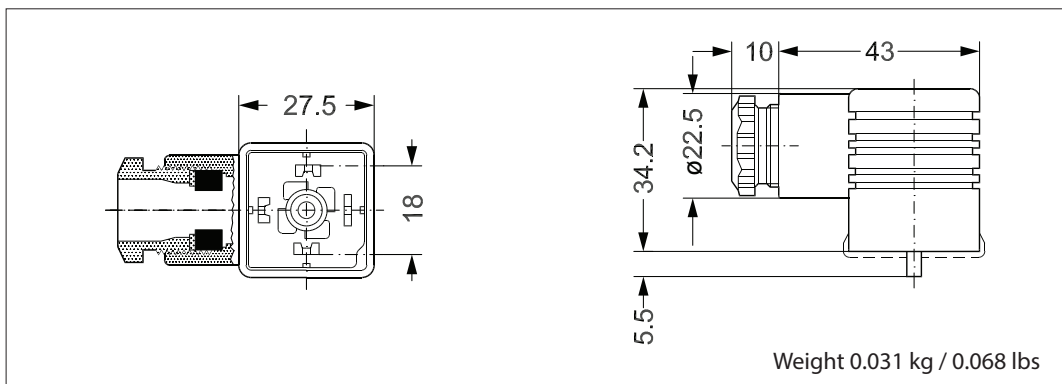
| Cable plug size | Description                               | Suitable for coil types | Code no.        |
|-----------------|---|-------------------------|-----------------|
| DIN 18          | Cable plug according to DIN 43650-A PG 11 | AM, BA, BB, BD, BY      | <b>042N0156</b> |

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                |                   |
| Protection class       | IP65 (IEC 60529)           |                   |
| Max. operating current | 16 A                       |                   |
| Contact resistance     | < 10m Ω                    |                   |
| Cable diameter         | ø 4.5 – 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





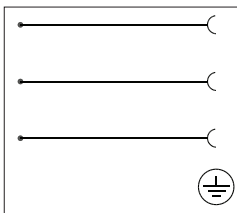
Cable plug



- For use with Danfoss coils type AM, BA, BB, BD and BY
- AC / DC all voltages up to 250 V
- Enclosure: Up to IP65
- Ambient temperature: Up to 80 °C / 176 °F

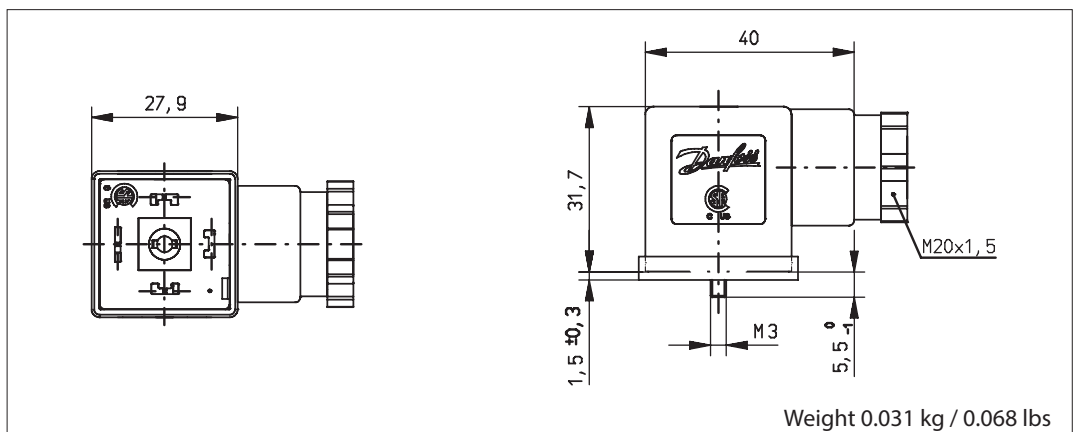
| Cable plug size | Description            | Suitable for coil types | Code no. |
|-----------------|------------------------|-------------------------|----------|
| DIN 18          | Cable plug with form A | AM, BA, BB, BD, BY      | 042N0178 |

Technical data



|                        |                            |                      |
|------------------------|----------------------------|----------------------|
| Design                 | EN 175301-803 Form A       |                      |
| Cable gland            | PG 11                      |                      |
| Poles                  | 2 + PE                     |                      |
| Max. voltage           | 250 V AC / DC              |                      |
| Approvals              | us CSA                     |                      |
| Protection class       | IP65                       |                      |
| Max. operating current | 16 A                       |                      |
| Contact resistance     | < 4m Ω                     |                      |
| Cable diameter         | ø6 – 8 / 8 – 10 mm         |                      |
| Wire cross section     | Max. 1.5 mm <sup>2</sup>   |                      |
| Ambient temperature    | -25 – 80 °C / -13 – 176 °F |                      |
| Materials              | Contacts:                  | CuZn, Cu/Sn - plated |
|                        | Terminal block:            | PA 6 GF              |
|                        | Profiled gasket:           | NBR                  |
|                        | Housing:                   | PA 6 GF              |

Dimensions and weight



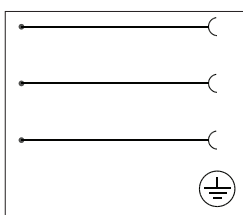
Industrial plug



- For use with Danfoss coils type AB and AC
- AC / DC all voltages up to 250 V
- Enclosure: Up to IP65
- Ambient temperature: Up to 90 °C / 194 °F

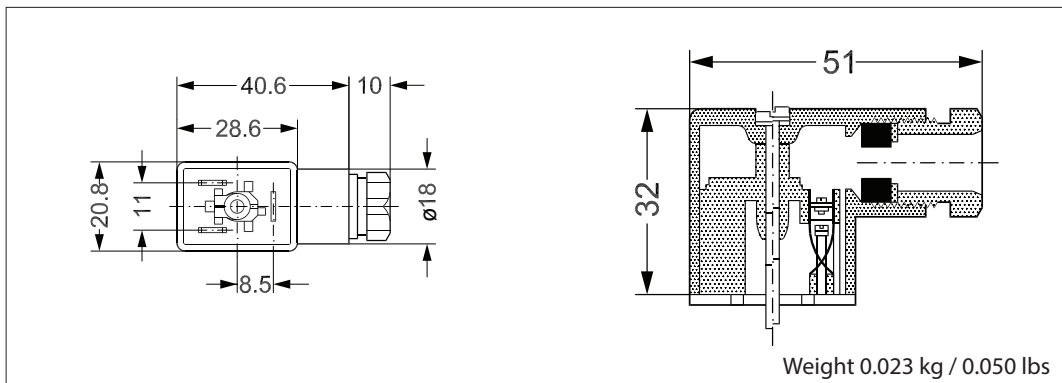
| Industrial plug size | Description                                  | Suitable for coil types | Code no. |
|----------------------|--|-------------------------|----------|
| DIN 11               | Cable plug for 6.3 x 0.8 mm spade connectors | AB, AC                  | 042N0139 |

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                  |                   |
| Protection class       | 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



Cable plug (LED + Varistor)

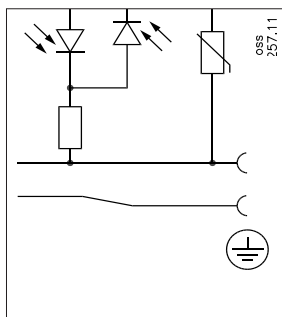


- For use with Danfoss coils type AM, AK, AL, BA, BD, BB and BY
- 24 V AC / DC and 230 V AC version
- Enclosure: Up to IP65
- Ambient temperature: Up to 60 °C / 140 °F
- DIN 18

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

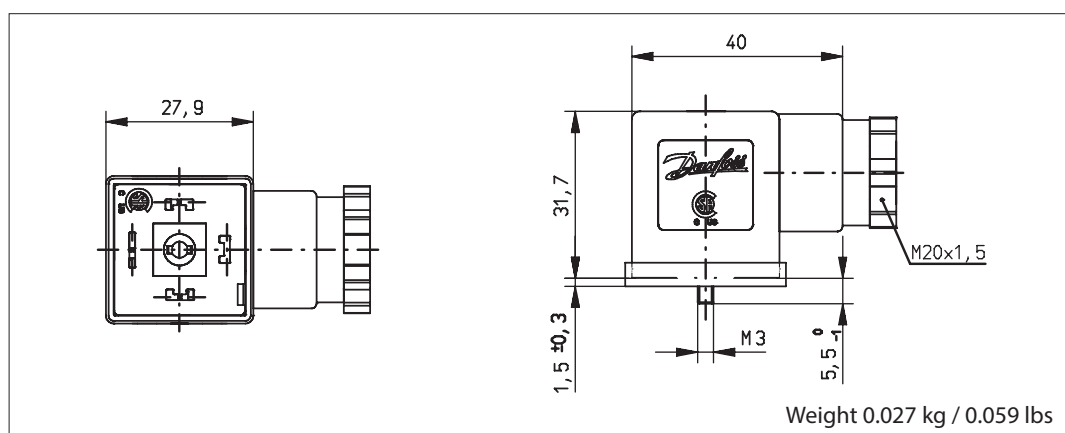
<sup>1)</sup> Protects against voltage peaks

Technical data



|                                   |                            |                           |
|-----------------------------------|----------------------------|---------------------------|
| Design                            | EN 175301-803 A            |                           |
| Supply voltage variation          | ±10%                       |                           |
| Power consumption                 | Max. 5 mA                  |                           |
| Protection class                  | IP65 (IEC 60529)           |                           |
| Max. operating current            | 1.5 A clamping contact     |                           |
| Contact resistance                | ≤ 4m Ω                     |                           |
| Protection against wrong polarity | Yes                        |                           |
| Cable diameter                    | 6 – 8 mm and 8 – 10 mm     |                           |
| Wire cross section                | Max. 1.5 mm <sup>2</sup>   |                           |
| Ambient temperature               | -25 – 60 °C / -13 – 140 °F |                           |
| Materials                         | 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



Industrial plug (LED + Varistor)

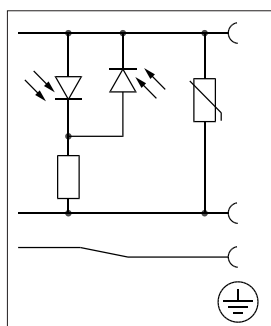


- For use with Danfoss coils type AB and AC
- 24 V AC / DC and 230 V AC version
- Enclosure: Up to IP65
- Ambient temperature: Up to 60 °C / 140 °F

| 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                                 | 042N0267 |
| DIN 11               | 230     | –      | AB, AC                  | Red        | Yes                                 | 042N0265 |

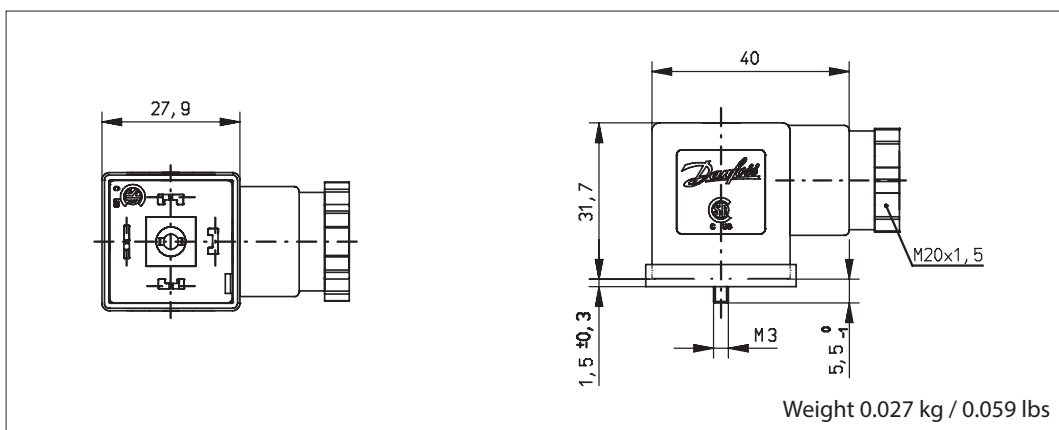
<sup>1)</sup> Protects against voltage peaks

Technical data



|                                   |                            |                           |
|-----------------------------------|----------------------------|---------------------------|
| Design                            | Industrial form            |                           |
| Supply voltage variation          | ±10%                       |                           |
| Power consumption                 | Max. 5 mA                  |                           |
| Protection class                  | IP65 (IEC 60529)           |                           |
| Max. operating current            | 1.5 A clamping contact     |                           |
| Contact resistance                | ≤ 4m Ω                     |                           |
| Protection against wrong polarity | Yes                        |                           |
| Cable diameter                    | 5 – 6 mm and 6 – 9 mm      |                           |
| Wire cross section                | Max. 1 mm <sup>2</sup>     |                           |
| Ambient temperature               | -25 – 60 °C / -13 – 140 °F |                           |
| Materials                         | 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**



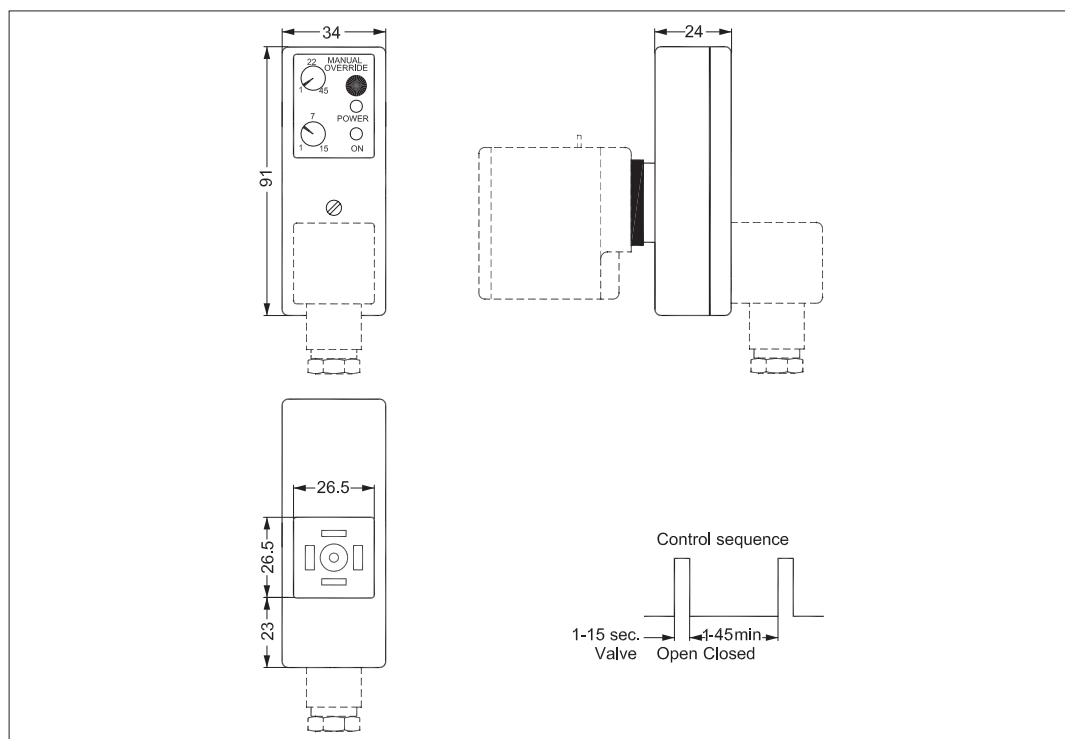
- Outside adjustments
- Light weight and small size
- External adjustable timing from 1 minute to 45 minutes with 1 to 15 seconds drain open
- One solid state timer fits all coil voltages from 24-240 V AC
- Light diodes for indication
- All in one unit
- Manual override (test button).

| Type   | Voltage [V AC] | Suitable for coil types | Code no. |
|--------|----------------|-------------------------|----------|
| BA024A | 24 – 240       | AM, 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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