

# Solenoid coils VACN-N

Type codes

VACN – N – K11 – 16B – 0,5 – [ ] – U4 – M

**Type**

|      |                         |
|------|-------------------------|
| VACN | Solenoid coil, N series |
|------|-------------------------|

**Solenoid coil type**

|   |   |
|---|---|
| N | N solenoid coil, for 9 mm armature tube |
|---|---|

**Electrical connection**

|    |   |
|----|---|
| A1 | Connection pattern type A, to EN 175301 |
|----|---|

|    |                |
|----|----------------|
| K1 | With 3 m cable |
|----|----------------|

|     |                  |
|-----|------------------|
| K11 | With 0.6 m cable |
|-----|------------------|

**Operating voltage**

|   |         |
|---|---------|
| 1 | 24 V DC |
|---|---------|

|    |                    |
|----|--------------------|
| 3A | 230 V AC, 50/60 Hz |
|----|--------------------|

|     |                      |
|-----|----------------------|
| 16B | 120 V AC or 110 V AC |
|-----|----------------------|

**Cable length**

|   |     |
|---|-----|
| – | 3 m |
|---|-----|

|     |       |
|-----|-------|
| 0,5 | 0.6 m |
|-----|-------|

**ATEX certification EU**

|   |                       |
|---|-----------------------|
| – | Without certification |
|---|-----------------------|

|     |                     |
|-----|---------------------|
| EX2 | ATEX category II 3D |
|-----|---------------------|

|     |                     |
|-----|---------------------|
| EX4 | ATEX category II 2D |
|-----|---------------------|

**Additional certifications**

|   |                       |
|---|-----------------------|
| – | Without certification |
|---|-----------------------|

|    |  |
|----|--|
| U4 | Explosion protection certification for USA |
|----|--|

**Type of ignition protection**

|   |      |
|---|------|
| – | None |
|---|------|

|   |                    |
|---|--------------------|
| A | Intrinsically safe |
|---|--------------------|


|   |               |
|---|---------------|
| M | Encapsulation |
|---|---------------|

|   |              |
|---|--------------|
| N | Non-sparking |
|---|--------------|


# Solenoid coils VACN-N

Technical data

FESTO

-  Voltage  
24 V DC  
110, 230 V AC

- Can be replaced without interrupting the pneumatic circuit

-  Temperature range  
-20 ... +60 °C



| General technical data |  |
|------------------------|--|
| Type of mounting       | Via knurled nut  |
| Mounting position      | Any (can be rotated in increments of 45° on the armature tube) |
| Product weight [g]     | 95   |

| Materials         |                |
|-------------------|----------------|
| Housing           | Steel, polymer |
| Winding           | Copper         |
| Pin contacts      | Brass          |
| Note on materials | RoHS compliant |

| Electrical data                      |  |
|--------------------------------------|--|
| Electrical connection                | Plug pins, 3-pin, with connection pattern to EN 175301-803, type A |
| Permissible voltage fluctuations [%] | -10 / +10  |
| Duty cycle [%]                       | 100  |
| Insulation class                     | F  |
| Enamelled wire insulation class      | F  |
| Degree of protection to EN 60529     | IP65 with plug socket  |

| Characteristic coil data      |       |        |     |        |     |  |
|-------------------------------|-------|--------|-----|--------|-----|--|
| Nominal operating voltage [V] | 24 DC | 110 AC |     | 230 AC |     |  |
| Frequency [Hz]                | -     | 50     | 60  | 50     | 60  |  |
| Power [W]                     | 0.7   | -      | -   | -      | -   |  |
| Pick-up power [VA]            | -     | 5.2    | 4.2 | 6.2    | 4.9 |  |
| Holding power [VA]            | -     | 3.1    | 2.5 | 3.7    | 2.9 |  |
| Surge resistance [kV]         | -     | 2.5    |     | 4      |     |  |

| Operating and environmental conditions                   |   |        |        |
|--|---|--------|--------|
| Nominal operating voltage [V]                            | 24 DC                                     | 110 AC | 230 AC |
| Ambient temperature [°C]                                 | -20 ... +60                               |        |        |
| Corrosion resistance class CRC <sup>1)</sup>             | 2   |        |        |
| Degree of contamination                                  | 3   |        |        |
| CE marking (see declaration of conformity) <sup>3)</sup> | To EU Low Voltage Directive <sup>2)</sup> |        |        |

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
- 2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [p → User documentation.](#)  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.
- 3) Additional information [p → Certificates.](#)

# Solenoid coils VACN-N

Technical data

FESTO

**Dimensions** Download CAD data →

2 Plug pattern to EN 175301-803, type A  
3 Solenoid coil  
4 Mounting screw M3

| Type          | B1 | H1   | H3   | L1   | L2   | L4   |
|---------------|----|------|------|------|------|------|
| VACN-N-A1-... | 30 | 29.5 | 15.3 | 47.6 | 35.5 | 14.7 |

| Ordering data  |  |                    |                                   |                                 |
|--|--|--------------------|-----------------------------------|---------------------------------|
|  | Description  |                    | Part No.                          | Type                            |
| <b>Solenoid coil</b>   |  |                    |                                   |                                 |
|  | Without plug socket, connection pattern to EN 175301-803, type A           | 24 V DC            | <b>8029144</b>                    | <b>VACN-N-A1-1</b>              |
|  |  | 110 V AC           | <b>8029134</b>                    | <b>VACN-N-A1-16B</b>            |
|  |  | 230 V AC           | <b>8029135</b>                    | <b>VACN-N-A1-3A</b>             |
| <b>Plug socket</b>   |  |                    |                                   |                                 |
|  | Operating voltage 230 V DC/V AC  | Cable fitting Pg9  | <b>34583</b>                      | <b>MSSD-C</b>                   |
|  |  | Cable fitting M16  | <b>539709</b>                     | <b>MSSD-C-M16</b>               |
|  | Operating voltage 24 V DC, signal status display with LED                  | Cable fitting Pg11 | <b>177617</b>                     | <b>MSSD-C-TY-24DC</b>           |
| <b>Connecting cable</b>  |  |                    |                                   |                                 |
|  | Operating voltage 24 V DC, signal status display with LED                  | Cable length 0.6 m | <b>3679776</b>                    | <b>NEBV-A1W3F-P-K-0.6-N-LE3</b> |
|  |  | Cable length 2.5 m | <b>30931</b>                      | <b>KMC-1-24DC-2,5-LED</b>       |
|  |  | Cable length 5 m   | <b>30933</b>                      | <b>KMC-1-24DC-5-LED</b>         |
|  |  | Cable length 10 m  | <b>193459</b>                     | <b>KMC-1-24-10-LED</b>          |
|  | Operating voltage 230 V DC/V AC  | Cable length 0.6 m | <b>3579466</b>                    | <b>NEBV-A1W3-K-0.6-N-LE3</b>    |
|  |  | Cable length 2.5 m | <b>30932</b>                      | <b>KMC-1-230AC-2,5</b>          |
|  |  | Cable length 5 m   | <b>30934</b>                      | <b>KMC-1-230AC-5</b>            |
| Electrical connection 2, M12x1, A-coded<br>Operating voltage 24 V DC, signal status display with LED | Cable length 0.3 m   | <b>3679771</b>     | <b>NEBV-A1W3F-P-K-0.3-N-M12W3</b> |                                 |
|  | Cable length 0.6 m   | <b>3679772</b>     | <b>NEBV-A1W3F-P-K-0.6-N-M12W3</b> |                                 |
|  | Electrical connection 2, M12x1, A-coded<br>Operating voltage 230 V DC/V AC | Cable length 0.3 m | <b>3579461</b>                    | <b>NEBV-A1W3-K-0.3-N-M12W3</b>  |
|  |  | Cable length 0.6 m | <b>3579462</b>                    | <b>NEBV-A1W3-K-0.6-N-M12W3</b>  |
| <b>Illuminating seal</b>   |  |                    |                                   |                                 |
|  | Operating voltage 24 V DC  |                    | <b>19145</b>                      | <b>MC-LD-12-24DC</b>            |
|  | Operating voltage 230 V DC/V AC  |                    | <b>19146</b>                      | <b>MC-LD-230AC</b>              |

# Solenoid coils VACN-N-...-EX2-N

Technical data

FESTO



- Non-sparking solenoid coil
- Category "II 3G" and "II 3D"
- Type of ignition protection for gas "Ex nA"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit



| General technical data |  |
|------------------------|--|
| Type of mounting       | Via knurled nut  |
| Mounting position      | Any (can be rotated in increments of 45° on the armature tube) |
| Product weight [g]     | 95   |

| Materials         |                |
|-------------------|----------------|
| Housing           | Steel, polymer |
| Winding           | Copper         |
| Pin contacts      | Brass          |
| Note on materials | RoHS compliant |

| Electrical data                      |  |
|--------------------------------------|--|
| Electrical connection                | Plug pins, 3-pin, with connection pattern to EN 175301-803, type A |
| Permissible voltage fluctuations [%] | -10 / +10  |
| Duty cycle [%]                       | 100  |
| Insulation class                     | F  |
| Enamelled wire insulation class      | H  |
| Degree of protection to EN 60529     | IP65 with plug socket  |

| Characteristic coil data      |       |        |     |     |        |  |
|-------------------------------|-------|--------|-----|-----|--------|--|
| Nominal operating voltage [V] | 24 DC | 110 AC |     |     | 230 AC |  |
| Frequency [Hz]                | -     | 50     | 60  | 50  | 60     |  |
| Power [W]                     | 2.1   | -      | -   | -   | -      |  |
| Pick-up power [VA]            | -     | 6.9    | 5.4 | 6.9 | 5.4    |  |
| Holding power [VA]            | -     | 4.1    | 3.2 | 4.1 | 3.3    |  |

| Operating and environmental conditions                   |   |
|--|---|
| Ambient temperature [°C]                                 | -20 ... +60                                 |
| Corrosion resistance class CRC <sup>1)</sup>             | 2   |
| CE marking (see declaration of conformity) <sup>2)</sup> | To EU Explosion Protection Directive (ATEX) |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Additional information p → Certificates.



# Solenoid coils VACN-N-...-EX2-N

Technical data

| ATEX                                 |                              |
|--------------------------------------|------------------------------|
| ATEX category for gas                | II 3G                        |
| Type of ignition protection for gas  | Ex nA IIC T5/T4 X Gc         |
| ATEX category for dust               | II 3D                        |
| Type of ignition protection for dust | Ex tc IIIC T95°C/T105°C X Dc |
| Explosion ambient temperature [°C]   | -20 ≤ Ta ≤ +60               |

**Dimensions** [Download CAD data →](#)

3 Solenoid coil  
4 Mounting screw M3

| Type                | B1 | H1   | H2   | L1 | L2   |
|---------------------|----|------|------|----|------|
| VACN-N-A1-...-EX2-N | 30 | 38.5 | 29.5 | 64 | 35.5 |

| Ordering data |  |          |                |                            |  |
|---------------|--|----------|----------------|----------------------------|--|
|               | Description  |          | Part No.       | Type                       |  |
|               | With plug socket included in delivery, connection pattern to EN 175301-803, type A | 24 V DC  | <b>8029136</b> | <b>VACN-N-A1-1-EX2-N</b>   |  |
|               |  | 110 V AC | <b>8029137</b> | <b>VACN-N-A1-16B-EX2-N</b> |  |
|               |  | 230 V AC | <b>8029138</b> | <b>VACN-N-A1-3A-EX2-N</b>  |  |

# Solenoid coils VACN-N-...-U4-M

Technical data

FESTO



- Encapsulated solenoid coil with insulating conduit connection
- Explosion protection certification "Class I", "Class II" and "Class III"
- FM certification
- Can be replaced without interrupting the pneumatic circuit



| General technical data |  |
|------------------------|--|
| Type of mounting       | Via knurled nut  |
| Mounting position      | Any (can be rotated in increments of 45° on the armature tube) |
| Product weight [g]     | 207  |

| Materials         |  |
|-------------------|--|
| Housing           | Steel, polymer   |
| Winding           | Copper   |
| Note on materials | Contains paint-wetting impairment substances<br>RoHS compliant |

| Electrical data                      |           |
|--------------------------------------|-----------|
| Electrical connection                | Cable     |
| Cable length [m]                     | 0.61      |
| Permissible voltage fluctuations [%] | -10 / +10 |
| Duty cycle [%]                       | 100       |
| Insulation class                     | H         |
| Enamelled wire insulation class      | H         |
| Degree of protection to EN 60529     | IP65      |

| Characteristic coil data      |       |        |        |
|-------------------------------|-------|--------|--------|
| Nominal operating voltage [V] | 24 DC | 110 AC | 230 AC |
| Frequency [Hz]                | -     | 60     | 50     |
| Power [W]                     | 4.6   | -      | -      |
| Pick-up power [VA]            | -     | 10     | 11.5   |
| Holding power [VA]            | -     | 6.8    | 8      |

| Operating and environmental conditions                   |             |   |          |
|--|-------------|---|----------|
| Nominal operating voltage                                | 24 V DC     | 110 V AC                                  | 230 V AC |
| Ambient temperature [°C]                                 | -20 ... +60 | -20 ... +60                               |          |
| Corrosion resistance class CRC <sup>1)</sup>             | 2           | 2   |          |
| CE marking (see declaration of conformity) <sup>3)</sup> | -           | To EU Low Voltage Directive <sup>2)</sup> |          |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [p → User documentation.](#)  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

3) Additional information [p → Certificates.](#)



# Solenoid coils VACN-N-...-U4-M

Technical data

| ATEX  |                           |                       |
|---|---------------------------|-----------------------|
| Type of ignition protection for gas               | AEx m II T4<br>Ex m II T4 |                       |
| Explosion ambient temperature [°C]                | -20 ≤ Ta ≤ +60            |                       |
| Explosion protection certification outside the EU | EPL Gb (US)               |                       |
|   | Class I, Div. 1 (US)      | Class I, Div. 1 (CA)  |
|   | Class I, Div. 2 (US)      | Class I, Div. 2 (CA)  |
|   | Class II, Div. 1 (US)     | Class II, Div. 1 (CA) |
| Certificate issuing authority                     | CSA 265489                |                       |
|   | FM 3053936                |                       |

**Dimensions** [Download CAD data →](#)

1 Solenoid coil

| Type           | B1 | D2   | H1 | H3   | L1 | L2 | L4 | L5  |
|----------------|----|------|----|------|----|----|----|-----|
| VACN-N-K11-... | 36 | 24.6 | 31 | 14.5 | 43 | 18 | 23 | 610 |

| Ordering data |                  | Part No. | Type                                   |
|---------------|------------------|----------|--|
|               | Moulded-in cable | 24 V DC  | <b>8029146</b> VACN-N-K11-1-0.5-U4-M   |
|               |                  | 110 V AC | <b>8029145</b> VACN-N-K11-16B-0.5-U4-M |
|               |                  | 230 V AC | <b>8029140</b> VACN-N-K11-3A-0.5-U4-M  |

# Solenoid coils VACN-N-...-EX4-M

Technical data



- Category "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex mb"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit



| General technical data |  |
|------------------------|--|
| Type of mounting       | Via knurled nut  |
| Mounting position      | Any (can be rotated in increments of 45° on the armature tube) |
| Product weight [g]     | 353  |

| Materials         |                |
|-------------------|----------------|
| Housing           | Steel, polymer |
| Winding           | Copper         |
| Note on materials | RoHS compliant |

| Electrical data                      |                       |
|--------------------------------------|-----------------------|
| Electrical connection                | Cable                 |
| Cable length [m]                     | 3                     |
| Cable diameter [mm]                  | 7                     |
| Permissible voltage fluctuations [%] | -10 / +10             |
| Duty cycle [%]                       | 100                   |
| Insulation class                     | F                     |
| Enamelled wire insulation class      | H                     |
| Degree of protection to EN 60529     | IP65 with plug socket |

| Characteristic coil data      |       |        |        |
|-------------------------------|-------|--------|--------|
| Nominal operating voltage [V] | 24 DC | 110 AC | 230 AC |
| Frequency [Hz]                | -     | 50/60  | 50/60  |
| Power                         | [W]   | 2.6    | -      |
|                               | [VA]  | -      | 2.4    |

| Operating and environmental conditions                   |   |
|--|---|
| Ambient temperature [°C]                                 | -20 ... +50                                 |
| Corrosion resistance class CRC <sup>1)</sup>             | 2   |
| CE marking (see declaration of conformity) <sup>2)</sup> | To EU Explosion Protection Directive (ATEX) |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Additional information p → Certificates.

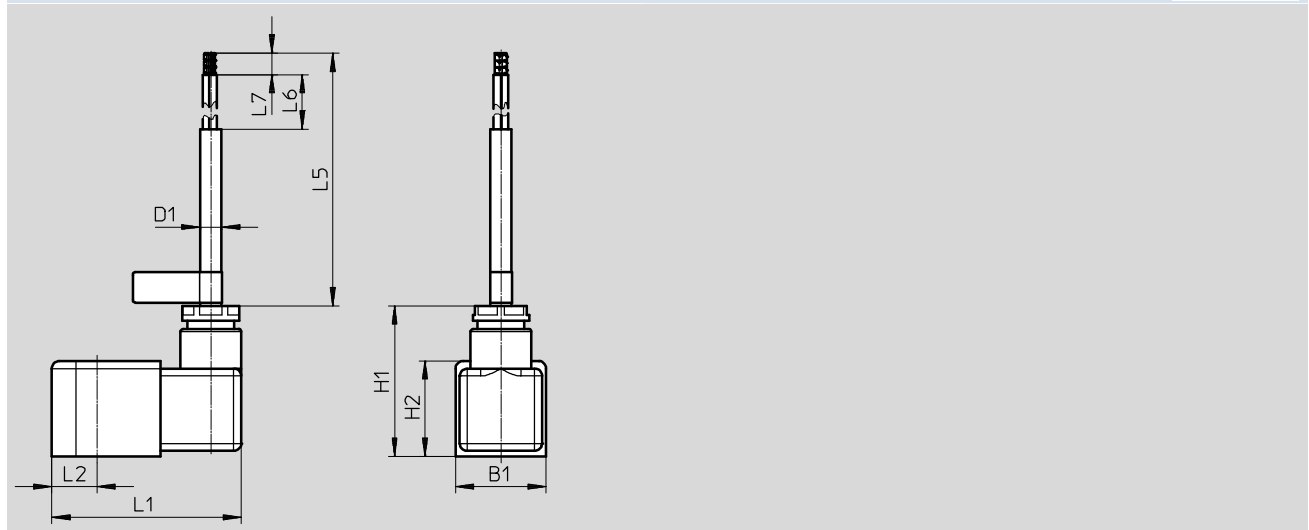


# Solenoid coils VACN-N-...-EX4-M

Technical data

| ATEX  |  |
|---|--|
| ATEX category for gas                             | II 2G  |
| Type of ignition protection for gas               | Ex mb IIC T6   |
| ATEX category for dust                            | II 2D  |
| Type of ignition protection for dust              | Ex mb tb IIIC T80°C  |
| Explosion ambient temperature [°C]                | -20 ≤ Ta ≤ +50   |
| Explosion protection certification outside the EU | EPL Db (BR), EPL Db (IEC-EX), EPL Gb (BR), EPL Gb (IEC-EX) |
| Certificate issuing authority                     | DNV 15.0189X   |
|   | IECEX PTB 15.0016X   |
|   | PTB 14 ATEX 2027 X   |

**Dimensions** Download CAD data →



| Type          | B1   | D1 | H1   | H2   | L1 | L2   | L5   | L6 | L7 |
|---------------|------|----|------|------|----|------|------|----|----|
| VACN-N-K1-... | 29.7 | 7  | 49.3 | 31.3 | 67 | 14.8 | 3000 | 43 | 7  |

| Ordering data |                                  |          |                                    |
|---------------|----------------------------------|----------|------------------------------------|
|               | Description                      | Part No. | Type                               |
|               | With plug socket, with 3 m cable | 24 V DC  | <b>8029143</b> VACN-N-K1-1-EX4-M   |
|               |                                  | 110 V AC | <b>8029142</b> VACN-N-K1-16B-EX4-M |
|               |                                  | 230 V AC | <b>8029141</b> VACN-N-K1-3A-EX4-M  |

# Solenoid coils VACN-N-...-EX4-A

Technical data



- Intrinsically safe solenoid coil
- Category "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex ia"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit



| General technical data |  |
|------------------------|--|
| Type of mounting       | Via knurled nut  |
| Mounting position      | Any (can be rotated in increments of 45° on the armature tube) |
| Product weight [g]     | 114  |

| Materials         |                |
|-------------------|----------------|
| Housing           | Steel, polymer |
| Winding           | Copper         |
| Note on materials | RoHS compliant |

| Electrical data                      |   |
|--------------------------------------|---|
| Electrical connection                | Plug connector, connection pattern to EN 175301-803, type A |
| Permissible voltage fluctuations [%] | -10 / +10   |
| Duty cycle [%]                       | 100   |
| Insulation class                     | F   |
| Enamelled wire insulation class      | H   |
| Degree of protection to EN 60529     | IP65 with plug socket                                       |

| Characteristic coil data          |                |
|-----------------------------------|----------------|
| Nominal operating voltage [V]     | 24 DC          |
| Max. input voltage [V]            | 28 DC          |
| Max. input current [mA]           | 115            |
| Required current consumption [mA] | ≤27            |
| Effective internal capacitance    | Negligibly low |
| Effective internal inductance     | Negligibly low |

| Operating and environmental conditions                   |   |
|--|---|
| Ambient temperature [°C]                                 | -20 ... +50                                 |
| Corrosion resistance class CRC <sup>1)</sup>             | 2   |
| CE marking (see declaration of conformity) <sup>2)</sup> | To EU Explosion Protection Directive (ATEX) |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Additional information p → Certificates.

# Solenoid coils VACN-N-...-EX4-A

Technical data

| ATEX  |  |
|---|--|
| ATEX category for gas                             | II 2G  |
| Type of ignition protection for gas               | Ex ia IIC T6, T4 Ga  |
| ATEX category for dust                            | II 2D  |
| Type of ignition protection for dust              | Ex tb IIIC T80°C, T130°C Db IP65                           |
| Explosion ambient temperature [°C]                | T4,T130°C: -40°C ≤ Ta ≤ +85°C                              |
|   | T6,T80°C: -40°C ≤ Ta ≤ +50°C                               |
| Explosion protection certification outside the EU | EPL Db (BR), EPL Db (IEC-EX), EPL Ga (BR), EPL Gb (IEC-EX) |
| Certificate issuing authority                     | DNV 15.0188  |
|   | IECEX PTB 15.0013  |
|   | PTB 09 ATEX 2043   |

**Dimensions** Download CAD data →

3 Solenoid coil  
4 Mounting screw M3

| Type                | B1 | H1   | H2   | L1   | L2   |
|---------------------|----|------|------|------|------|
| VACN-N-A1-...-EX4-A | 30 | 38.5 | 29.5 | 67.7 | 39.2 |

| Ordering data |   | Part No.                  | Type                     |
|---------------|---|---------------------------|--------------------------|
|               | Intrinsically safe solenoid coil with plug socket included in delivery, connection pattern to EN 175301-803, type A | 24 V DC<br><b>8029139</b> | <b>VACN-N-A1-1-EX4-A</b> |