



Model Number

NRB4-12GH40-E2-V1

Features

- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing
- Front face FDA conform

Accessories

BF 12

Mounting flange, 12 mm

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

Technical Data

General specifications

| | | | |
|----------------------------|-------|---------------|----|
| Switching element function | | PNP | NO |
| Rated operating distance | s_n | 4 mm | |
| Installation | | flush | |
| Output polarity | | switched high | |
| Assured operating distance | s_a | 0 ... 3.24 mm | |
| Reduction factor r_{Al} | | 1 | |
| Reduction factor r_{Cu} | | 1 | |
| Reduction factor r_{304} | | 1 | |
| Reduction factor r_{S37} | | 1 | |

Nominal ratings

| | | |
|--------------------------------|-----------|--|
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 2000 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 2 V |
| Rated insulation voltage | U_{BIS} | 60 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA typ. 0.1 μ A at 25 °C |
| No-load supply current | I_0 | ≤ 12 mA |
| Time delay before availability | t_v | ≤ 20 ms |
| Constant magnetic field | B | 200 mT |
| Alternating magnetic field | B | 200 mT |
| Switching state indicator | | Multihole-LED, yellow |

Functional safety related parameters

| | |
|--------------------------------|--------|
| MTTF _d | 1393 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 85 °C (-13 ... 185 °F) |
| Storage temperature | -40 ... 85 °C (-40 ... 185 °F) |

Mechanical specifications

| | |
|----------------------|------------------------------------|
| Connection type | Connector M12 x 1, 4-pin |
| Housing material | stainless steel 1.4404 / AISI 316L |
| Sensing face | LCP, (conforms with FDA) |
| Degree of protection | IP67 |
| Mass | 15 g |

General information

| | |
|-------------------|----------------------|
| Scope of delivery | Supplied with 2 nuts |
|-------------------|----------------------|

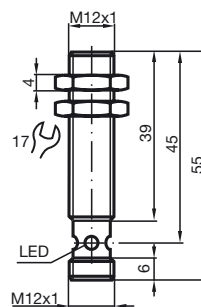
Compliance with standards and directives

| | |
|---------------------|---|
| Standard conformity | |
| Standards | EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 |

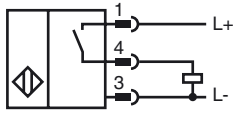
Approvals and certificates

| | |
|---------------------------------|--|
| Protection class | II |
| Rated insulation voltage | U_i 60 V |
| Rated impulse withstand voltage | U_{imp} 800 V |
| UL approval | cULus Listed, General Purpose Class 2 power source |
| CSA approval | cCSAus Listed, General Purpose Class 2 power source |
| CCC approval | CCC approval / marking not required for products rated ≤ 36 V |

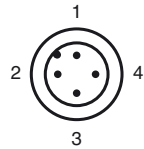
Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

| | | | |
|---|--|----|---------|
| 1 | | BN | (brown) |
| 2 | | WH | (white) |
| 3 | | BU | (blue) |
| 4 | | BK | (black) |