

Inductive sensor

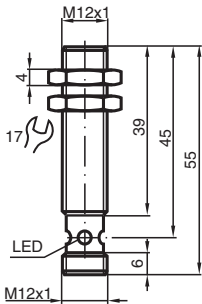
NRB4-12GS40-A2-V1



- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing



Dimensions



Technical Data

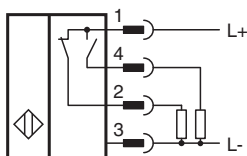
| General specifications | | |
|-----------------------------|-------|----------------------------|
| Switching function | | complementary |
| Output type | | PNP |
| Rated operating distance | s_n | 4 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 3.24 mm |
| Reduction factor r_{Al} | | 1 |
| Reduction factor r_{Cu} | | 1 |
| Reduction factor r_{304} | | 1 |
| Reduction factor r_{St37} | | 1 |
| Output type | | 4-wire |
| 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 |

Release date: 2025-06-10 Date of issue: 2025-06-10 Filename: 264601_eng.pdf

Technical Data

| | | |
|---|-----------|---|
| 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 | ≤ 14 mA |
| Time delay before availability | t_v | max. 15 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 % |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| 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 Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 30 V DC Output Switching Current: 200 mA |
| CCC approval | | CCC approval / marking not required for products rated ≤ 36 V |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 70 °C (-13 ... 158 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug |
| Housing material | | Stainless steel 1.4305 / AISI 303 |
| Sensing face | | PBT |
| Degree of protection | | IP67 |
| Connector | | |
| Threading | | M12 x 1 |
| Number of pins | | 4 |
| Mass | | 15 g |
| Dimensions | | |
| Length | | 55 mm |
| Diameter | | 12 mm |
| General information | | |
| Scope of delivery | | 2 self locking nuts in scope of delivery |

Connection Assignment



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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