



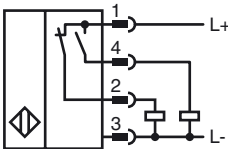
Model Number

NRB50-FP-A2-C-P3-V1

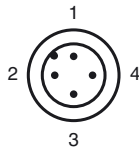
Features

- 50 mm flush
- Reduction factor = 1
- Weld Immune

Connection



Pinout



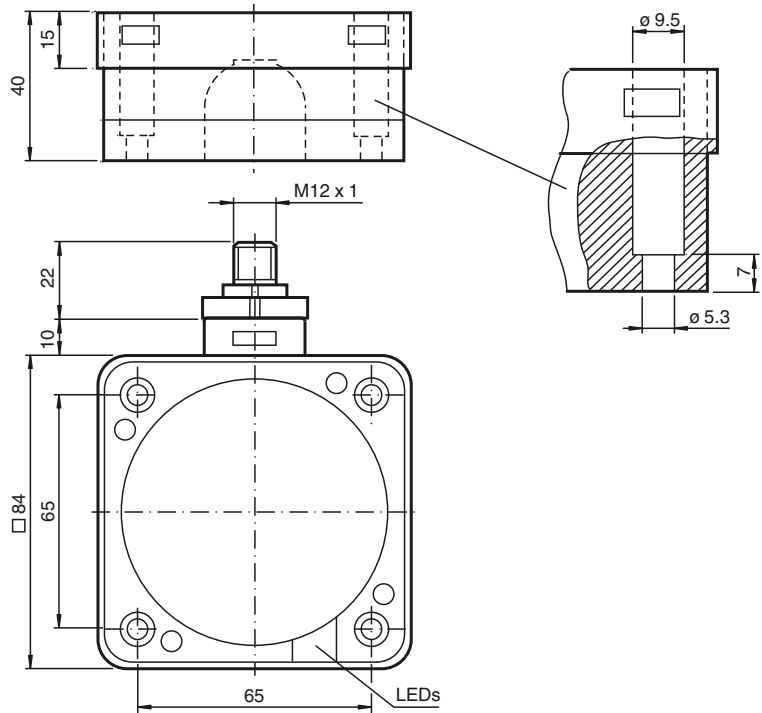
Wire colors in accordance with EN 60947-5-2

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

Accessories

- 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

Dimensions



Technical Data

General specifications

| | | |
|-----------------------------|-------|---------------|
| Switching element function | PNP | NO/NC |
| Rated operating distance | s_n | 50 mm |
| Installation | | flush |
| Output polarity | | switched high |
| Assured operating distance | s_a | 0 ... 40.5 mm |
| Reduction factor r_{Al} | | 1 |
| Reduction factor r_{Cu} | | 1 |
| Reduction factor r_{304} | | 1 |
| Reduction factor r_{S137} | | 1 |

Nominal ratings

| | | |
|--------------------------------|-----------|----------------------------|
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 1 Hz |
| Hysteresis | H | typ. 3 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 3 V |
| Rated insulation voltage | U_{BIS} | 50 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA |
| No-load supply current | I_0 | ≤ 20 mA |
| Time delay before availability | t_v | ≤ 300 ms |
| Operating voltage display | | LED, green |
| Switching state indication | | LED, yellow |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 854 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

| | |
|---------------------|--|
| Ambient temperature | 0 ... 50 °C (32 ... 122 °F) (± 10 % changing operating distance) |
| | -25 ... 70 °C (-13 ... 158 °F) (± 20 % changing operating distance) |

Mechanical specifications

| | |
|-------------------|--------------------------|
| Connection type | Connector M12 x 1, 4-pin |
| Housing material | PBT/metal |
| Sensing face | PBT, PTFE coated |
| Housing base | PBT |
| Protection degree | IP68 |

Compliance with standards and directives

| | |
|---------------------|---|
| Standard conformity | |
| Standards | EN 60947-5-2:2007 IEC 60947-5-2:2007 |

Approvals and certificates

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

Release date: 2013-04-05 16:29 Date of issue: 2013-04-08 187795_eng.xml

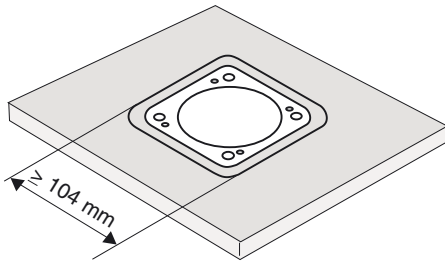
Installation hint

These sensors are particularly suitable for embedded installation in floor conveyor systems. The installation of the switch in a metal base plate provides it with considerable protection against mechanical damage.

Care should be taken to ensure that the cut out in the base plate is at least 104 mm x 104 mm and that the sensor is positioned centrally within this cut out.

The active surface of the sensor must not be recessed with respect to the front face of the base plate.

The high switching distance guarantees safe detection and thus control of the floor conveyor system.

**Caution!**

After removal of the metal screen the proximity switch can no longer be mounted as an embedded installation.