



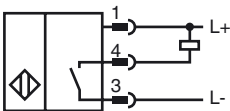
Model Number

NBB5-18GM50-E0-V1

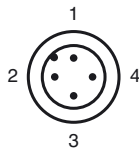
Features

- Basic series
- 5 mm embeddable

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

4-pin, M12 female field-attachable connector

V1-W

4-pin, M12 female field-attachable connector

V1-G-2M-PUR

Cable socket, M12, 4-pin, PUR cable

BF 18

Mounting flange, 18 mm

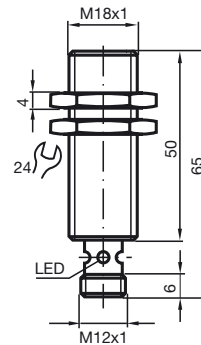
V1-W-2M-PUR

Cable socket, M12, 4-pin, PUR cable

EXG-18

Quick mounting bracket with dead stop

Dimensions



Technical Data

General specifications

| | | | |
|----------------------------|-------|---------------|----|
| Switching element function | | NPN | NO |
| Rated operating distance | s_n | 5 mm | |
| Installation | | embeddable | |
| Output polarity | | DC | |
| Assured operating distance | s_a | 0 ... 4.05 mm | |
| Reduction factor r_{AI} | | 0.3 | |
| Reduction factor r_{Cu} | | 0.3 | |
| Reduction factor r_{304} | | 0.7 | |

Nominal ratings

| | | |
|-----------------------------------|-------|--|
| Operating voltage | U_B | 10 ... 30 V |
| Switching frequency | f | 0 ... 800 Hz |
| Hysteresis | H | typ. 5% |
| Reverse polarity protected | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 3 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 | ≤ 20 mA |
| Indication of the switching state | | Multihole-LED, yellow |

Functional safety related parameters

| | |
|--------------------------|--------|
| MTTF _d | 1920 a |
| Mission Time (T_M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
|---------------------|--------------------------------|

Mechanical specifications

| | |
|-------------------|---------------------------------|
| Connection type | Device connector M12 x 1, 4-pin |
| Housing material | brass, nickel-plated |
| Sensing face | PBT |
| Protection degree | IP67 |

Compliance with standards and directives

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

Approvals and certificates

| | |
|--------------|--|
| UL approval | cULus Listed, General Purpose |
| CSA approval | cCSAus Listed, General Purpose |
| CCC approval | Products with a maximum operating voltage of ≤ 36 V do not bear a CCC marking because they do not require approval. |