



Model Number

NBB8-18GM50-E2-M-Y266288

Features

- Basic series
- 8 mm flush
- Increased operating distance
- Extended temperature range - 40 ... +85 °C
- E1-Type approval
- Raised EMC resistance 100 V/m

Accessories

BF 18

Mounting flange, 18 mm

EXG-18

Quick mounting bracket with dead stop

Technical Data

General specifications

| | | | |
|----------------------------|-------|---------------|----|
| Switching element function | | PNP | NO |
| Rated operating distance | s_n | 8 mm | |
| Installation | | flush | |
| Output polarity | | DC | |
| Assured operating distance | s_a | 0 ... 6.48 mm | |
| Reduction factor r_{Al} | | 0.45 | |
| Reduction factor r_{Cu} | | 0.4 | |
| Reduction factor r_{304} | | 0.7 | |

Nominal ratings

| | | |
|--------------------------------|-------|--|
| Operating voltage | U_B | 10 ... 30 V |
| Switching frequency | f | 0 ... 400 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 2.5 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 | ≤ 10 mA |
| Time delay before availability | t_v | ≤ 60 ms |
| Switching state indicator | | all direction LED, yellow |

Functional safety related parameters

| | |
|--------------------------------|--------|
| MTTF _d | 2070 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

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

Mechanical specifications

| | |
|----------------------|---|
| Connection type | Cable connector PUR, L = 0.6 m |
| Connection assembly | AMP housing 282105-1 AMP connector type 282109-1 AMP sealing 281934-2 |
| Core cross-section | 0.75 mm ² |
| Housing material | brass, nickel-plated |
| Sensing face | PBT |
| Degree of protection | IP68 / IP69K |

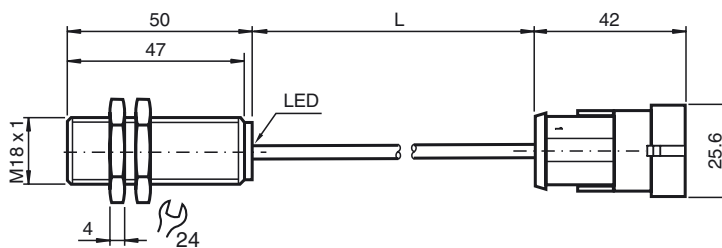
Compliance with standards and directives

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

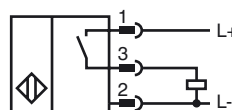
Approvals and certificates

| | |
|------------------|-------------------------------|
| UL approval | cULus Listed, General Purpose |
| E1 Type approval | 10R-04 |

Dimensions



Electrical Connection



Installation Hint

Emitted interference and interference immunity in accordance with motor vehicle directive 2006/28/EG (e1 Type approval)
 Interference immunity in accordance with DIN ISO 11452-2: 100 V/m
 Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO 7637-2: Pulse

| | | | | | | | |
|-------------------|-----|-----|-----|-----|-----|-----|----|
| | 1 | 2a | 2b | 3 a | 3b | 4 | 5 |
| Severity level | III | III | III | III | III | III | IV |
| Failure criterion | C | A | C | A | A | A | C |

| | |
|----------------|------------------------|
| EN 61000-4-2: | CD: 8 kV / AD: 15 kV |
| Severity level | IV IV |
| EN 61000-4-3: | 30 V/m (80...2500 MHz) |
| Severity level | IV |
| EN 61000-4-4: | 2 kV |
| Severity level | III |
| EN 61000-4-6: | 10 V (0.15...80 MHz) |
| Severity level | III |
| EN 55011: | Class A |

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