



Model Number

NBB8-F33-A2-M1

Features

- 8 mm flush
- 4-wire DC
- Raised EMC resistance 36 V/m
- E1-Type approval

Technical Data

General specifications

| | | |
|----------------------------|-------|---------------|
| Switching function | | complementary |
| Output type | | PNP |
| Rated operating distance | s_n | 8 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 6.48 mm |
| Reduction factor r_{AI} | | 0.3 |
| Reduction factor r_{CU} | | 0.2 |
| Reduction factor r_{304} | | 0.6 |
| Output type | | 3-wire |

Nominal ratings

| | | |
|--------------------------------|-------|----------------------------|
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 350 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | 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 |
| No-load supply current | I_0 | ≤ 25 mA |
| Time delay before availability | t_v | ≤ 5 ms |
| Switching state indicator | | LED yellow |

Functional safety related parameters

| | |
|--------------------------|--------|
| MTTF _d | 1240 a |
| Mission Time (T_M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -35 ... 70 °C (-31 ... 158 °F) |
| Storage temperature | -40 ... 85 °C (-40 ... 185 °F) |

Mechanical specifications

| | |
|----------------------|-------------------------|
| Connection type | cable PUR , 2 m |
| Core cross-section | 0.5 mm ² |
| Housing material | PBT |
| Sensing face | PBT |
| Degree of protection | IP67 / IP69K |
| Note | Tightening torque: 5 Nm |

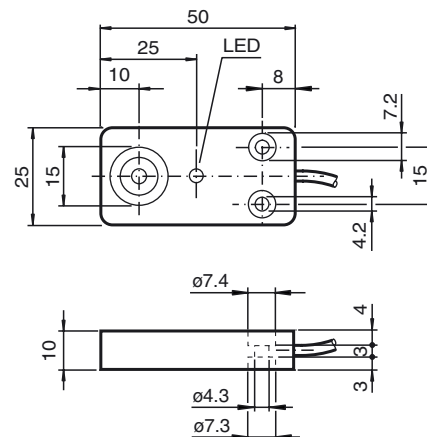
Compliance with standards and directives

| | |
|---------------------|---|
| 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

| | |
|------------------|--|
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure |
| E1 Type approval | 10R-04 |

Dimensions



Electrical Connection

