



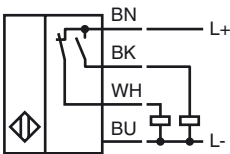
Model Number

NBB5-F33-A2

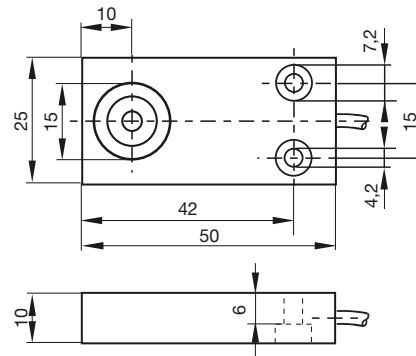
Features

- 5 mm embeddable
- 4-wire DC

Connection



Dimensions



Technical Data

General specifications

| | | | |
|----------------------------|-------|---------------|-------|
| Switching element function | | PNP | NO/NC |
| Rated operating distance | s_n | 5 mm | |
| Installation | | embeddable | |
| Output polarity | | DC | |
| Assured operating distance | s_a | 0 ... 4.05 mm | |
| Reduction factor r_{Al} | | 0.3 | |
| Reduction factor r_{Cu} | | 0.2 | |
| Reduction factor r_{303} | | 0.6 | |

Nominal ratings

| | | | |
|----------------------------|-------|-------------------------------|--|
| Operating voltage | U_B | 10 ... 30 V DC | |
| Switching frequency | f | 0 ... 500 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 | |
| No-load supply current | I_0 | ≤ 20 mA | |

Functional safety related parameters

| | |
|--------------------------|-------|
| MTTF _d | 820 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 | cable PVC , 2 m |
| Core cross-section | 0.34 mm ² |
| Housing material | PBT |
| 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. |

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