

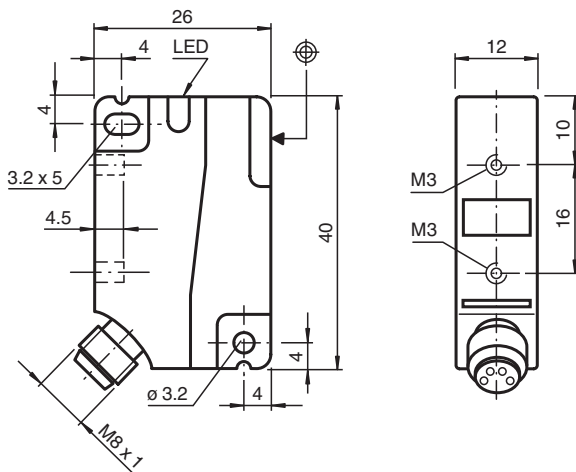


Inductive sensor NBN8-F1-A2-V31

- 8 mm non-flush
- 4-wire DC



Dimensions



Technical Data

General specifications

| | | |
|----------------------------|-------|---------------|
| Switching function | | complementary |
| Output type | | PNP |
| Rated operating distance | s_n | 8 mm |
| Installation | | non-flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 6.48 mm |
| Reduction factor r_{Al} | | 0.45 |
| Reduction factor r_{Cu} | | 0.45 |
| Reduction factor r_{304} | | 0.7 |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

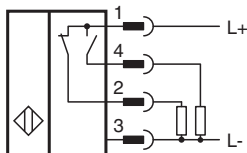
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PF PEPPERL+FUCHS

Technical Data

| | | |
|-------------------------------------------------|------------------|--------------------------------------------------------------------|
| Reduction factor r_{Brass} | | 0.55 |
| Output type | | 4-wire |
| Nominal ratings | | |
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 1400 Hz |
| Hysteresis | H | typ. 5% |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 2.5 V |
| Rated insulation voltage | U_{BIS} | 60 V |
| Operating current | I_L | 0 ... 250 mA |
| Off-state current | I_r | 0 ... 0.01 mA typ. 0.1 μA at 25 °C |
| No-load supply current | I_0 | ≤ 15 mA |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 1530 a |
| Mission Time (T_M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| 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 |
| Rated impulse withstand voltage | 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 |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 70 °C (-13 ... 158 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug M8 x 1 , 4-pin |
| Housing material | | PA |
| Sensing face | | PA |
| Degree of protection | | IP67 |
| Tightening torque, fastening screws | | Threading M3 max: 1.1 Nm |

Connection





Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Accessories

| | | |
|-----------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------|
|  | V31-WM-2M-PUR | Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey |
|  | V31-GM-2M-PUR | Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey |

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