CE

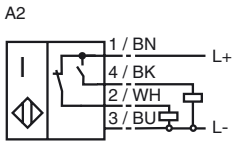
## Model Number

**NBB8-18GM60-A2-V1-3D**

## Features

- **Basic series**
- **increased operating distance**

## Connection

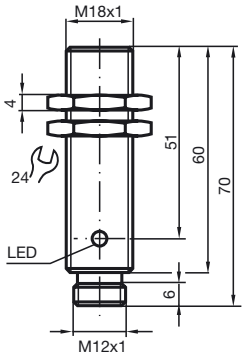



## Accessories

**BF 18**
Mounting flange

**EXG-18**
Mounting aid

## Dimensions




## Technical Data

| | | |
|---|---|---|
| **General specifications** | | |
| Switching element function | | PNP Antivalent |
| Rated operating distance | $s_n$ | 8 mm |
| Installation | | embeddable |
| 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 $r_{V2A}$ | | 0.7 |
| **Nominal ratings** | | |
| Operating voltage | $U_B$ | 10 ... 30 V |
| Switching frequency | f | 0 ... 500 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | protected against reverse polarity |
| 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 µA at 25 °C |
| No-load supply current | $I_0$ | ≤ 25 mA |
| Indication of the switching state | | LED, yellow |
| **Standard conformity** | | |
| Standards | | IEC / EN 60947-5-2:2004 |
| **Ambient conditions** | | |
| Ambient temperature | | -25 ... 70 °C (248 ... 343 K) |
| **Mechanical specifications** | | |
| Connection type | | V1-connector |
| Housing material | | brass, nickel-plated |
| Sensing face | | PBT |
| Protection degree | | IP67 |
| **General information** | | |
| Use in the hazardous area | | see instruction manuals |
| Category | | 3D |

Release date: 2008-10-10 10:01 Date of issue: 2008-10-10 127794_ENG.xml

**ATEX 3D**

| | |
|---|---|
| Instruction | **Manual electrical apparatus for hazardous areas** |
| **Device category 3D** | for use in hazardous areas with non-conducting combustible dust |
| Directive conformity | 94/9/EG |
| Standard conformity | EN 50281-1-1<br>Protection via housing<br>Use is restricted to the following stated conditions |
| CE symbol | CE |
| Ex-identification | Ex II 3D IP67 T 94 °C X The Ex-significant identification is on the enclosed adhesive label |
| General | The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The data stated in the data sheet are restricted by this operating instruction! The special conditions must be adhered to! |
| Installation, Comissioning | Laws and/or regulations and standards governing the use or intended usage goal must be observed.<br>The adhesive label provided must be affixed in the immediate vicinity of the sensor! The surface to which the label is applied must be clean, flat and free from grease!<br>The affixed adhesive label must be readable and durable, taking account of the possibility of chemical corrosion! |
| Maintenance | No changes can be made to apparatus, which are operated in hazardous areas.<br>Repairs to these apparatus are not possible. |
| [Fett]Special conditions | |
| Maximum operating current $I_L$ | The maximum permissible load current must be restricted to the values given in the following list.<br>High load currents and load short-circuits are not permitted. |
| Maximum operating voltage UBmax | The maximum permissible operating voltage UBmax must be restricted to the values given in the following list. Tolerances are not permitted. |
| Maximum heating (Temperature rise) | dependant of the load current $I_L$ and the max. operating voltage $U_{Bmax.}$<br>Information can be taken from the following list. The maximum surface temperature at maximum ambient temperature is given in the Ex identification of the apparatus. |
| at $U_{Bmax}$=30 V, $I_L$=200 mA | 24 °C |
| at $U_{Bmax}$=30 V, $I_L$=100 mA | 20 °C |
| at $U_{Bmax}$=30 V, $I_L$=50 mA | 19 °C |
| Plug connector | The plug connector must not be disconnected under voltage. The proximity switch is marked as follows: “DO NOT DISCONNECT UNDER VOLTAGE!” When the plug connector is disconnected the ingress of dirt into the inner areas (i.e. the areas, which are not accessible in the plugged-in condition) must be prevented.<br>The plug connection can only be separated using a tool. This is achieved by using the locking protection V1-Clip (Mounting accessory from Pepperl + Fuchs). |
| Protection from mechanical danger | The sensor must not be mechanically damaged. |
| Electrostatic charging | Electrostatic charges on the metal housing components must be avoided. Dangerous electrostatic charges on the metal housing components can be avoided by incorporating these components in the equipotential bonding. |

Release date: 2008-10-10 10:01 Date of issue: 2008-10-10 127794_ENG.xml





Pepperl+Fuchs Group www.pepperl-fuchs.com
USA: +1 330 486 0001 fa-info@us.pepperl-fuchs.com
Germany: +49 621 776-4411 fa-info@de.pepperl-fuchs.com
Singapore: +65 6779 9091 fa-info@sg.pepperl-fuchs.com