Inductive sensor NBN4-V3-E2-3G-3D

Technical Data

General specifications
Switching function: Normally open (NO)
Output type: PNP
Rated operating distance: 4 mm
Installation: non-flush
Output polarity: DC
Assured operating distance: 0 – 3.24 mm
Reduction factor rAl: 0.35
Reduction factor rCu: 0.2
Reduction factor r304: 0.7
Output type: 3-wire

Nominal ratings
Operating voltage: 10 ... 30 V DC
Switching frequency: 0 ... 500 Hz
Reverse polarity protection: yes
Short-circuit protection: pulsing
Voltage drop: \( U_d \leq 3 \) V
Operating current: \( I_L \leq 100 \) mA
Off-state current: \( I_r \leq 0.5 \) mA typ. 0.1 \( \mu \)A at 25 °C
No-load supply current: \( I_0 \leq 15 \) mA
Switching state indicator: LED, yellow

Ambient conditions
Ambient temperature: -25 ... 70 °C (-13 ... 158 °F)

Mechanical specifications
Connection type: cable PVC, 130 mm
Core cross-section: 0.14 mm²
Housing material: PBT
Sensing face: PBT
Degree of protection: IP67
Cable Bending radius: > 10 x cable diameter

General information
Use in the hazardous area: see instruction manuals
Category: 3G, 3D

Compliance with standards and directives
Standard conformity
- 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: CCC approval / marking not required for products rated \( \leq 36 \) V

Dimensions

Electrical Connection

Equipment protection level Gc (nA)
Certificate: PF 15CERT3754 X
CE marking:
ATEX marking: II 3G Ex nA IIC T6 Gc
The Ex-related marking can also be printed on the enclosed label.
### Inductive sensor NBN4-V3-E2-3G-3D

**Standards**  

**Ignition protection category "n"**
Use is restricted to the following stated conditions

<table>
<thead>
<tr>
<th>Special conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating current $I_L$</td>
</tr>
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<td>Maximum operating voltage $U_{Bmax}$</td>
</tr>
<tr>
<td>Maximum permissible ambient temperature $T_{U_{max}}$</td>
</tr>
<tr>
<td>at $U_{Bmax}=30 \text{ V}$, $I_L=100 \text{ mA}$</td>
</tr>
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<td>at $U_{Bmax}=30 \text{ V}$, $I_L=25 \text{ mA}$</td>
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</tbody>
</table>

**Equipment protection level Dc (tc)**  
 CE marking:  
ATEX marking: II 3D Ex tc IIIC T80°C Dc

**CE marking**

**ATEX marking**

**Standards**  

**Protection by enclosure "tc"**

Some of the information in this instruction manual is more specific than the information provided in the datasheet.

**General**

The corresponding datasheets, declarations of conformity, EC-type examination certificates, certifications, and control drawings, where applicable (see datasheets), form an integral part of this document. These documents can be found at www.pepperl-fuchs.com. The maximum surface temperature of the device was determined without a layer of dust on the apparatus. Some of the information in this instruction manual is more specific than the information provided in the datasheet.

**Special conditions**

**Maximum permissible ambient temperature $T_{U_{max}}$**

| at $U_{Bmax}=30 \text{ V}$, $I_L=100 \text{ mA}$ | $41 \degree \text{C} (105.8 \degree \text{F})$ |
| at $U_{Bmax}=30 \text{ V}$, $I_L=50 \text{ mA}$ | $42 \degree \text{C} (107.6 \degree \text{F})$ |
| at $U_{Bmax}=30 \text{ V}$, $I_L=25 \text{ mA}$ | $42 \degree \text{C} (107.6 \degree \text{F})$ |