



CE

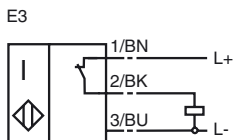
Model Number

NBB2-V3-E3-3D

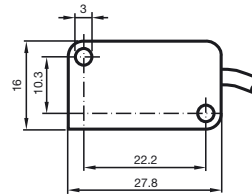
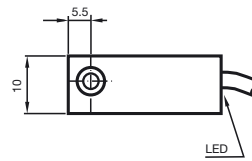
Features

- Basic series
- 2 mm embeddable

Connection



Dimensions



Technical Data

General specifications

Switching element function	PNP Break function
Rated operating distance	s_n 2 mm
Installation	embeddable
Output polarity	DC
Assured operating distance	s_a 0 ... 1.62 mm
Reduction factor r_{Al}	0.35
Reduction factor r_{Cu}	0.2
Reduction factor r_{V2A}	0.7

Nominal ratings

Operating voltage	U_B	10 ... 30 V
Switching frequency	f	0 ... 1000 Hz
Reverse polarity protection		all connections
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 100 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 μ A at 25 °C
No-load supply current	I_0	≤ 15 mA
Indication of the switching state		LED, yellow

Standard conformity

Standards	IEC / EN 60947-5-2:2004
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Ambient conditions

Ambient temperature	-25 ... 70 °C (248 ... 343 K)
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Mechanical specifications

Connection type	130 mm, PVC cable
Core cross-section	0.14 mm ²
Housing material	PBT
Sensing face	PBT
Protection degree	IP67

General information

Use in the hazardous area	see instruction manuals
Category	3D

ATEX 3D

Instruction

Manual electrical apparatus for hazardous areas**Device category 3D**

Directive conformity

Standard conformity

CE symbol

Ex-identification

General

Installation, Commissioning

Maintenance

[Fett]Special conditions

Maximum operating current I_L Maximum operating voltage U_{Bmax}

Maximum heating (Temperature rise)

at $U_{Bmax}=30\text{ V}$, $I_L=100\text{ mA}$ at $U_{Bmax}=30\text{ V}$, $I_L=50\text{ mA}$ at $U_{Bmax}=30\text{ V}$, $I_L=25\text{ mA}$

Protection from mechanical danger

Protection of the connection cable

for use in hazardous areas with non-conducting combustible dust

94/9/EG

EN 50281-1-1

Protection via housing

Use is restricted to the following stated conditions

CE

Ex II 3D IP67 T 110 °C X

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!

Laws and/or regulations and standards governing the use or intended usage goal must be observed.

No changes can be made to apparatus, which are operated in hazardous areas.

Repairs to these apparatus are not possible.

The maximum permissible load current must be restricted to the values given in the following list.

High load currents and load short-circuits are not permitted.

The maximum permissible operating voltage U_{Bmax} must be restricted to the values given in the following list. Tolerances are not permitted.dependant of the load current I_L and the max. operating voltage U_{Bmax} .

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.

40 °C

39 °C

36 °C

The sensor must not be mechanically damaged.

The connection cable must be prevented from being subjected to tension and torsional loading.