



Model Number

NBN4-V3-E2-3D

Features

- Basic series
- 4 mm non-flush

Technical Data

General specifications

Switching element function		PNP	NO
Rated operating distance	s_n	4 mm	
Installation		non-flush	
Output polarity		DC	
Assured operating distance	s_a	0 ... 3.24 mm	
Reduction factor r_{Al}		0.35	
Reduction factor r_{Cu}		0.2	
Reduction factor r_{304}		0.7	

Nominal ratings

Operating voltage	U_B	10 ... 30 V
Switching frequency	f	0 ... 500 Hz
Reverse polarity protection		yes
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
Switching state indicator		LED, yellow

Standard conformity

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

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
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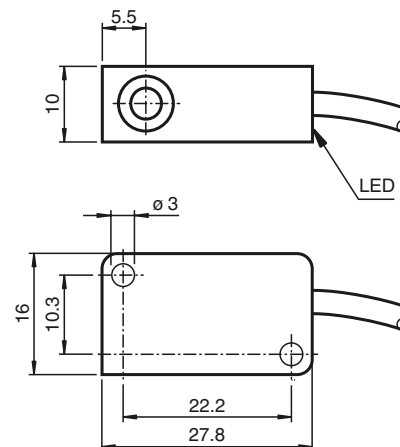
Mechanical specifications

Core cross-section	0.14 mm ²
Housing material	PBT
Sensing face	PBT
Degree of protection	IP67

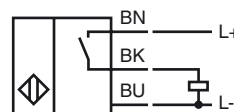
General information

Use in the hazardous area	see instruction manuals
Category	3D

Dimensions



Electrical Connection



ATEX 3D

Instruction	Manual electrical apparatus for hazardous areas
Device category 3D CE marking	for use in hazardous areas with non-conducting combustible dust CE
ATEX marking Directive conformity Standards	Ex II 3D IP67 T 99 °C (210.2 °F) X 94/9/EG EN 50281-1-1 Protection via housing Use is restricted to the following stated conditions
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, Commissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed.
Maintenance	No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.
Specific conditions	
Maximum operating current I_L	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.
Maximum operating voltage U_{Bmax}	The maximum permissible operating voltage U_{Bmax} 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} . 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, $I_L=100$ mA	29 K
at $U_{Bmax}=30$ V, $I_L=50$ mA	28 K
at $U_{Bmax}=30$ V, $I_L=25$ mA	25 K
Protection from mechanical danger	The sensor must not be mechanically damaged.
Protection of the connection cable	The connection cable must be prevented from being subjected to tension and torsional loading.