



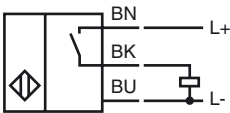
Model Number

NCB1,5-18GM60-E2-D-3D

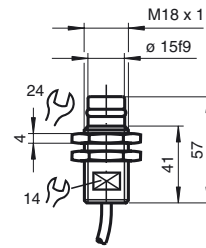
Features

- Comfort series
- 1.5 mm embeddable
- Compression proof up to 350 bar, dynamic on active surface

Connection



Dimensions



Technical Data

General specifications

Switching element function		PNP	NO
Rated operating distance	s_n	1.5 mm	
Installation		embeddable	
Output polarity		DC	
Assured operating distance	s_a	0 ... 1.22 mm	
Reduction factor r_{Al}		0.3	
Reduction factor r_{Cu}		0.2	
Reduction factor r_{304}		0.5	

Nominal ratings

Operating voltage	U_B	10 ... 60 V
Switching frequency	f	0 ... 1500 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protected		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 200 mA
No-load supply current	I_0	≤ 10 mA

Limit data

Operating pressure dynamically	350 bar (5076.4 psi)
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Standard conformity

EMC in accordance with Standards	IEC / EN 60947-5-2:2004 IEC / EN 60947-5-2:2004
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Ambient conditions

Ambient temperature	-35 ... 80 °C (-31 ... 176 °F)
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Mechanical specifications

Core cross-section	0.34 mm ²
Housing material	Stainless steel
Sensing face	Epoxy (black)
Protection degree	IP67

General information

Use in the hazardous area Category	see instruction manuals 3D
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ATEX 3D

Instruction

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

Directive conformity

Standard conformity

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

CE symbol

Ex-identification

General

Ex II 3D IP67 T 98 °C (208.4 °F) 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!

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.

Special conditionsMaximum 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 $U_{Bmax}=60$ V, $I_L=200$ mA

18 K

at $U_{Bmax}=60$ V, $I_L=50$ mA

17 K

at $U_{Bmax}=30$ V, $I_L=200$ mA

14 K

at $U_{Bmax}=30$ V, $I_L=100$ mA

13 K

Protection from mechanical danger

The sensor must not be mechanically damaged.

Electrostatic charging

Electrostatic charges must be avoided on the mechanical housing components. Dangerous electrostatic charges on the mechanical housing components can be avoided by incorporating these in the equipotential bonding.

Protection of the connection cable

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