



CE

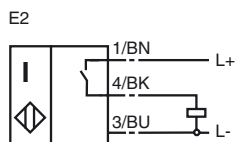
Model Number

NJ2-12GM40-E2-3D-5M

Features

- Comfort series
- 2 mm embeddable

Connection

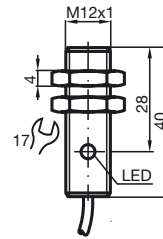


Accessories

EXG-12

Mounting aid

Dimensions



Technical Data

General specifications

Switching element function	PNP Make 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}	0.23
Reduction factor r_{Cu}	0.21
Reduction factor r_{V2A}	0.7

Nominal ratings

Operating voltage	U_B	10 ... 60 V
Switching frequency	f	0 ... 3000 Hz
Hysteresis	H	1 ... 10 typ. 3 %
Reverse polarity protection		protected against reverse polarity
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 200 mA
No-load supply current	I_0	≤ 11 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)
Storage temperature	-40 ... 85 °C (233 ... 358 K)

Mechanical specifications

Connection type	5 m, PUR cable
Core cross-section	0.34 mm ²
Housing material	Stainless steel
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

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 symbol



Ex-identification

II 3D IP67 T 104 °C X

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.

[Fett]Special 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 $U_{Bmax}=60$ V, $I_L=200$ mA

34 °C

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

22 °C

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

26 °C

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

17 °C

at $U_{Bmax}=30$ V, $I_L=50$ mA

13 °C

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.

Protection of the connection cable

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