



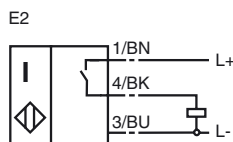
Model Number

NJ2-12GM40-E2-V1-3D

Features

- Comfort series
- 2 mm embeddable

Connection



Accessories

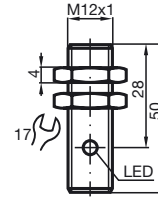
BF 12

Mounting flange

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_{AI}	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
-----------	-------------------------

Ambient conditions

Ambient temperature	-25 ... 70 °C (248 ... 343 K)
Storage temperature	-40 ... 85 °C (233 ... 358 K)

Mechanical specifications

Connection type	V1-connector
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

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 $U_{Bmax}=60\text{ V}$, $I_L=200\text{ mA}$ at $U_{Bmax}=60\text{ V}$, $I_L=100\text{ mA}$ at $U_{Bmax}=60\text{ V}$, $I_L=50\text{ mA}$ at $U_{Bmax}=30\text{ V}$, $I_L=200\text{ mA}$ at $U_{Bmax}=30\text{ V}$, $I_L=100\text{ mA}$

Plug connector

Protection from mechanical danger

Electrostatic charging


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


 II 3D IP67 T 105 °C X

The Ex-significant identification is on the enclosed adhesive label

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.

The adhesive label provided must be affixed in the immediate vicinity of the sensor! The surface to which the label is

applied must be clean, flat and free from grease!

The affixed adhesive label must be readable and durable, taking account of the possibility of chemical corrosion!

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.

35 °C

24 °C

23 °C

26 °C

16 °C

The plug connector must not be disconnected under voltage. The proximity switch is marked as follows: "DO NOT DISCONNECT UNDER VOLTAGE!" When the plug connector is disconnected the ingress of dirt into the inner areas (i.e. the areas, which are not accessible in the plugged-in condition) must be prevented.

The plug connection can only be separated using a tool. This is achieved by using the locking protection V1-Clip (Mounting accessory from Pepperl + Fuchs).

The sensor must not be mechanically damaged.

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.