



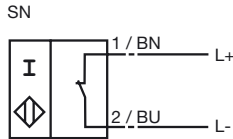
**Model Number**

NJ40-FP-SN-B1-P1-Y024207

**Features**

- 40 mm flush

**Connection**



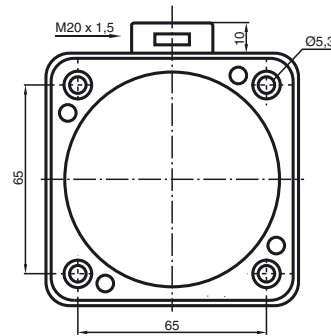
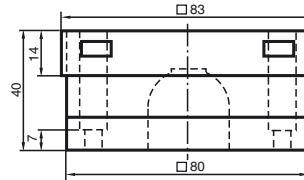
**Application**



**Danger!**

In safety-related applications the sensor must be operated with a qualified fail safe interface from Pepperl+Fuchs, such as KFD2-SH-EX1. Consider the "exida Functional Safety Assessment" document which is available on [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com) as an integral part of this product's documentation.

**Dimensions**



**Technical Data**

**General specifications**

Switching element function	NAMUR, NC
Rated operating distance	$s_n$ 40 mm
Installation	flush
Output polarity	Safety Function
Assured operating distance	$s_a$ 0 ... 32.4 mm
Reduction factor $r_{Al}$	0.4
Reduction factor $r_{Cu}$	0.3
Reduction factor $r_{304}$	0.85

**Nominal ratings**

Nominal voltage	$U_o$ 8 V
Switching frequency	$f$ 0 ... 100 Hz
Current consumption	
Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA

**Ambient conditions**

Ambient temperature	-40 ... 100 °C (-40 ... 212 °F)
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**Mechanical specifications**

Connection type	screw terminals
Core cross-section	up to 2.5 mm <sup>2</sup>
Housing material	PBT
Sensing face	PBT
Protection degree	IP68

**General information**

Use in the hazardous area	see instruction manuals
Category	2G

**Compliance with standards and directives**

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

**Approvals and certificates**

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose

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**ATEX 2G**

Instruction

**Device category 2G**

Directive conformity

Standard conformity

CE marking

Ex-identification

EC-Type Examination Certificate

Appropriate type

Effective internal capacitance  $C_i$ Effective internal inductance  $L_i$ 

General

Highest permissible ambient temperature

Installation, Commissioning

Maintenance

**Specific conditions**

Electrostatic charging

**Manual electrical apparatus for hazardous areas**

for use in hazardous areas with gas, vapour and mist


94/9/EG

EN 60079-0:2009, EN 60079-11:2007

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

 0102

 II 2G Ex ia IIC T6 Gb

PTB 00 ATEX 2049 X

NJ 40-FP-SN...

 $\leq 370$  nF ; a cable length of 10 m is considered. $\leq 300$   $\mu$ H ; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate.

Laws and/or regulations and standards governing the use or intended usage goal must be observed. The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety.

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

When used in group IIC non-permissible electrostatic charges should be avoided on the plastic housing parts. The apparatus is provided with an outer lacquered metallic screen, which must be protected from electrostatic charging.