

Model Number

NRB50-FP-E2-C-P3-V1

Features

- **50 mm flush**
- **Reduction factor = 1**
- **Weld Immune**

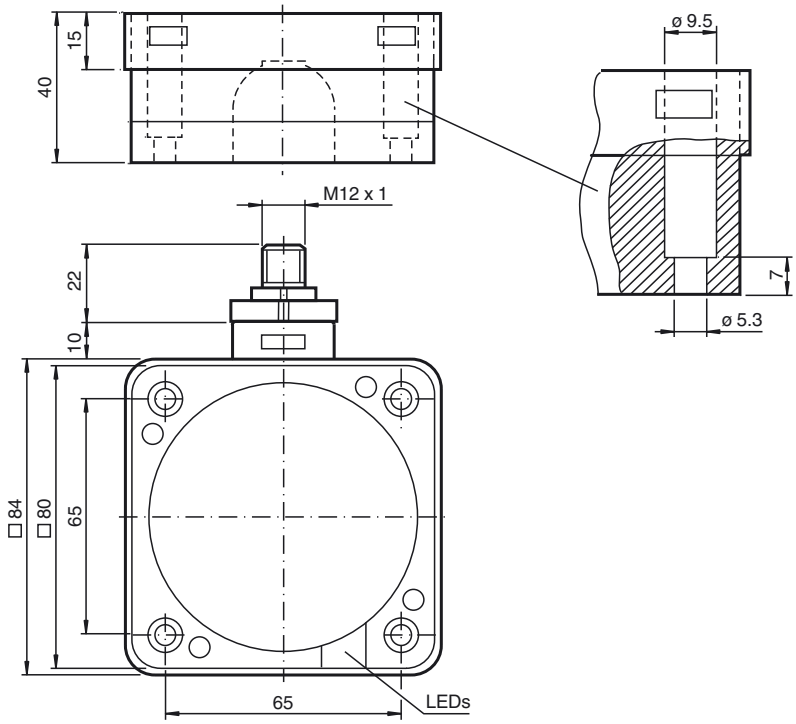
Accessories

V1-G
Female connector, M12, 4-pin, field attachable
V1-W
Female connector, M12, 4-pin, field attachable
V1-G-2M-PUR
Female cordset, M12, 4-pin, PUR cable
V1-W-2M-PUR
Female cordset, M12, 4-pin, PUR cable

Technical Data

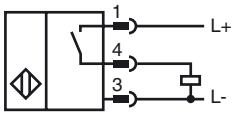
General specifications		
Switching element function		PNP NO
Rated operating distance	s_n	50 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 40.5 mm
Reduction factor r_{Al}		1
Reduction factor r_{Cu}		1
Reduction factor r_{304}		1
Reduction factor r_{St37}		1
Nominal ratings		
Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 1 Hz
Hysteresis	H	typ. 3 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Rated insulation voltage	U_{BIS}	50 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
No-load supply current	I_0	≤ 20 mA
Time delay before availability	t_v	≤ 300 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety related parameters		
$MTTF_d$		944 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Ambient conditions		
Ambient temperature		0 ... 50 °C (32 ... 122 °F) (± 10 % changing operating distance) -25 ... 70 °C (-13 ... 158 °F) (± 20 % changing operating distance)
Mechanical specifications		
Connection type		Connector M12 x 1 , 4-pin
Housing material		PBT/metal
Sensing face		PBT, PTFE coated
Housing base		PBT
Degree of protection		IP68
Compliance with standards and directives		
Standard conformity		
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
CCC approval		CCC approval / marking not required for products rated ≤36 V

Dimensions

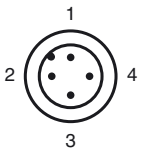


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Electrical Connection



Pinout

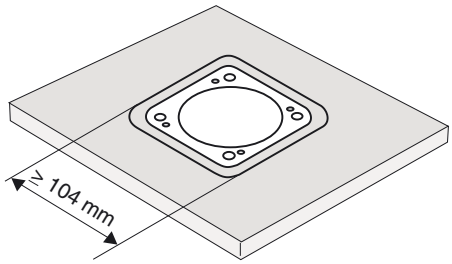


Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Installation Hint

These sensors are particularly suitable for embedded installation in floor conveyor systems. The installation of the switch in a metal base plate provides it with considerable protection against mechanical damage.
Care should be taken to ensure that the cut out in the base plate is at least 104 mm x 104 mm and that the sensor is positioned centrally within this cut out.
The active surface of the sensor must not be recessed with respect to the front face of the base plate.
The high switching distance guarantees safe detection and thus control of the floor conveyor system.



Caution!
After removal of the metal screen the proximity switch can no longer be mounted as an embedded installation.

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