

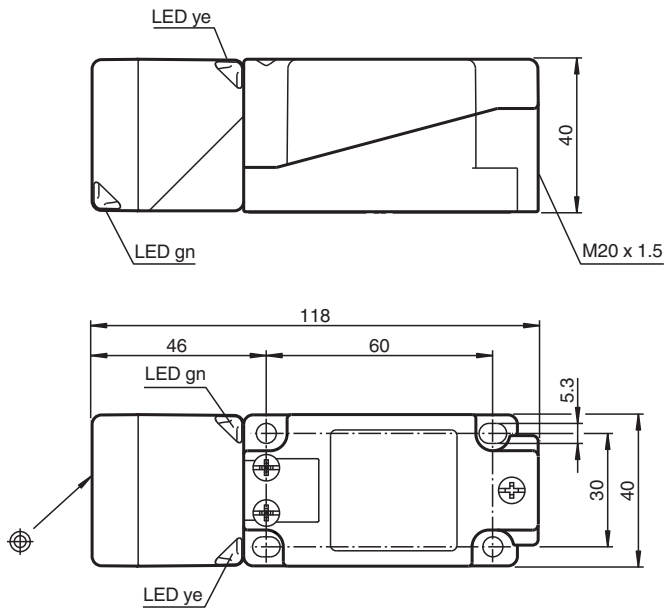


Inductive sensor NBB15-U1-A2-M

- Sensor head bidirectional and rotatable
- 15 mm flush
- 4 LEDs indicator for 360° visibility
- E1-Type approval
- Extended temperature range
-40 ... +85 °C



Dimensions



Technical Data

General specifications

Switching function		complementary
Output type		PNP
Rated operating distance	s_n	15 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 12.15 mm
Reduction factor r_{AI}		0.34
Reduction factor r_{Cu}		0.32
Reduction factor r_{304}		0.77

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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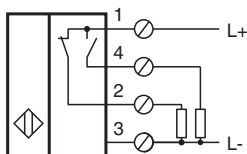
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Technical Data

Reduction factor r_{Brass}		0.43
Output type		4-wire
Nominal ratings		
Operating voltage	U_B	10 ... 60 V
Switching frequency	f	0 ... 200 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
No-load supply current	I_o	≤ 20 mA
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
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		Certified by China Compulsory Certification (CCC)
E1 Type approval		10R-04
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		screw terminals
Information for connection		A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross section		up to 2.5 mm ²
Minimum core cross-section		without wire end ferrule 0.5 mm ² , with connector sleeves 0.34 mm ²
Maximum core cross-section		without wire end ferrule 2.5 mm ² , with connector sleeves 1.5 mm ²
Housing material		PA/metal with epoxy powder coating
Sensing face		PA-GF35
Housing base		plastic
Degree of protection		IP68 / IP69K
Mass		225 g
Note		Tightening torque: 1.8 Nm (housing)

Connection





Mounting

Emitted interference and interference immunity in accordance with motor vehicle directive 2006/28/EG (e1 Type approval)
 Interference immunity in accordance with DIN ISO 11452-2: 100 V/m
 Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO 7637-2: Pulse 1 2a 2b 3a 3b 4 5
 Severity level III III III III III III IV
 Failure criterion C A C A A A C

EN 61000-4-2: CD: 8 kV / AD: 15 kV
 Severity level IV IV
 EN 61000-4-3: 30 V/m (80...2500 MHz)
 Severity level IV
 EN 61000-4-4: 2 kV
 Severity level III
 EN 61000-4-6: 10 V (0.01...80 MHz)
 Severity level III
 EN 55011: Class A

Accessories

	MHW 01	Modular mounting bracket
	V1-M20-80	Receptacles, M12/M20; plastic version

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