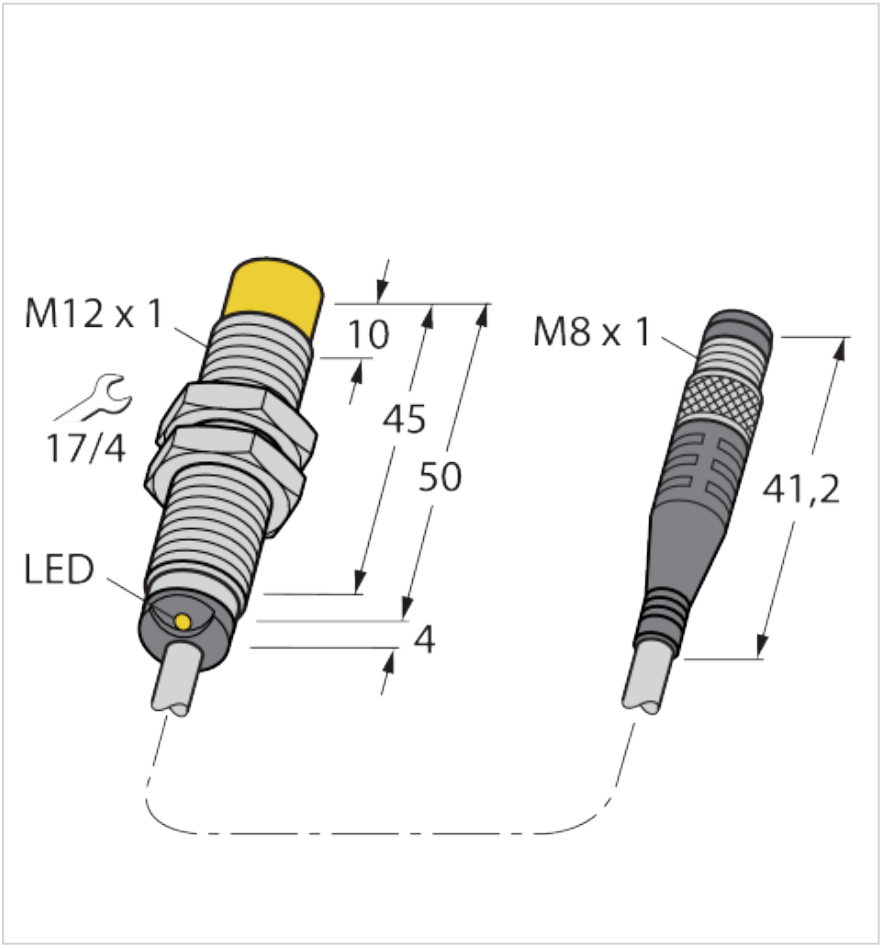
NI8U-M12-AP6X-0.2-PSG3M

Inductive Sensor



Type designation	NI8U-M12-AP6X-0.2-PSG3M
Ident-No.	1644108

Technical data

Application area	
Magnetic field immune	Immune to magnetic AC and DC fields
Detection area/measuring range	
Rated switching distance	8 mm
Secured operating distance	≤ (0.81 × Sn) mm
Power supply	
Operating voltage U_B	10...30 VDC
Voltage drop at I_e	≤ 1,8 V

Features

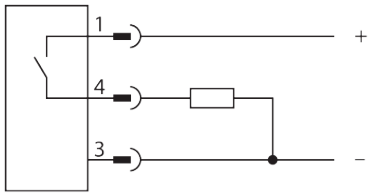
- M12 × 1 threaded barrel
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10…30 VDC
- NO, PNP output
- Pigtail with M8 × 1 connector

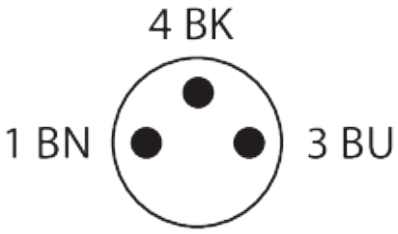
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Technical data

Electrical data	
AC field stability	300 mT_{SS}
No-load current	15 mA
Output function	3-wire, NO contact, PNP
Short-circuit protection	yes/Cyclic
Wire break/reverse polarity protection	yes/Complete
DC field stability	300 mT
DC rated operational current	≤ 200 mA
Insulation class	II
Isolation test voltage	≤ 0,5 kV
Residual current	≤ 0,1 mA
Residual ripple	≤ 10 % U_{ss}
Switching frequency	2 kHz
Accuracy/deviation	
Hysteresis	3 % v. E...15 % v. E.
Temperature drift	10 %
Repeat accuracy	≤ 2 % v. E.
	≤ ± 15 %, ≤ -25 °C v ≥ +70 °C
Mechanical data	
Design	Threaded barrel, M12 x 1
Construction type designation	M12
	⌀ 12 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, LCP
End cap	Plastic, EPTR
Material coupling nut	metal, CuZn, nickel-plated
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable with connector, M8 x 1
Number of pins	3
Pressure resistant	no
Thread length	35 mm
Thread size	M12 × 1
Mounting conditions	Non-flush
Cable	
Cable length	0,2 m
Core cross-section	3 x 0,14 mm²
Cable type	LifYY-11Y

Wiring Diagram





Functional principle

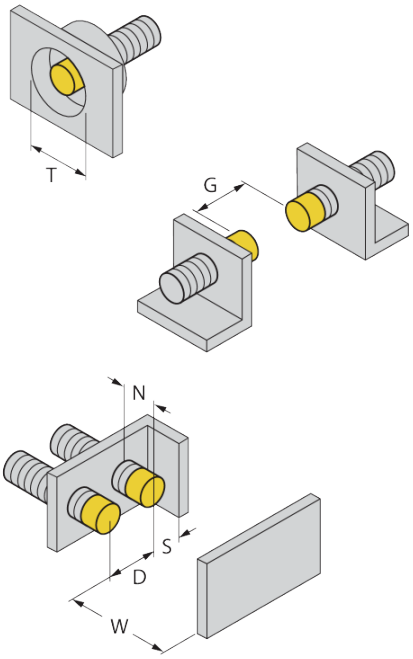
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

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Technical data

External Diameter of the Cable	Ø 3 mm
Cable Jacket Material	PUR
Ambient conditions	
Ambient temperature	-30...+85 °C
Pollution degree	3
Shock resistance	30 g (11 ms)
Vibration resistance	55 Hz (1 mm)
Protection class	IP68
Tests/approvals	
MTTF	874 Years acc. to SN 29500 (Ed. 99) 40 °C
Displays/controls	
Switching state	LED, Yellow

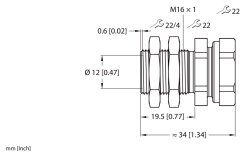
Assembly instructions

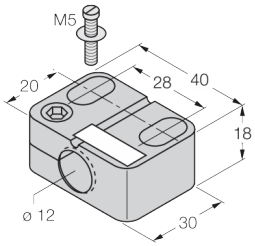


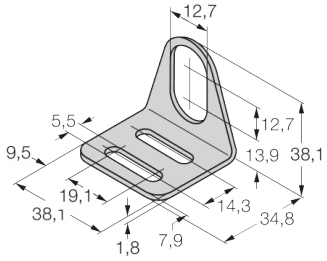
Distance D: 3 x B
Distance W: 3 x Sn
Distance T: 3 x B
Distance S: 1.5 x B
Distance G: 6 x Sn
Distance N: 2 x Sn
Diameter active area B: 12 mm

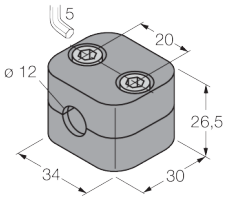
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Mounting accessories

QM-12	6945101
	Quick-mount bracket with dead-stop; material: chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B	6947212
	Mounting bracket for threaded barrel sensors, with dead-stop; material: PA6

MW12	6945003
	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12	6901321
	Mounting bracket for smooth and threaded barrel sensors; material: Polypropylene

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