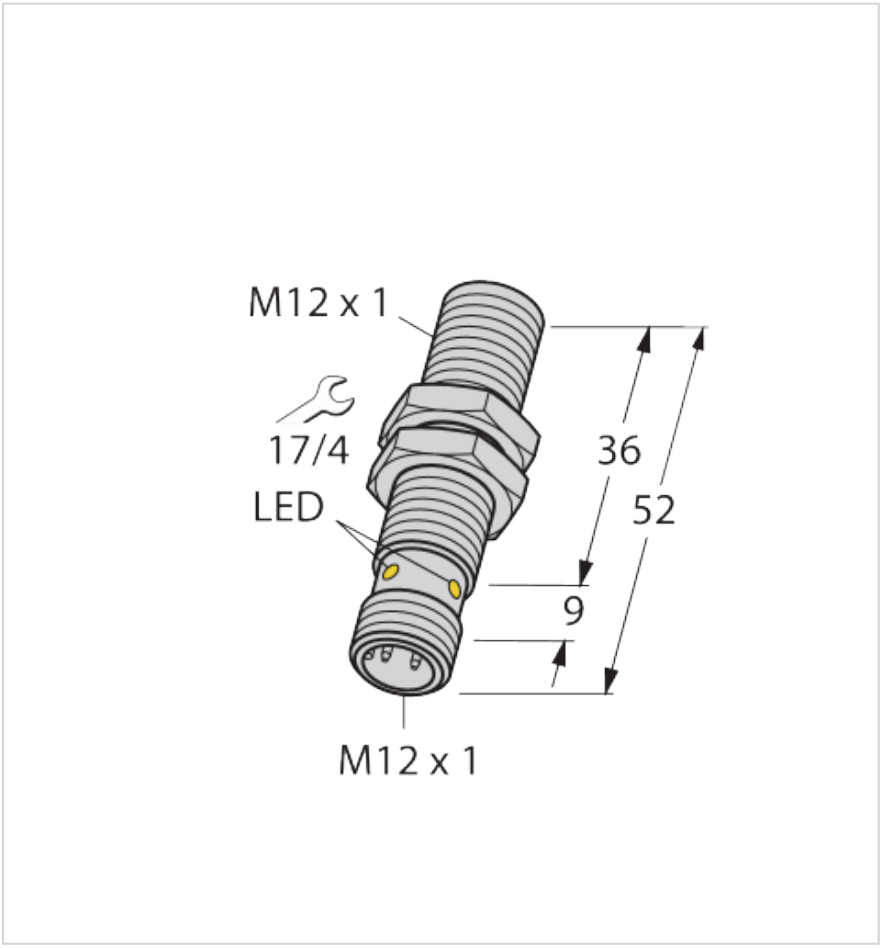
BI6U-M12-AP6X-H1141

Inductive Sensor





Type designation	BI6U-M12-AP6X-H1141
Ident-No.	1644810

Technical data

Application area	
Magnetic field immune	Immune to magnetic AC and DC fields
Detection area/measuring range	
Rated switching distance	6 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

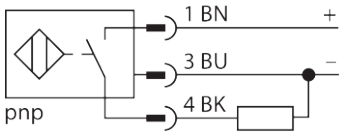
- M12 × 1 threaded barrel
- Chrome-plated brass
  - Factor 1 for all metals
  - Degree of protection IP68
  - Resistant to magnetic fields
  - Large switching distance
  - DC 3-wire, 10…30 VDC
  - NO, PNP output
  - Connector, M12 × 1

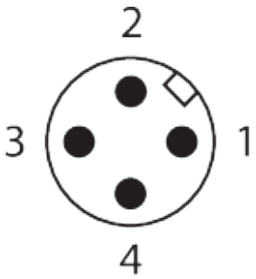
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Technical data

Electrical data	
AC field stability	300 mT_{SS}
No-load current	25 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
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.
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
Max. tightening torque of housing nut	7 Nm
Electrical connection	Connector, M12 x 1
Number of pins	4
Pressure resistant	no
Thread length	36 mm
Thread size	M12 × 1
Mounting conditions	Flush
Ambient conditions	
Ambient temperature	-25...+70 °C
Pollution degree	3
Shock resistance	30 g (11 ms)
Vibration resistance	55 Hz (1 mm)
Protection class	IP68
Tests/approvals	

Wiring Diagram





Functional principle

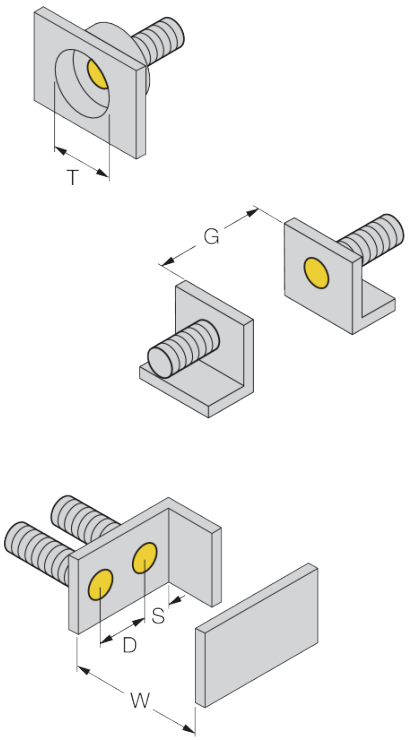
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

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Technical data

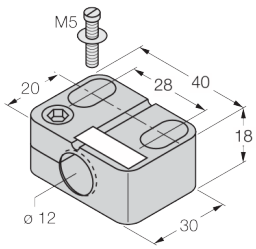
MTTF	874 Years acc. to SN 29500 (Ed. 99) 40 °C
Displays/controls	
Switching state	LED, Yellow

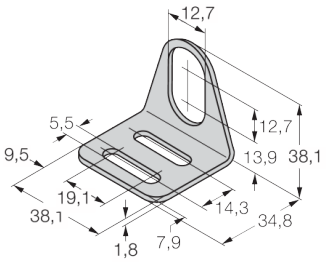
Assembly instructions



Distance D: 24 mm
Distance W: 3 x Sn
Distance T: 3 x B
Distance S: 1.5 x B
Distance G: 6 x Sn
Diameter active area B: 12 mm
Installation information:
The sensor along with the BSS-12 half-shell clamp can be mounted with a torque of up to 0.5 Nm in any orientation.

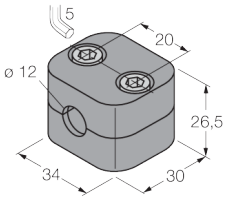
Mounting accessories

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)

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Mounting accessories

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

Connection accessories

RKC4T-2/TEL	6625010
	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

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