

BI4U-M12-RN6X-H1141

Inductive Sensor – With Extended Switching Distance



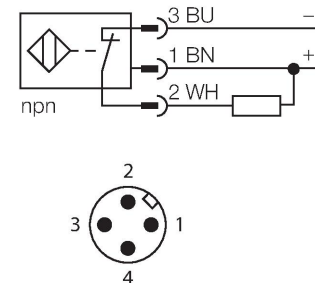
Technical data

Type	BI4U-M12-RN6X-H1141
ID	1635200
General data	
Rated switching distance	4 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
	$\leq \pm 15\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	$\leq 200\text{ mA}$
No-load current	25 mA
Residual current	$\leq 0.1\text{ mA}$
Isolation test voltage	$\leq 0.5\text{ kV}$
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	$\leq 1.8\text{ V}$
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NC contact, NPN
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□

Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NC contact, NPN output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. aprox+ 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.

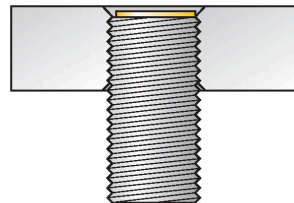
BI4U-M12-RN6X-H1141 | 11/07/2023 13-49 | technical changes reserved

Technical data

Switching frequency	3 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	52 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, LCP
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 x 1
Environmental conditions	
Ambient temperature	-30...+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



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	Ø 12 mm

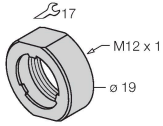
All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

Accessories

PN-M12

6905309

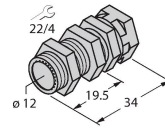
Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)



QM-12

6945101

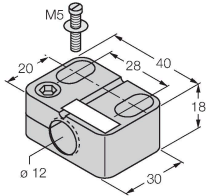
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

6947212

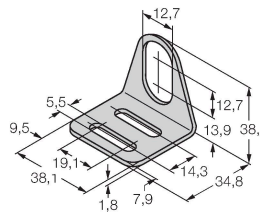
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW-12

6945003

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



BSS-12

6901321

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

