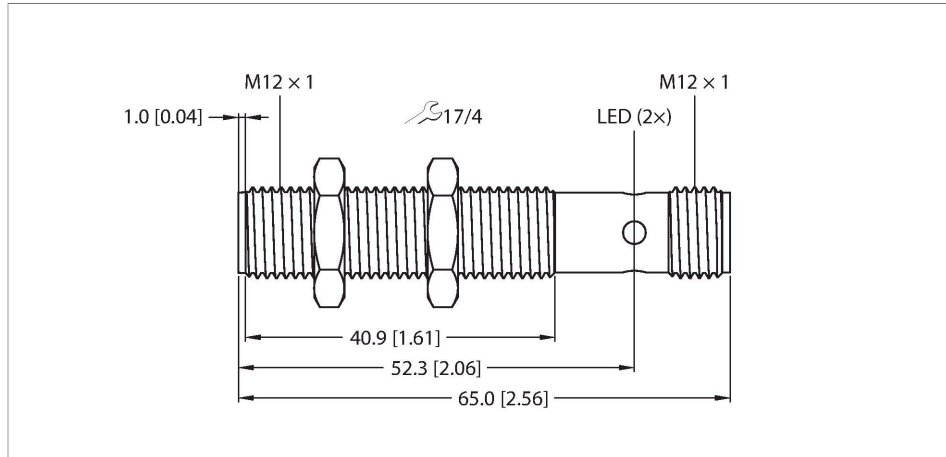


BI4-M12-2APS8X2-H1141

Inductive Sensor



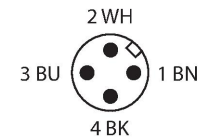
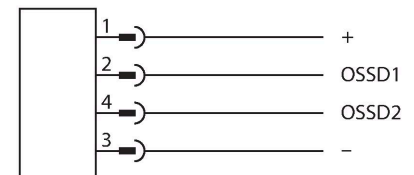
Technical data

Type	BI4-M12-2APS8X2-H1141
Ident. no.	100016606
Rated switching distance	4 mm
Secured switch-on distance	3.2 mm
Secured switch-off distance	6 mm
Mounting conditions	Flush
Correction factors	St37 = 1; Al = 0.45; stainless steel = 0.8; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	19.2...28.8 VDC
Residual ripple	≤ 10 % U _{ss}
No-load current	≤ 20 mA
Impulse withstand voltage	1.5 kV
Isolation test voltage	≤ 28.8 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	Complete
Output function	4-wire, 2x OSSD, NO contacts, PNP
Number of safe semiconductor outputs	2
Switching frequency	0.1 kHz
Design	Threaded barrel, M12 × 1
Dimensions	65 mm

Features

- M12 × 1 threaded barrel
- Nickel-plated brass
- SIL 2 (IEC 61508)
- PL d (ISO 13849-1)
- 2 x OSSD output, NO contact, PNP
- DC 4-wire, 24 VDC

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

Housing material	Metal, CuZn
Active area material	plastic, PA
Max. tightening torque housing nut	12 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
PL acc. to DIN EN 13849-1:2008	d
Category acc. to DIN EN 13849-1:2008	2
SIL according IEC 61508	2
Protection class	IP67
Power-on indication	LED, Red
Switching state	LED, Green

Mounting instructions

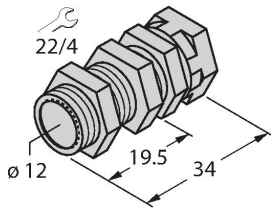
Mounting instructions/Description



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

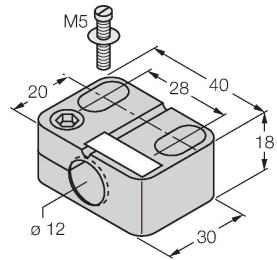
Accessories

QM-12 6945101



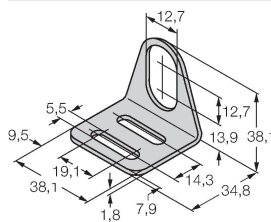
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B 6947212



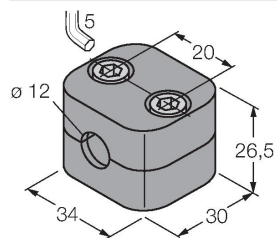
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW12 6945003



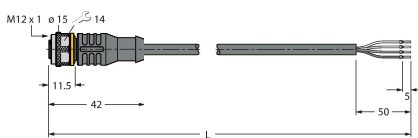
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12 6901321



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

Wiring accessories

Dimension drawing	Type	Ident. no.	
	RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com