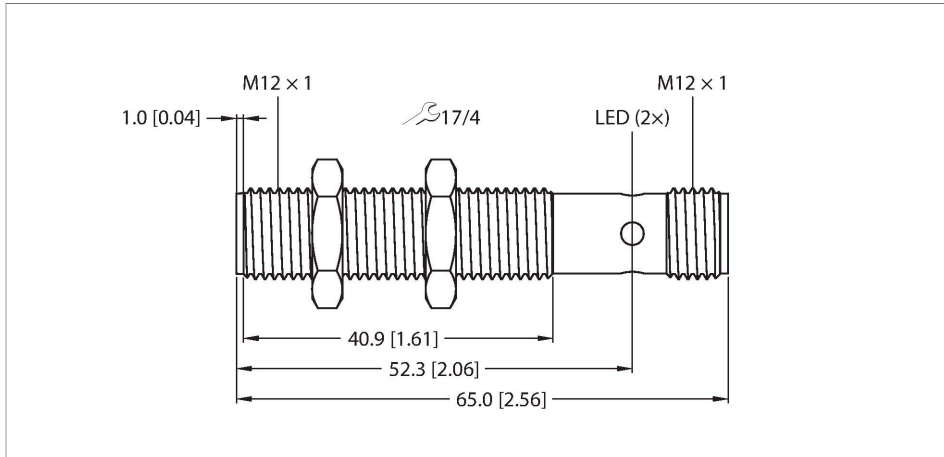


# BI4-M12-2APS8X2-H1141

## Inductive Safety Sensor



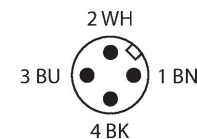
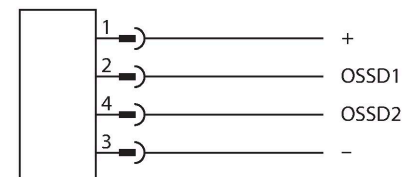
### Technical data

Type	BI4-M12-2APS8X2-H1141
ID	100016606
<b>General data</b>	
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 %
<b>Electrical data</b>	
Operating voltage $U_B$	19.2...28.8 VDC
Ripple $U_{ss}$	≤ 10 % $U_{Bmax}$
No-load current	≤ 20 mA
Impulse withstand voltage	1.5 kV
Isolation test voltage	0.0288 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	Complete
Output function	4-wire, 2 x OSSD, NO contact, PNP
Number of safe semiconductor outputs	2
Switching frequency	0.1 kHz

### 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

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	65 mm
Housing material	Metal, CuZn
Active area material	plastic, PA
Max. tightening torque of housing nut	12 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Safety Data	
PL acc. to EN ISO 13849-1	Level d
Category acc. to DIN EN 13849-1:2008	2
SIL acc. to IEC 61508	2
Power-on indication	LED, Red
Switching state	LED, Green

## Mounting instructions

### Mounting instructions/Description



Distance D 36 mm

Distance W 3 x Sn

Distance T 3 x B

Distance S 1.5 x B

Distance G 32 mm

Diameter active area B  $\varnothing$  12 mm

## Accessories

QM-12

6945101

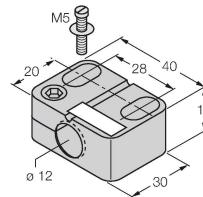
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

6947212

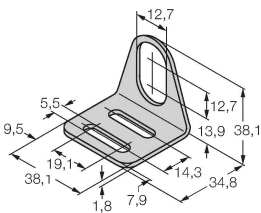
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW12

6945003

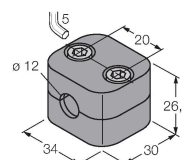
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



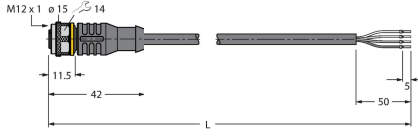
BSS-12

6901321

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



Wiring accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval