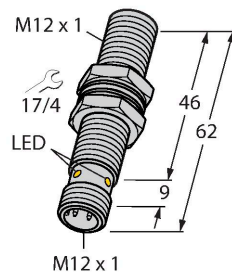


# BI2-M12E-Y0X-H1141

## Inductive Sensor



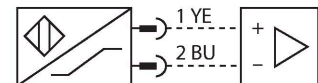
### Technical data

Type	BI2-M12E-Y0X-H1141
ID	4606490
<b>General data</b>	
Rated switching distance	2 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2 \%$ of full scale
Hysteresis	1...10 %
<b>Electrical data</b>	
Output function	2-wire, NAMUR
Switching frequency	5 kHz
Voltage	Nom. 8.2 VDC
Non-actuated current consumption	$\geq 2.1$ mA
Actuated current consumption	$\leq 1.2$ mA
<b>Mechanical data</b>	
Design	Threaded barrel, M12 x 1
Dimensions	62 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 x 1

### Features

- M12 x 1 threaded barrel
- Long version
- Chrome-plated brass
- DC 2-wire, nom. 8.2 VDC
- Output acc. to EN 60947-5-6 (NAMUR)
- M12 x 1 connector

### 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

Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	6198 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor:

- Top Diagram:** Shows a single sensor mounted to a vertical surface using a screw. A dimension line labeled 'T' indicates the distance from the mounting surface to the center of the sensor's active area.
- Middle Diagram:** Shows two sensors mounted to a vertical surface using screws. A dimension line labeled 'G' indicates the distance between the centers of the two sensors.
- Bottom Diagram:** Shows two sensors mounted to a vertical surface using screws. A dimension line labeled 'D' indicates the distance between the centers of the two sensors. A dimension line labeled 'S' indicates the distance from the mounting surface to the center of the sensor's active area. A dimension line labeled 'W' indicates the width of the sensor's active area.

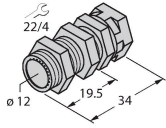
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

## Accessories

QM-12

6945101

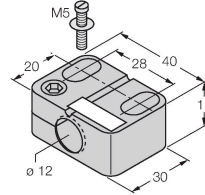
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

6947212

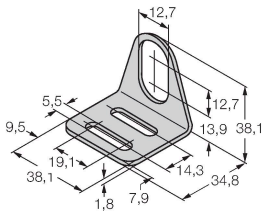
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



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

