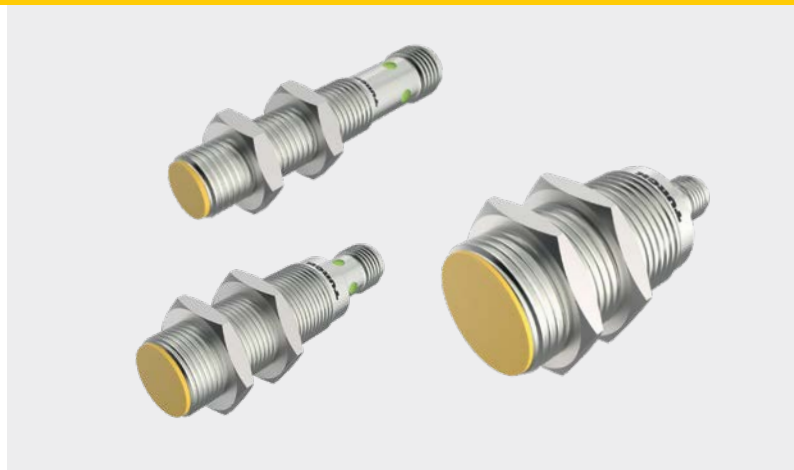


Your Global Automation Partner

# TURCK

## BI4-M12 | BI8-M18 | BI12-M30 Inductive Safety Sensors



### Sensors with Two OSSD Outputs

Inductive safety sensors with two OSSD (output switching signal device) outputs complete Turck's safety technology portfolio. The proximity sensors now allow users to exploit the benefits of contactless and therefore wear-free position and range monitoring in safety-related applications – whether on presses, cranes, amusement park rides or machine covers.

The sensors send switching signals to safety systems via their OSSD outputs. In addition, they detect short circuits, overloads or cross-connections while simultaneously testing the shutdown capability. With SIL 2 (IEC 61508) and Performance Level d (EN ISO 13849) ratings, the devices meet stringent functional safety requirements.

Turck's new product series includes M12, M18 and M30 flush-mount threaded barrel devices, each with a high secured switch-on distance, a rugged metal housing and a wide temperature range of -25...70 °C. Thanks to their resistance to dust and moisture, the inductive proximity switches reduce the risk of plant failure – and are therefore aimed at users who want to cost-effectively implement a safety solution using a metal target instead of a specially mounted actuator.

### Your Benefits

- Safe shutdown via two OSSD outputs up to SIL2 and Performance Level d
- Easy integration thanks to the compact design and a wide range of accessories
- Flexible use with high secured switch-on point without separate actuator
- High machine availability through IP67 protection rating

# Inductive Safety Sensors



- Threaded barrel, M12 × 1, M18 × 1 or M30 × 1.5
- Nickel-plated brass
- Flush mountable
- 2 x OSSD output, NO contact, PNP
- SIL 2 (IEC 61508), PL d (ISO 13849-1)
- DC 4-wire, 24 VDC

Type	BI4-M12-2APS8X2-H1141	BI8-M18-2APS8X2-H1141	BI12-M30-2APS8X2-H1141
Ident-No.	100016606	100016607	100016608
Rated switching distance	4 mm	8 mm	12 mm
Secured switch-on distance	3.2 mm	6.5 mm	9.6 mm
Secured switch-off distance	6 mm	12 mm	18 mm
Mounting condition	Flush		
Correction factors	St37 = 1; Al = 0.45; stainless steel = 0.8; Ms = 0.4		
Repeatability	≤ 2 % full scale		
Temperature drift	≤ ± 10 %		
Hysteresis	3...15 %		
Ambient temperature	-25...+70 °C		
Operating voltage	19.2...28.8 VDC		
Residual ripple	≤ 10 % U <sub>ss</sub>		
No-load current	≤ 20 mA		
Rated surge voltage resistance	1.5 kV		
Isolation test voltage	≤ 28.8 kV		
Short-circuit protection	Yes		
Wire breakage/reverse polarity protection	Complete		
Output function	Four-wire, NO contact, PNP		
Number of safe semiconductor outputs	2		
Switching frequency	0.1 kHz		
<b>Design</b>	M12 × 1 threaded barrel	M18 × 1 threaded barrel	M30 × 1.5 threaded barrel
Dimensions	65 mm	69 mm	71 mm
Housing material	Metal, CuZn		
Active face material	Plastic PA		
Max. tightening torque of housing nut	12 Nm		
Electrical connection	M12 × 1 male connector		
Vibration resistance	55 Hz (1 mm)		
Shock resistance	30 g (11 ms)		
PL acc. to EN ISO 13849-1:2008	d		
Category acc. to EN ISO 13849-1:2008	2		
SIL per IEC 61508	2		
Protection class	IP67		
<b>Operating voltage display</b>	LED, red		
Display switching status	LED, green		

