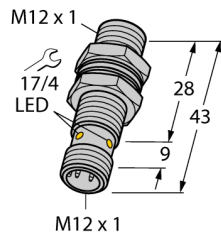


# Inductive Sensor With Increased Switching Distance BI4-G12K-AP6X-H1141



Type	BI4-G12K-AP6X-H1141
ID	4670213

General data	
Rated switching distance $S_n$	4 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
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...15 %

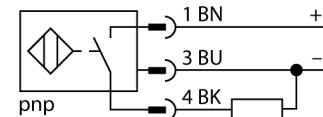
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{es}$
DC rated operational current	$\leq 200$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes/ Cyclic
Voltage drop at $I_L$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	42 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

Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C

- Threaded barrel, M12 x 1
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male 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.

Switching state LED, Yellow

## Accessories

Type code	Ident no.		Dimension drawing
BST-12B	6947212	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6	
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.	
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	