

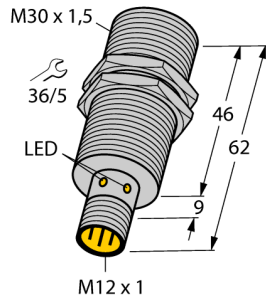
Inductive sensor

With increased switching distance

BI15-M30-AP6X-H1141

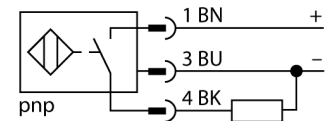
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- Threaded barrel, M30 x 1.5
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

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.

Type designation	BI15-M30-AP6X-H1141
Ident-No.	46185
Ident-No (TUSA)	T4618500
Rated switching distance Sn	15 mm
Mounting conditions	flush
Assured switching distance	$\leq (0,81 \times S_n) \text{ mm}$
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq 2 \% \text{ of full scale}$
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	10... 30VDC
Residual ripple	$\leq 10 \% U_{in}$
DC rated operational current	$\leq 200 \text{ mA}$
No-load current I_0	$\leq 15 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Rated insulation voltage	$\leq 0.5 \text{ kV}$
Short-circuit protection	yes/ cyclic
Voltage drop at I_0	$\leq 1.8 \text{ V}$
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Protective insulation	□
Switching frequency	0.3 kHz
Construction	Threaded barrel, M30 x 1.5
Dimensions	62 mm
Housing material	Metal, CuZn, chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque housing nut	75 Nm
Electrical connection	Flange connector, M12 x 1
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
Switching state	LED yellow

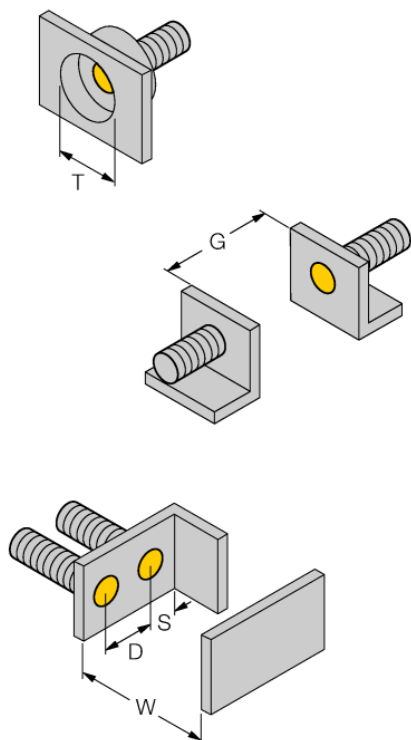
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Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

Diameter of the active area B	Ø 30 mm
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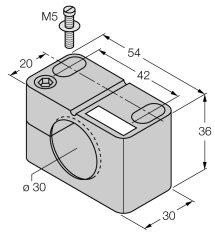
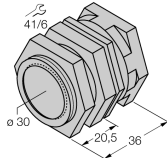
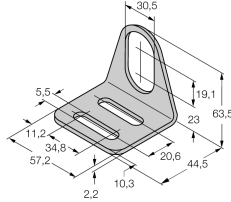
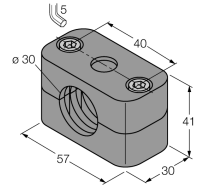


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Accessories

Type code	Ident-No.	Description	
BST-30B	6947216	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
QM-30	6945103	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M36 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
MW-30	6945005	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-30	6901319	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	

Wiring accessories

Type code	Ident-No.	Description	
RKC4T-2/TEL	6625010	Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	