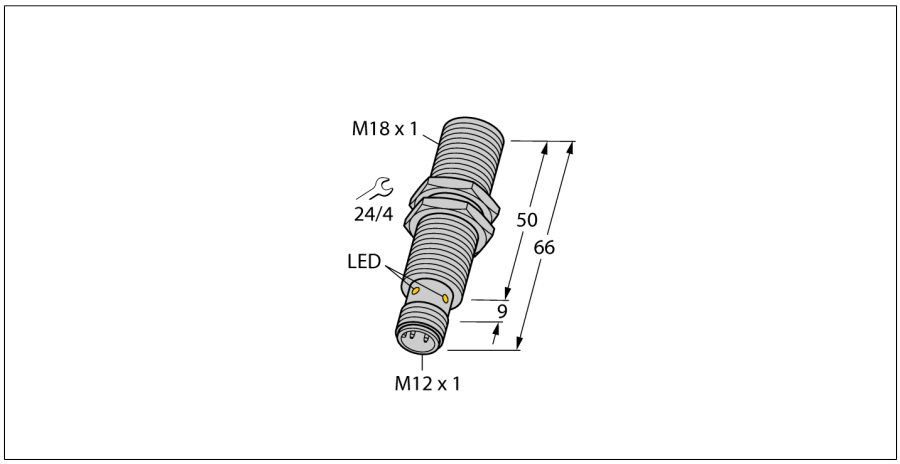
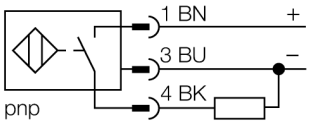
Inductive sensor
With extended temperature range
Bi8-M18-AP6X-H1141/S58-S97



- **Threaded barrel, M18 x 1**
- **Chrome-plated brass**
- **Temperatures down to -40 °C**
- **Increased switching distance**
- **DC 3-wire, 10…30 VDC**
- **NO contact, PNP output**
- **M12 x 1 male connector**

Wiring diagram



Type code	Bi8-M18-AP6X-H1141/S58-S97
Ident no.	4615005

Rated switching distance Sn	8 mm
Mounting conditions	flush
Assured switching distance	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	≤ ± 10 % ≤ ± 20 %, ≤ -25 °C
Hysteresis	3…15 %
Ambient temperature	-40…+70 °C

Operating voltage	10…30VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current I_0	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I_e	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.5 kHz

Construction	threaded barrel, M18 x 1
Dimensions	72 mm
Housing material	metal, CuZn, chrome-plated
Material active area	plastic, PA
Max. tightening torque housing nut	25 Nm
Connection	male, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
IP Rating	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C

Switching state	LED yellow

Functional principle

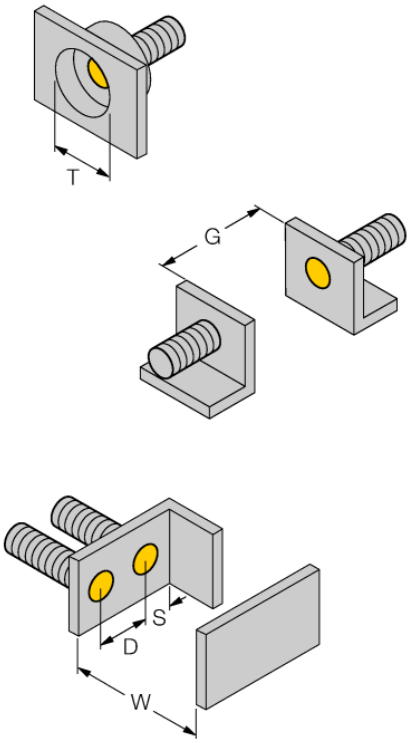
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Special versions are available for ambient temperatures between -60°C and +250°C.

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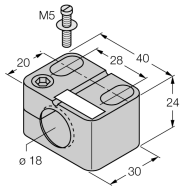
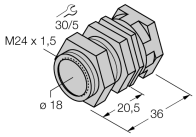
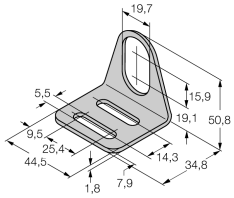
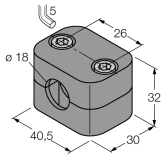
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

Diameter of the active area B	Ø 18 mm

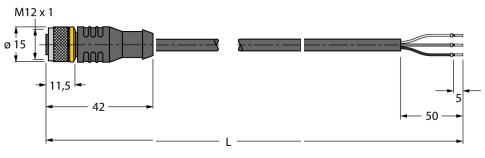


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Accessories

Type code	Ident no.	Description	Design
BST-18B	6947214	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
QM-18	6945102	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M24 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
MW-18	6945004	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-18	6901320	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	

Wiring accessories

Type code	Ident no.	Description	Design
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	

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