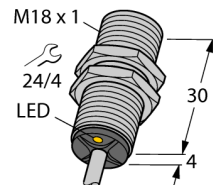
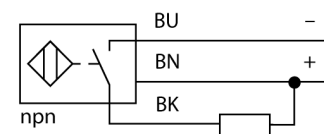


Inductive Sensor With Extended Temperature Range BI5-G18K-AN6X/S97/S703



- M18 × 1 threaded barrel
- Chrome-plated brass
- Temperatures up to -40 °C
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

Wiring Diagram



Functional principle

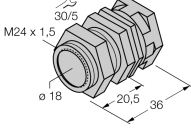
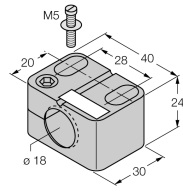
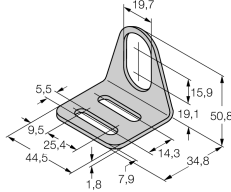
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

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

Type	BI5-G18K-AN6X/S97/S703
ID	4671402
Special version	S703 Corresponds to:Silicone cable, jacket black
General data	
Rated switching distance S_n	5 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	$\leq \pm 10\%$
	$\leq \pm 20\%, \leq -25\text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_o	10...30 VDC
Ripple U_{ss}	$\leq 10\% U_{\text{Bmax}}$
DC rated operating current I_o	$\leq 200\text{ mA}$
Residual current	$\leq 0.1\text{ mA}$
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	$\leq 1.8\text{ V}$
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	0.5 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	34 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2mm, Black, SiHSi, Silicone, 2 m
	Black
Core cross-section	3 x 0.25 mm ²

Environmental conditions	
Ambient temperature	-40...+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
Switching state	
	LED, Yellow

Accessories

Type code	Ident-No.		Dimension drawing
QM-18	6945102	Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.	
BST-18B	6947214	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6	
MW-18	6945004	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-18	6901320	Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene	