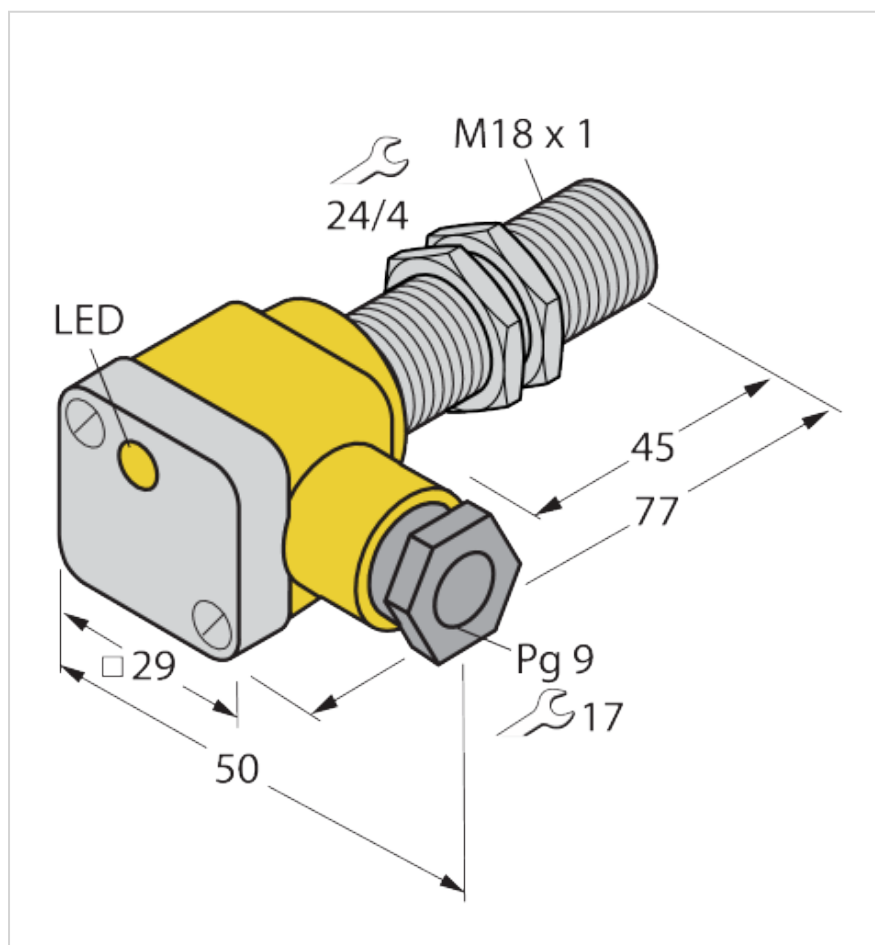


BI5-G18SK-AP6X

Inductive Sensor



Type designation	BI5-G18SK-AP6X
Ident-No.	46420

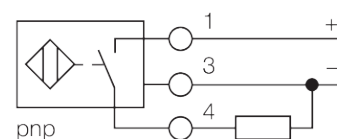
Technical data

General data	
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Detection area/measuring range	
Rated switching distance	5 mm
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Power supply	
Operating voltage U_B	10...30 VDC
Voltage drop at I_e	$\leq 1,8$ V

Features

- M18 × 1 threaded barrel
- Chrome-plated brass
- DC 3-wire, 10...30 VDC
- NO, PNP output
- Terminal chamber

Wiring Diagram



Technical data

Electrical data	
No-load current	15 mA
Output function	3-wire, NO contact, PNP
Short-circuit protection	yes/Cyclic
Wire break/reverse polarity protection	yes/Complete
DC rated operational current	≤ 200 mA
Isolation test voltage	≤ 0,5 kV
Residual current	≤ 0,1 mA
Residual ripple	≤ 10 % U _{SS}
Switching frequency	0,5 kHz
Accuracy/deviation	
Hysteresis	3 % v. E...15 % v. E.
Temperature drift	10 %
Repeat accuracy	≤ 2 % v. E.
Mechanical data	
Design	Threaded barrel, M18 x 1
Construction type designation	G18SK
	ø 18 mm
Housing material	Metal, CuZn, Chrome-plated
Terminal chamber cover material	plastic, Ultem
Terminal chamber housing material	plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	25 Nm
Electrical connection	Terminal chamber
Clamping ability	≤ 2,5 mm ²
Pressure resistant	no
Thread length	45 mm
Thread size	M18 × 1
Mounting conditions	Flush
Cable	
Cable external diameter	4.5 8
Ambient conditions	
Ambient temperature	-25...+70 °C
Pollution degree	3
Shock resistance	30 g (11 ms)
Vibration resistance	55 Hz (1 mm)
Protection class	IP67

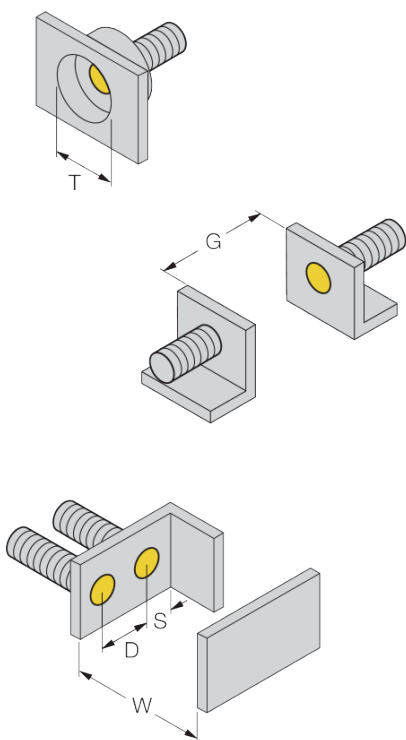
Functional principle

Inductive sensors are used for the contactless and wear-free detection of metallic objects. 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.

Technical data

Tests/approvals	
MTTF	2283 Years acc. to SN 29500 (Ed. 99) 40 °C
Displays/controls	
Switching state	LED, Yellow
Comments	
Included in delivery	Cable gland; 2 × rubber seals

Assembly instructions

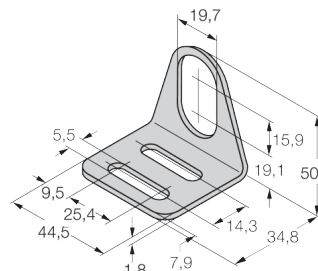
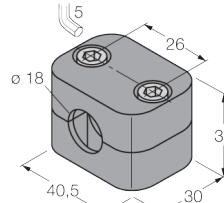


Distance D: 2 x B
Distance W: 3 x Sn
Distance T: 3 x B
Distance S: 1.5 x B
Distance G: 6 x Sn
Diameter active area B: 18 mm

Mounting accessories

QM-18	6945102	BST-18B	6947214
	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.		Mounting bracket for threaded barrel sensors, with dead-stop; material: PA6

Mounting accessories

MW18	6945004	BSS-18	6901320
 Technical drawing of the MW18 mounting bracket. It is a 3D perspective view showing a bracket with a circular hole for a sensor. Dimensions are provided in millimeters: 19,7 (hole diameter), 15,9 (height), 50,8 (total height), 19,1 (base width), 34,8 (base length), 14,3 (base offset), 7,9 (base thickness), 1,8 (base width), 44,5 (total width), 25,4 (hole offset), 9,5 (hole offset), 5,5 (hole offset), and 9,5 (hole offset).		 Technical drawing of the BSS-18 mounting bracket. It is a 3D perspective view showing a bracket with two circular holes for sensors. Dimensions are provided in millimeters: 26 (width), 32 (height), 30 (depth), 40,5 (total width), 18 (hole diameter), 5 (hole offset), and 5 (hole offset).	
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)		Mounting bracket for smooth and threaded barrel sensors; material: Polypropylene	