

BI5-EG18F-AG6X

Inductive Sensor – Stainless Steel Front



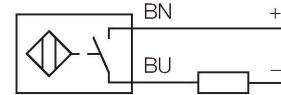
Technical data

Type	BI5-EG18F-AG6X
ID	4614640
General data	
Rated switching distance	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	$\leq 10\%$ of full scale
Temperature drift	$\leq \pm 20\%$
Hysteresis	1...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	≤ 100 mA
Rated operational current	at 25°C
Residual current	≤ 0.8 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 3.5 V
Wire breakage/Reverse polarity protection	Polarized
Output function	NO contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.1 kHz

Features

- M18 x 1 threaded barrel
- Stainless steel, 1.4305
- DC 2-wire, 10...30 VDC
- Polarized version
- NO contact
- Cable connection

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.

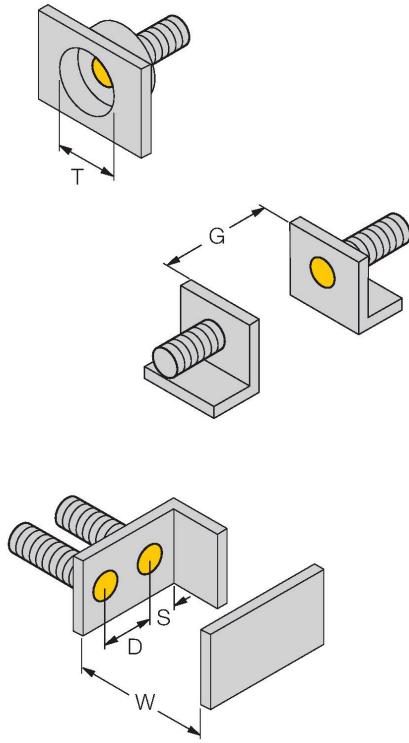
Technical data

Mechanical data

Design	Threaded barrel, M18 x 1
Dimensions	56 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Stainless steel, 1.4305 (AISI 303)
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 6 mm, LiYY, PVC, 2 m
Core cross-section	2 x 0.34 mm ²
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	2-color LED, Red

Mounting instructions

Mounting instructions/Description



Distance D	60 mm
Distance W	20 mm
Distance T	18 mm (Fe metal); 80 mm (non Fe-metal)
Distance S	30 mm (Fe metal); 40 mm (non Fe-metal)
Distance G	65 mm
Diameter active area B	Ø 18 mm

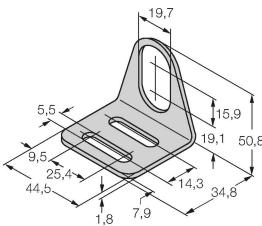
Switching distance not reduced when flush mounted in ferrous metals

When mounted in non-ferrous metals the active face has to protrude 16 mm.

The values depend on the mounting nuts used. Therefore we recommend the use of the nuts which are included in the delivery.

Accessories

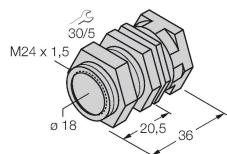
MW-18



6945004

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

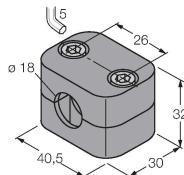
QM-18



6945102

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BSS-18



6901320

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene