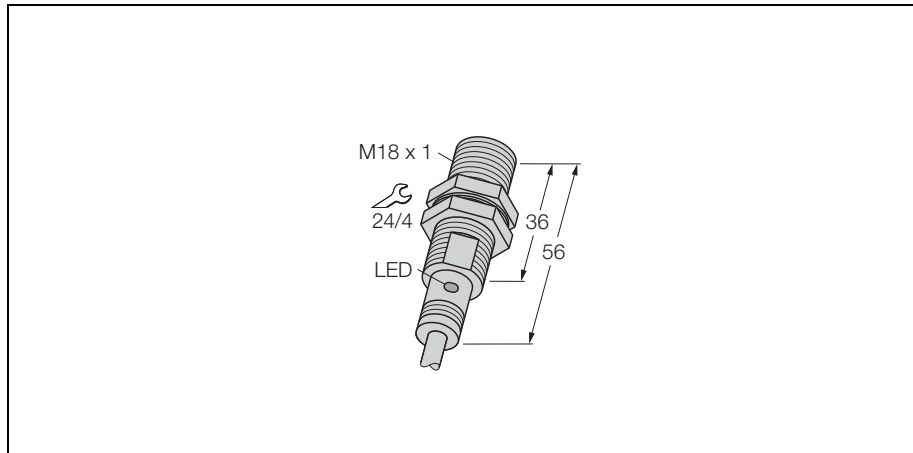


Inductive sensor

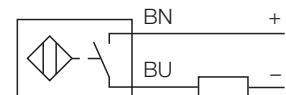
Stainless steel front

Bi5-EG18F-AG6X



- Threaded barrel, M18x1
- Stainless steel, 1.4305
- 2-wire DC, 10...30 VDC
- polarized version
- normally open
- cable connection

Wiring diagram



Functional principle

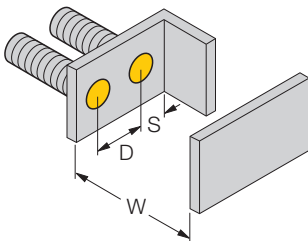
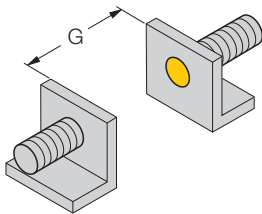
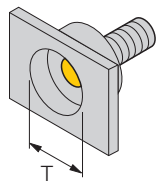
Inductive sensors are designed for wear-free and non-contact detection of metal objects. For this purpose they use a high-frequency electro-magnetic AC field that interacts with the target. Concerning inductive sensors, this field is generated by an LC resonant circuit with a ferrite core coil.

Type	Bi5-EG18F-AG6X
Ident-No.	4614640
Rated operating distance Sn	5 mm
Mounting condition	flush
Assured sensing range	$\leq (0,81 \times S_n)$ mm
Correction factors	St37 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3
Temperature drift	$\leq \pm 10 \%$
Hysteresis	1... 15 %
Repeatability	$\leq 2 \%$
Ambient temperature	-25...+ 70 °C
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
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes / cyclic
Voltage drop at I_e	≤ 3.5 V
Output function	2-wire, NO contact
Smallest operating current I_m	≥ 3 mA
Switching frequency	≤ 0.1 kHz
Housing	threaded barrel, M18 x 1
Dimensions	56 x 18 mm
Housing material	metal, V2A (1.4305)
Material active face	metal, A2 1.4305 (AISI 303)
Admissible pressure on front cap	≤ 20 bar
Tightening torque of housing nut	10 Nm
Electrical connection	cables
Cable quality	$\varnothing 6$, LifYY, PVC, 2 m
Cable cross section:	2 x 0.34mm ²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Protection class	IP68 / IP69K
Operating voltage display	LED green
Display switch state	LED red

**Inductive sensor
Stainless steel front
Bi5-EG18F-AG6X**

Mounting instructions	minimum distances
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 of the 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.