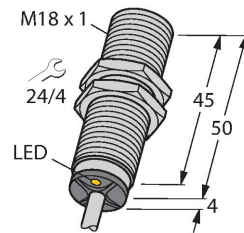


BI8-EM18-AP6X

Inductive Sensor – With Increased Switching Distance



Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4301
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Technical data

Type	BI8-EM18-AP6X
ID	46150951
General data	
Rated switching distance	8 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	≤ 2 % of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.5 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1

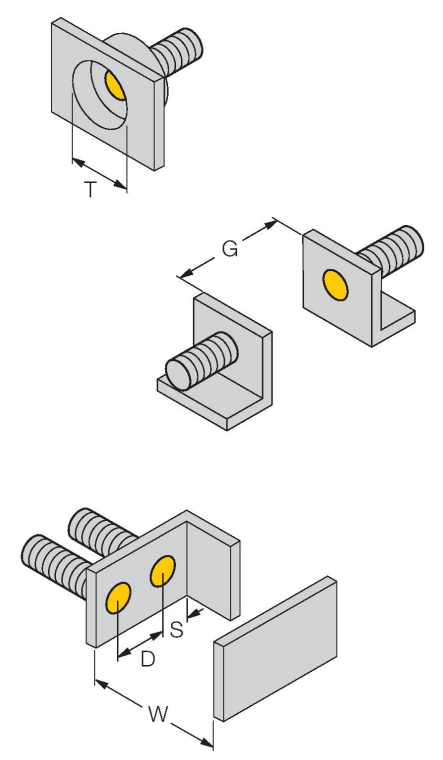
Functional principle

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

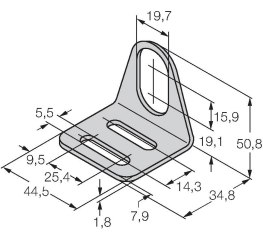
Dimensions	54 mm
Housing material	Stainless steel, 1.4301 (AISI 304), Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm ²
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description	
	Distance D $2 \times B$
	Distance W $3 \times S_n$
	Distance T $3 \times B$
	Distance S $1.5 \times B$
	Distance G $6 \times S_n$
	Diameter active area B $\varnothing 18 \text{ mm}$

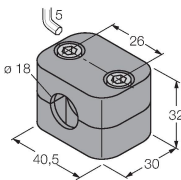
Accessories

MW186945004



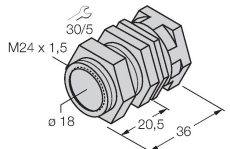
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-186901320



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

QM-186945102



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.