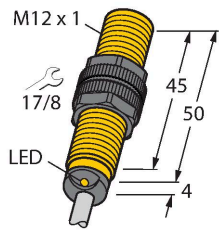
BI1U-S12-AP6X/S1132
Inductive Sensor – With Low Hysteresis



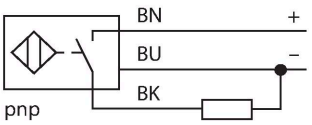
Technical data

Type	BI1U-S12-AP6X/S1132
ID	1634930
Remark to product	replaces article 1634800 Bi1U-S12-AP6X/ S100
Special version	S1132 corresponds to: Maximum ambient temperature = 100 °C Hysteresis 0.03 … 0.1 %
General data	
Rated switching distance	1 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
	≤ ± 20 %, ≤ -25 °C , ≥ +70 °C
Hysteresis	3…10 %
Hysteresis	0.03 .. 0.1 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
Rated operational current	See derating curve
No-load current	25 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic

Features

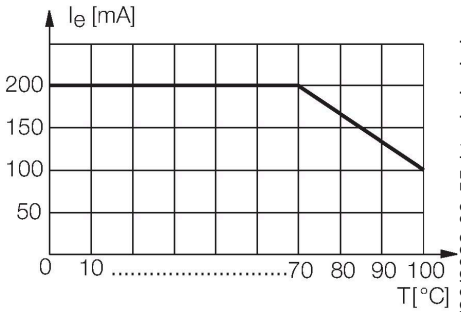
- Threaded barrel, M12 x 1
- Plastic, PA6-GK15
- Factor 1 for all metals
- Protection type IP68
- Resistant to magnetic fields
- Recessed mountable
- For temperatures up to +100°C
- Very short hysteresis
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

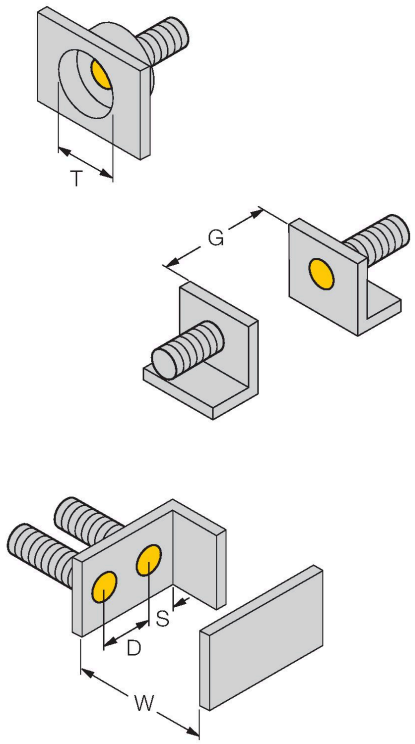


Technical data

Voltage drop at I_e	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT_{ss}
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M12 × 1
Dimensions	54 mm
Housing material	Plastic, PA6-GK15
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	1 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY-T105, PVC, 2 m
Core cross-section	3 x 0.5 mm^2
Environmental conditions	
Ambient temperature	-25…+100 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

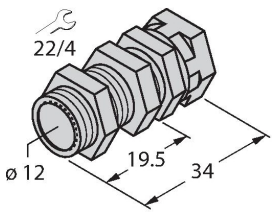
Mounting instructions/Description



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	Ø 12 mm

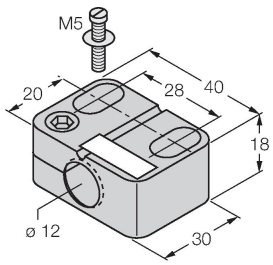
Accessories

QM-12	6945101



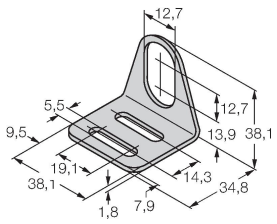
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B	6947212



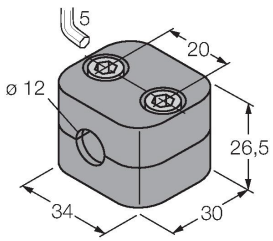
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW-12	6945003



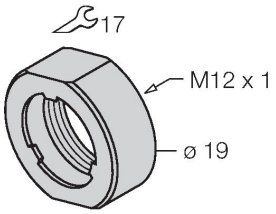
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12	6901321



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

PN-M12	6905309



Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)