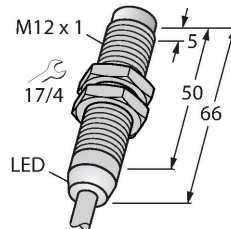


NI4-M12-AP6X/S120

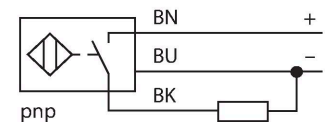
Inductive Sensor – With Increased Temperature Range



Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- Temperatures up to +120 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram

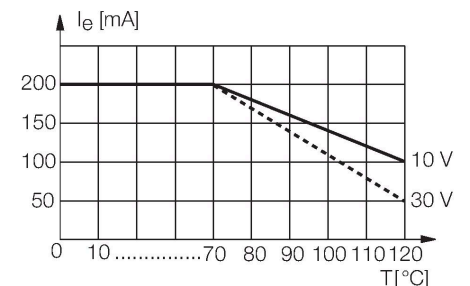


Technical data

Type	NI4-M12-AP6X/S120
ID	4614662
General data	
Rated switching distance	4 mm
Mounting conditions	Non-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
Temperature drift	$\leq \pm 10$ % $\leq \pm 20$ %, $\geq +70$ °C
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 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 breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.1 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	66 mm

Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient temperatures between -60°C and +250°C.



Technical data

Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PBT
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, SiHSi, Silicone, 2 m
Core cross-section	3 x 0.5 mm ²
Environmental conditions	
Ambient temperature	-25...+120 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	LED, Red

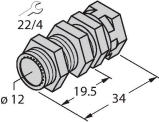
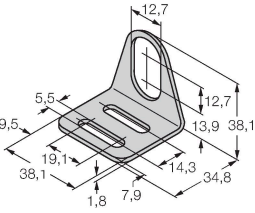
Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of a device. The top diagram shows a side view of a mounting plate with a central hole and a threaded hole, with dimension T indicating the thickness of the plate. The middle diagram shows a top view of the mounting plate with dimension G indicating the distance between the central hole and the threaded hole. The bottom diagram shows a perspective view of the mounting plate with dimensions N, S, D, and W indicating various distances and widths.

Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 12 mm

Accessories

QM-12	6945101	MW-12	6945003
	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.		Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)