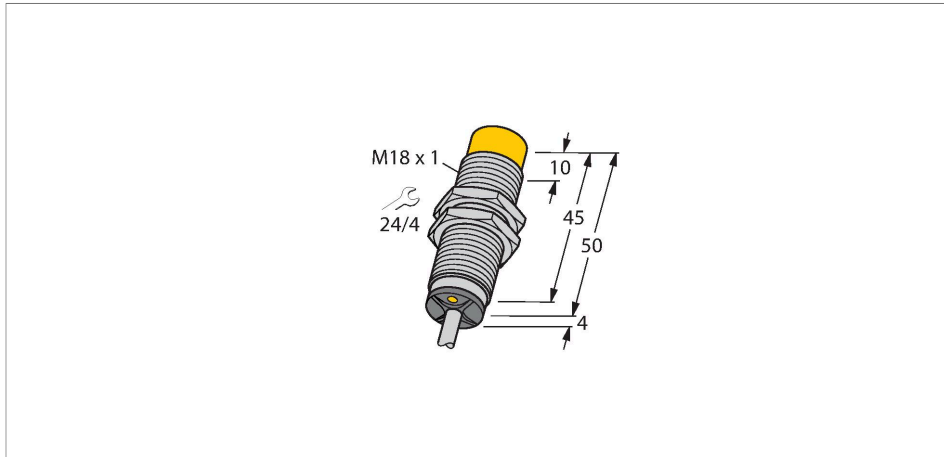


# NI14-M18-AP6X/S97

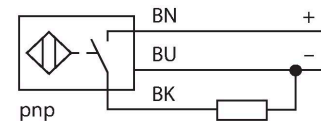
## Inductive Sensor – With Extended Temperature Range



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Temperatures up to -40 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram



### Technical data

Type	NI14-M18-AP6X/S97
ID	46114801
Special version	S97 corresponds to: Minimum ambient temperature = -40 °C
<b>General data</b>	
Rated switching distance	14 mm
Mounting conditions	Non-flush
Secured operating distance	≤ (0.81 × S <sub>n</sub> ) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale ≤ ± 20 %, ≤ -25 °C
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U <sub>ss</sub>
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 <sub>o</sub>	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.5 kHz

### Functional principle

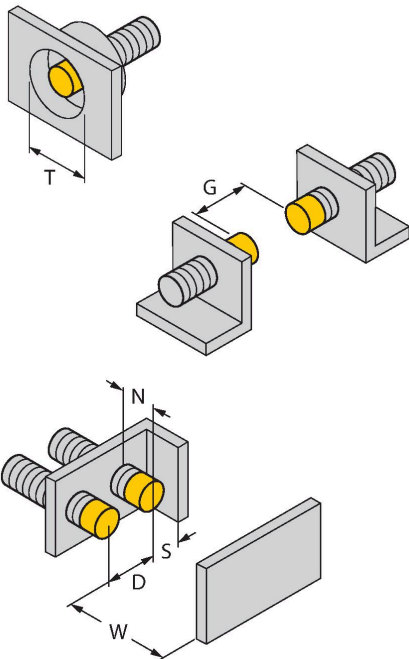
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient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

## Technical data

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	54 mm
Housing material	Metal, CuZn, 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 <sup>2</sup>
Environmental conditions	
Ambient temperature	-40...+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	7 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 18 mm

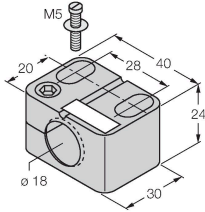
NI14-M18-AP6X/S97 | 11/07/2023 14-06 | technical changes reserved

## Accessories

**BST-18B**

6947214

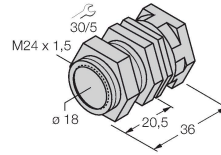
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



**QM-18**

6945102

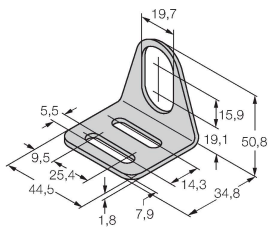
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



**MW-18**

6945004

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



**BSS-18**

6901320

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

