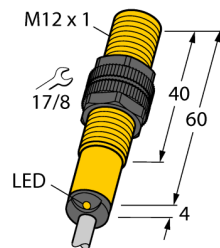
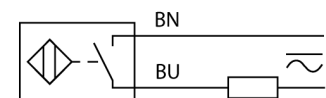


**Inductive sensor**  
**With extended temperature range**  
**NI4-S12-AZ31X/S100**



- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

**Wiring Diagram**

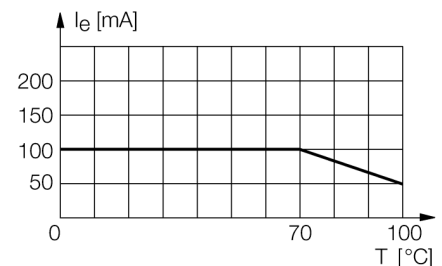


**Functional principle**

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.

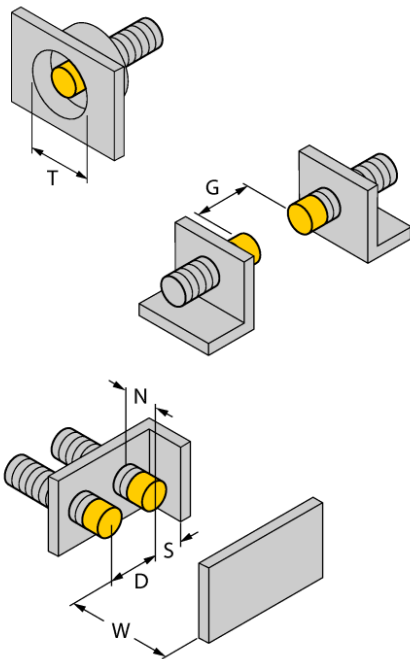
**Derating Curve**



<b>Type designation</b>	NI4-S12-AZ31X/S100
Ident no.	1302201
<b>Rated switching distance Sn</b>	4 mm
Mounting conditions	Non-flush
Secured operating distance	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
	≤ ± 20 %, ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-25...+100 °C
<b>Operating voltage</b>	20...250VAC
Operating voltage	10...300 VDC
AC rated operational current	≤ 100 mA
DC rated operational current	≤ 100 mA
Rated operational current	See derating curve
Frequency	≥ 50...≤ 60 Hz
Residual current	≤ 1.7 mA
Isolation test voltage	≤ 1.5 kV
Surge current	≤ 1 A (≤ 10 ms max. 5 Hz)
Voltage drop at I <sub>e</sub>	≤ 6 V
Output function	2-wire, NO contact
Smallest operating current I <sub>o</sub>	≥ 3 mA
Switching frequency	0.02 kHz
<b>Design</b>	Threaded barrel, M12 x 1
Dimensions	64 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque housing nut	1 Nm
Electrical connection	Cable
Cable quality	5.2 mm, LiYY-T105, PVC, 2m
Cable cross section	2 x 0.5 mm <sup>2</sup>
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
<b>Switching state</b>	LED red

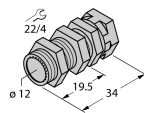
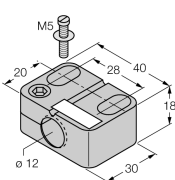
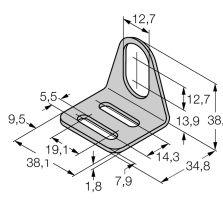
**Inductive sensor**  
**With extended temperature range**  
**NI4-S12-AZ31X/S100**

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
<hr/>	
Diameter active area B	Ø 12 mm



**Inductive sensor**  
**With extended temperature range**  
**NI4-S12-AZ31X/S100**

**Accessories**

Type code	Ident no.	Description	
QM-12	6945101	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
BST-12B	6947212	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
MW-12	6945003	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-12	6901321	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	