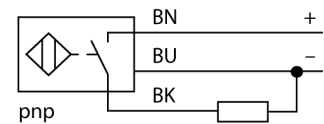


- Threaded barrel, M18 x 1
- Stainless steel, 1.4301
- Factor 1 for all metals
- Protection class IP68
- Magnetic field immune
- Extended temperature range
- High switching frequency
- Predamping protection through self-compensation
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- Cable connection

<b>Type code</b>	NI12U-EM18-AP6X
Ident no.	1645300
<b>Rated operating distance Sn</b>	12 mm
Mounting condition	non-flush, partially embeddable
Assured sensing range	≤ (0,81 x Sn) mm
Repeatability	≤ 2 % of full scale
Temperaturdrift	10 %
	≤ ± 20 %, ≤ -25 °C v ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
<b>Operating voltage</b>	10...30VDC
Residual ripple	≤ 10 % U <sub>ss</sub>
DC rated operational current	≤ 200 mA
No-load current I <sub>0</sub>	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I <sub>0</sub>	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Protection class	☐
Switching frequency	2 kHz
<b>Design</b>	threaded barrel, M18 x 1
Dimensions	54 mm
Housing material	Metal, V2A (1.4301)
Material active face	Plastic, PBT
End cap	Plastic, EPTR
Max. tightening torque housing nut	25 Nm
Connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2 m
Cable cross section	3 x 0.34 mm <sup>2</sup>
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
<b>Switching state</b>	• yellow

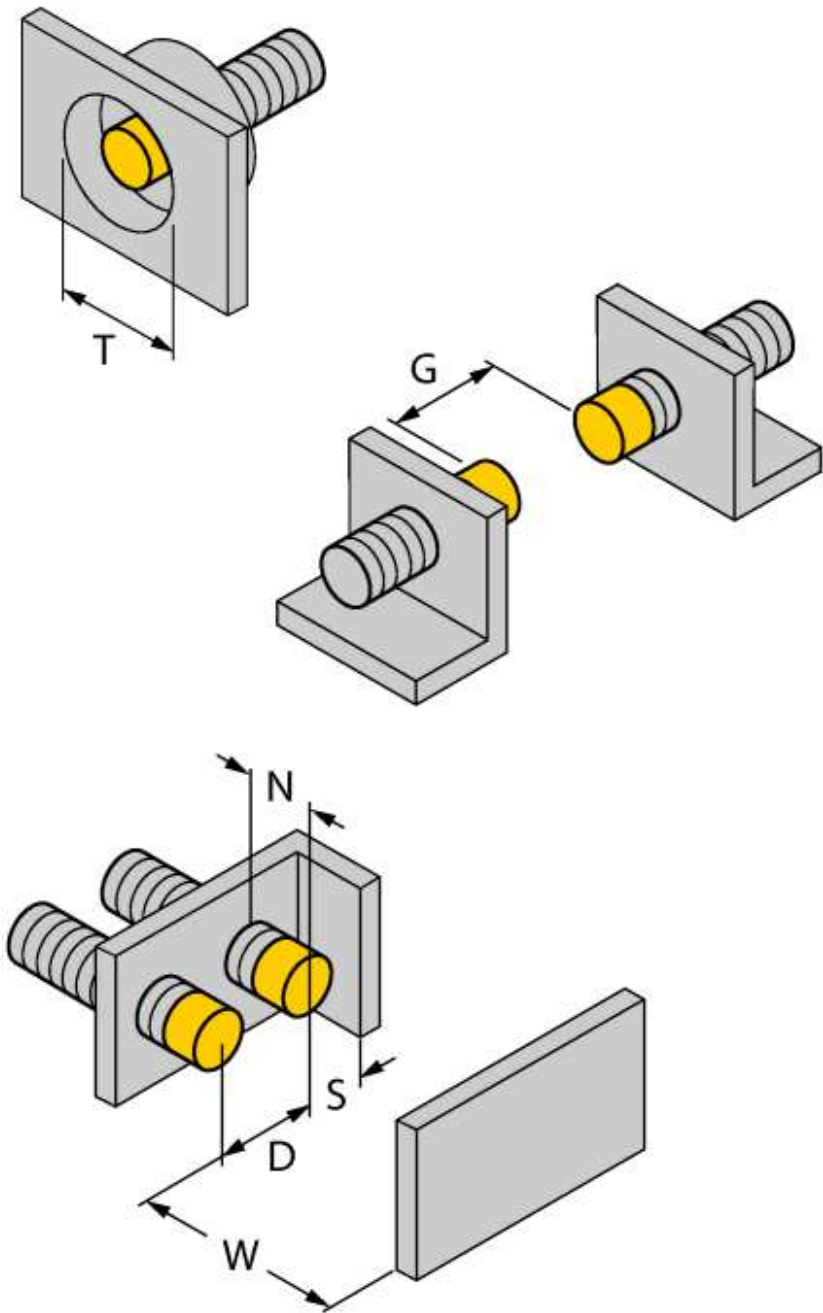
**Wiring diagram**



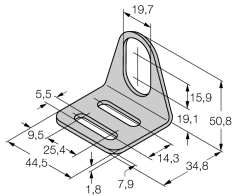
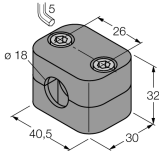
**Functional principle**

Inductive sensors detect metal objects contactless and wear-free. Due to the patented ferrite-less 3-coil system, *uprox®* factor 1 sensors have distinct advantages compared to conventional sensors. They detect all metals at the same switching distance, are magnetic field immune and feature large switching distances.

Distance D	4 x B
Distance W	3 x Sn
Distance T	65 mm
Distance S	0.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
<b>Diameter of the active area B</b>	<b>Ø 18 mm</b>



**Accessories**

Type code	Ident no.	Description	Dimension drawing
MW-18	6945004	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	 <p>Technical drawing of a stainless steel mounting bracket. Dimensions: 19.7 (width of top flange), 15.9 (height of top flange), 19.1 (width of base), 50.8 (total height), 34.8 (width of base), 14.3 (width of mounting hole), 7.9 (width of mounting hole), 1.8 (thickness of base), 25.4 (width of mounting hole), 9.5 (width of mounting hole), 44.5 (width of base), 5.5 (width of top flange).</p>
BSS-18	6901320	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	 <p>Technical drawing of a polypropylene mounting bracket. Dimensions: 5 (height of top flange), 26 (width of top flange), 32 (total height), 30 (width of base), 40.5 (width of base), 18 (diameter of mounting hole).</p>