

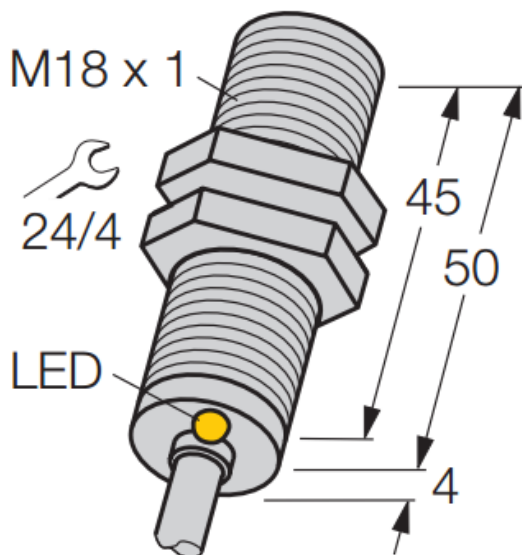
## Datasheet

# 12 mm PNP Barrel Inductive Proximity Sensor, M18 x 1, 200 mA, 10 → 30 V dc, IP68

RS Stock number 208-235



Dimensions: (mm)



- Threaded barrel, M18 x 1
- stainless steel, 1.4301
- factor 1 for all metals
- degree of protection IP68
- magnetic field immune
- extended temperature range
- high switching frequency
- 3-wire DC, 10...30 VDC
- normally open, pnp output
- cable connection

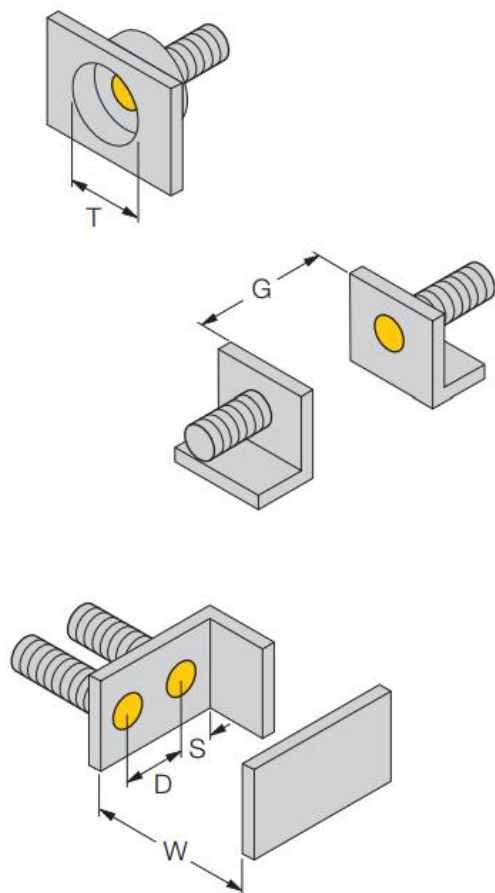
## Specification

<b>Rated operating distance Sn</b>	5 mm
Mounting condition	flush
Assured switching distance	$\leq (0,81 \times S_n)$ mm
Repeatability	$\leq 2 \%$
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 15 \%, \leq -25 \text{ °C v } \geq +70 \text{ °C}$
Hysteresis	3... 15 %
Ambient temperature	-30...+ 85 °C
<b>Operating voltage</b>	10... 30 VDC
Residual ripple	$\leq 10 \%$ $U_{SS}$
DC rated operational current	$\leq 200$ mA
No-load current $I_0$	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Rated insulation voltage	$\leq 0.5$ kV
Short-circuit protection	yes / cyclic
Voltage dip at $I_e$	$\leq 1.8$ V
Wire breakage / Reverse polarity protection	yes / complete
Output function	3-wire, normally open, pnp
Insulation class	□
Switching frequency	$\leq 2.5$ kHz
<b>Housing</b>	threaded barrel, M18 x 1
Dimensions	54 mm
Housing material	metal, A2 1.4301 (AISI 304)
Material active area	plastic, PBT
End cap	plastic, EPTR
Tightening torque of housing nut	25 Nm
Connection	cable
Cable quality	Ø 5.2, LifYY, PVC, 2 m
Cable cross section:	$3 \times 0.34 \text{ mm}^2$
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Degree of protection	IP68
<b>Display switch state</b>	LED yellow

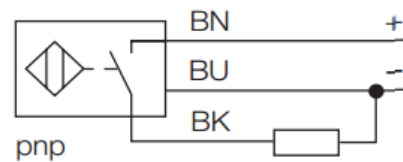
**Mounting instructions**

	minimum distances
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 of the active area B**                      Ø 18 mm



**Wiring diagram**



**Functional principle**

Inductive sensors are designed for wear-free and non-contact detection of metal objects. Due to a ferrite-less 3-coil system, uprox factor 1 sensors have distinct advantages. They detect all metals at the same switching distance, are magnetic field immune and feature large switching distances.