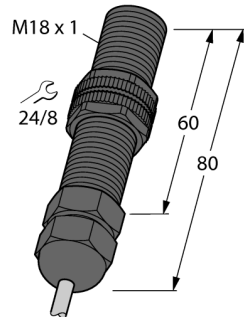


Inductive sensor
For underwater applications
BI8U-P18-AP6/S139-S1261



- Threaded barrel, M18 x 1
- Plastic, POM
- For underwater and off-shore applications
- Oil and seawater resistant
- Protection class IP68, 350 m water column
- Factor 1 for all metals
- Resistant to magnetic fields
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

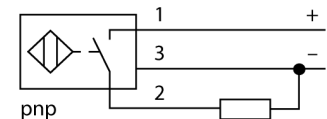
Type code BI8U-P18-AP6/S139-S1261
Ident-No. 1650230

Rated operating distance Sn 8 mm
Mounting condition flush
Assured switching distance $\leq (0,81 \times S_n)$ mm
Repeatability $\leq 2\%$ of full scale
Static pressure ≤ 35 bar
Temperature drift $\leq \pm 10\%$
 $\leq \pm 15\%$, $\leq -25^\circ\text{C}$ v $\geq +70^\circ\text{C}$
Hysteresis 3...15 %
Ambient temperature -30...+85 °C

Operating voltage 10...30VDC
Residual ripple $\leq 10\% U_{in}$
DC rated operational current ≤ 200 mA
No-load current I_0 ≤ 15 mA
Residual current ≤ 0.1 mA
Rated insulation voltage ≤ 0.5 kV
Short-circuit protection yes/ cyclic
Voltage drop at I_0 ≤ 1.8 V
Wire breakage / Reverse polarity protection yes/ complete
Output function 3-wire, NO contact, PNP
Switching frequency 2 kHz

Construction threaded barrel, M18 x 1
Dimensions 80 mm
Housing material plastic, POM, black
Material active area plastic, POM, Black
End cap Plastic, PA
Max. tightening torque housing nut 2 Nm
Connection cable
Cable quality 5.2 mm, Ölflex rugged 210, TPE, 2m
Cable cross section 3 x 0.5 mm²
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

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. Due to the patented ferrite-coreless 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.

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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
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