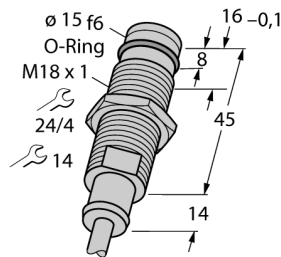
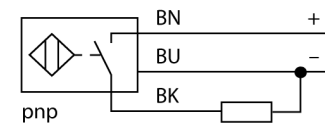


**Inductive sensor  
for high pressures  
BID2-G180-AP6/S212**



- Threaded barrel, M18 x 1
- Stainless steel, 1.4305
- Admissible pressure static/dynamic 500/350 bar
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- 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.

Pressure resistant inductive sensors withstand pressures of up to 500 bar which makes them perfectly suited for position control in hydraulic cylinders.

<b>Type code</b>	BID2-G180-AP6/S212
Ident no.	1688003
<b>Rated operating distance Sn</b>	2 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Static pressure	≤ 500 bar
Dynamic pressure	≤ 350 bar
Admissible contact medium	electrically non-conductive
Temperature drift	10 %
Hysteresis	3...15 %
Ambient temperature	-25...+85 °C
<b>Operating voltage</b>	10...30VDC
Residual ripple	≤ 10 % U <sub>s</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
Switching frequency	2 kHz
<b>Design</b>	threaded barrel, M18 x 1
Dimensions	58 mm
Housing material	metal, V2A (1.4305)
Material active area	Plastic, PA
Max. tightening torque housing nut	25 Nm
Connection	cable
Cable quality	6.3 mm, LiÖlflex, Ölflex®, 2 m
Cable cross section	3 x 0.5 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67

**Inductive sensor  
for high pressures  
BID2-G180-AP6/S212**

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



- In order to protect the coil connections integrated in the sensor head, it is required to ventilate the chamber of the oscillator coil.
- For this the employed non-conductive and neutral medium is filled into the cavity via the middle hole of the sensor's active face, using a thin cannula.