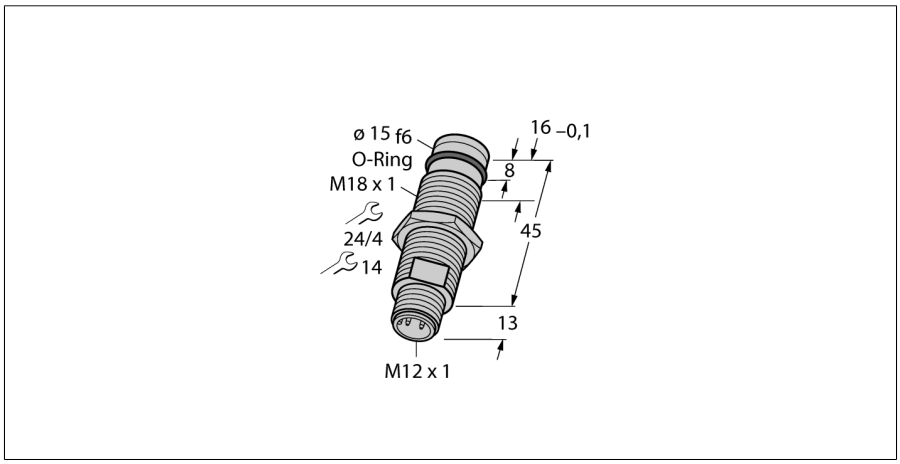
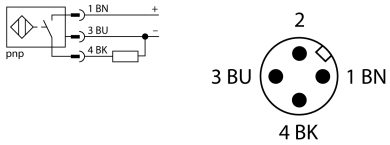
Inductive sensor
For high pressures
BID2-G180-AP6-H1141/S212



- **Threaded barrel, M18 x 1**
- **Stainless steel, 1.4305**
- **Admissible pressure static/dynamic 500/350 bar**
- **DC 3-wire, 10…30 VDC**
- **NO contact, PNP output**
- **M12 x 1 male connector**

Wiring Diagram



Type designation	BID2-G180-AP6-H1141/S212
Ident no.	16885

Rated switching distance Sn	2 mm
Mounting conditions	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
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

Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current I_0	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes/ Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
Reverse polarity protection	Complete
Switching frequency	2 kHz

Design	Threaded barrel, M18 × 1
Dimensions	58 mm
Housing material	Metal, V2A (1.4305)
Active area material	Plastic, PA12-GF30
Max. tightening torque housing nut	25 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67

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.

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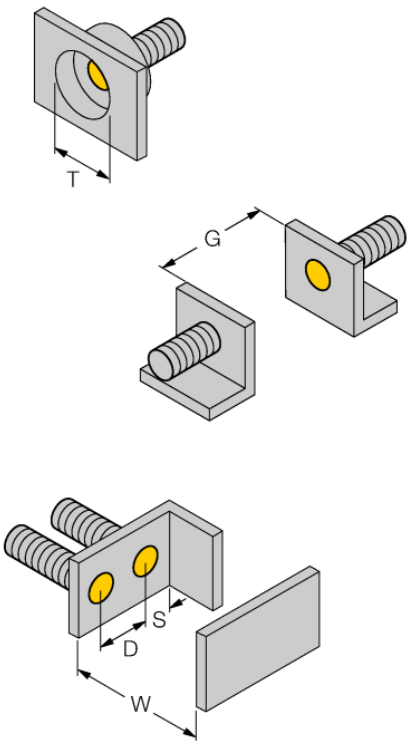
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

Diameter 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.

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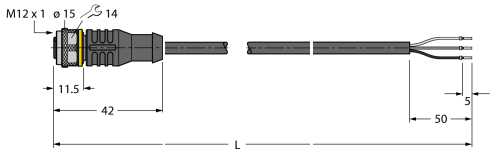
Wiring accessories

Type code	Ident no.	Description	
RKC4T-2/TEL	6625010	Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	

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