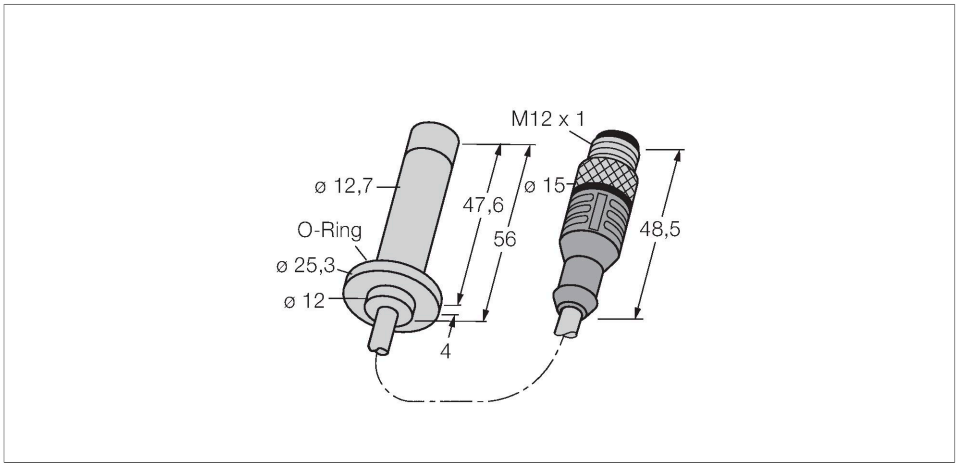
BID2-H12F-AP6/S312
Inductive Sensor – For High Pressures



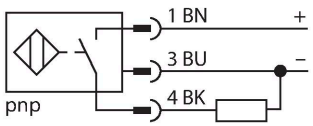
Technical data

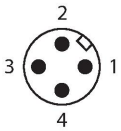
Type	BID2-H12F-AP6/S312
ID	1688813
Special version	S312 Corresponds to:Max. ambient temperature = 100 °C, 20 cm PUR cable with RS4 connector
General data	
Rated switching distance	2 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Static pressure	≤ 100 bar
Dynamic pressure	≤ 100 bar
Permissible contact medium	electrically conductive
Temperature drift	≤ ±10 %
Hysteresis	3…15 %
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic

Features

- Smooth barrel, Ø 12 mm
- Metal, chrome-plated brass
- admissible static or dynamic pressure 100 bar
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- Pigtail with male end M12 x 1

Wiring diagram





Functional principle

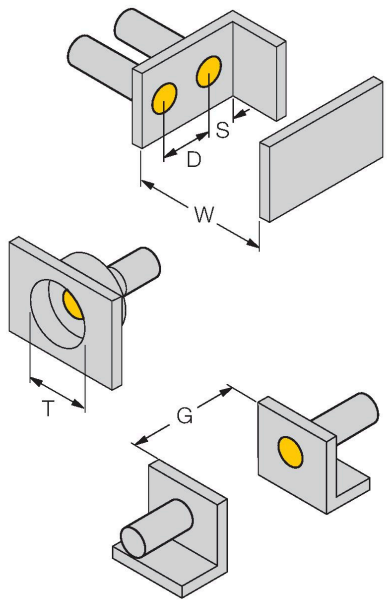
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.
Pressure-resistant inductive sensors withstand high pressures which makes them perfectly suited for position control in hydraulic cylinders.

Technical data

Voltage drop at I_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	1 kHz
Mechanical data	
Design	Smooth barrel, 12.7 mm
Dimensions	56 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Stainless steel, 1.4305 (AISI 303)
End cap	Plastic, EPTR
Material coupling nut	metal, CuZn, nickel-plated
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 5.2 mm, LifYY-11Y, PUR, 0.2 m
Core cross-section	3 x 0.34 mm^2
Environmental conditions	
Ambient temperature	-25…+100 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67

Mounting instructions

Mounting instructions/Description



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 12 mm