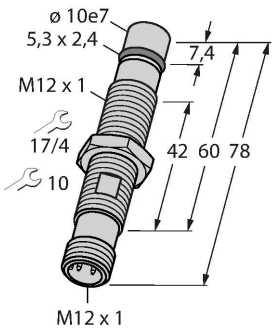
BID1.5-G120-AP6-H1141
Inductive Sensor – For High Pressures



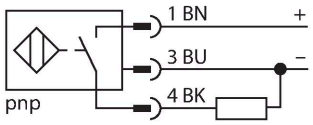
Technical data

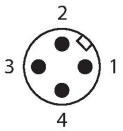
Type	BID1.5-G120-AP6-H1141
Ident. no.	1682000
Rated switching distance	1.5 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.32; Cu = 0.27; Ms = 0.45; stainless steel = 0.75
Repeat accuracy	≤ 7 % of full scale
Static pressure	≤ 500 bar
Dynamic pressure	≤ 500 bar
Vacuum-tight up to	10^{-8} Torr
Temperature drift	≤ ± 15 %
Hysteresis	3…15 %
Ambient temperature	-25…+80 °C
Operating voltage	10…30 VDC
Residual ripple	≤ 20 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	≤ 10 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_e	≤ 2 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP

Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- Admissible static pressure 500 bar
- Admissible peak pressure 1000 bar
- Suitable for use in high vacuum
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram





Functional principle

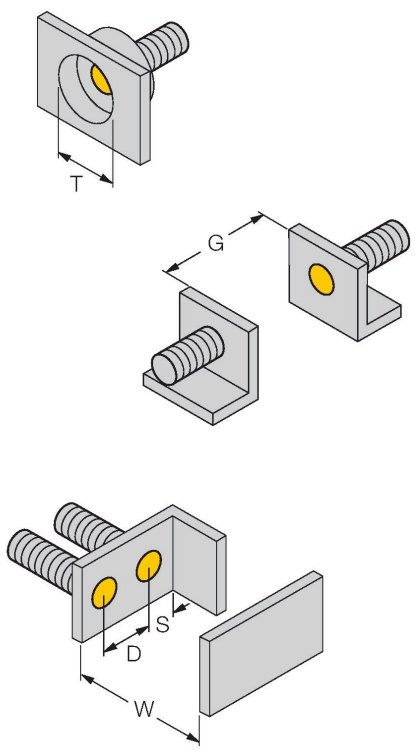
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. This field is generated by an LC resonant circuit with a ferrite core. Pressure resistant inductive sensors withstand pressures of up to 1000 bar which makes them perfectly suited for position control in hydraulic cylinders.

Technical data

Switching frequency	0.6 kHz
Design	Threaded barrel, M12 × 1
Dimensions	78 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, ZrO_2
Max. tightening torque of housing nut	40 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	1053 years acc. to SN 29500 (Ed. 99) 30 °C

Mounting instructions

Mounting instructions/Description



Distance D	3 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