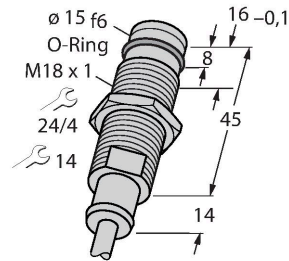


BID2-G180-AP6/S212

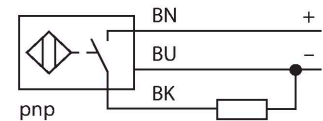
Inductive Sensor – For High Pressures



Features

- 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
- Cable connection

Wiring diagram



Technical data

Type	BID2-G180-AP6/S212
Ident. no.	1688003
Special version	S212 corresponds to: new production technology (core and coil encapsulated)
Rated switching distance	2 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ 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	$\leq \pm 10$ %
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	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 1.8 V

Functional principle

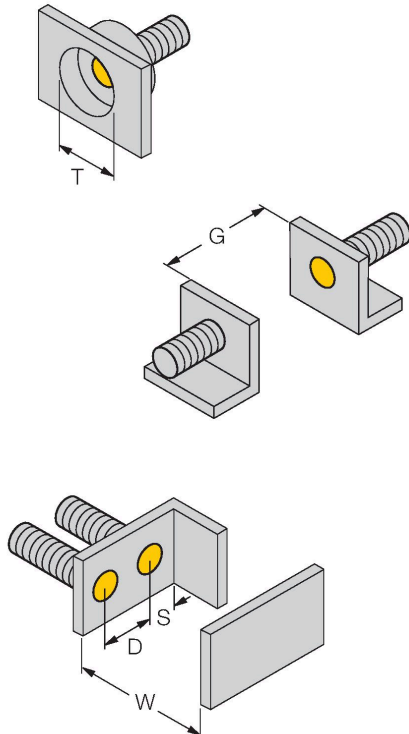
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Pressure resistant inductive sensors withstand pressures of up to 500 bar which makes them perfectly suited for position control in hydraulic cylinders.

Technical data

Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz
Design	Threaded barrel, M18 × 1
Dimensions	58 mm
Housing material	Metal, 1.4305 (AISI 303)
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 6.3 mm, LiÖlflex, Ölflex®, 2 m
Core cross-section	3 x 0.5 mm ²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	1804 years acc. to SN 29500 (Ed. 99) 40 °C

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 18 mm