

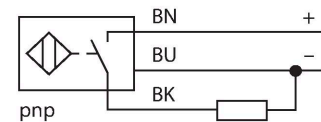
BID2-G180-AP6/S212

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

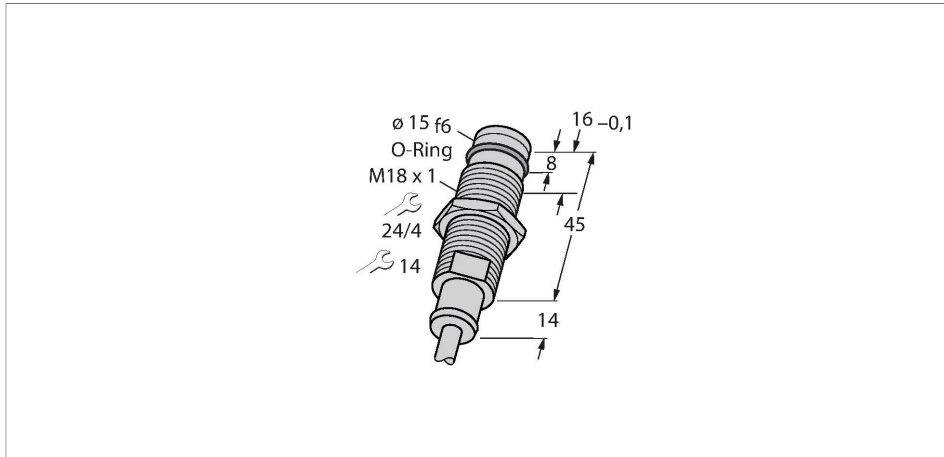
Wiring diagram



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

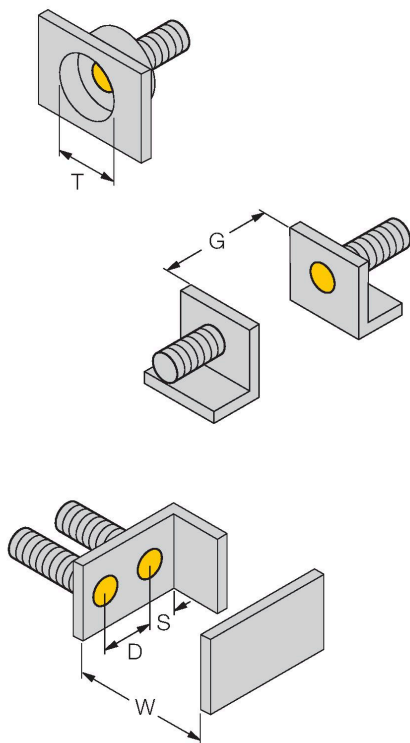
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|---|--|
| Type | BID2-G180-AP6/S212 |
| Ident. no. | 1688003 |
| Special version | S212 corresponds to: new production technology (core and coil encapsulated) |
| Rated switching distance | 2 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy | $\leq 2\%$ 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 | $\leq 10\% U_{ss}$ |
| 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_e | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |

Technical data

| | |
|------------------------------------|--|
| Output function | 3-wire, NO contact, PNP |
| 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 | 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 |