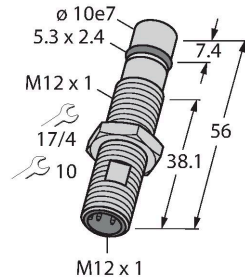


BID1.5-G120KK-AP6-H1141

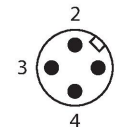
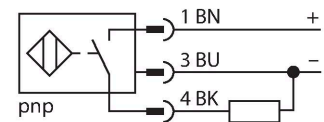
Inductive Sensor – For High Pressures



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



Technical data

| | |
|---|---|
| Type | BID1.5-G120KK-AP6-H1141 |
| Ident. no. | 1682001 |
| Rated switching distance | 1.5 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ 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 | $\leq \pm 15$ % |
| 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_o | ≤ 2 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |

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 | 56 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 |