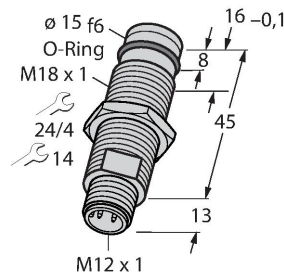


# BID2-G180-AP6-H1141/S212

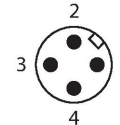
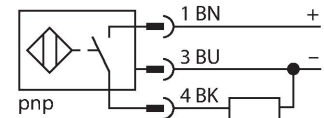
## Inductive Sensor – For High Pressures



### 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
- M12 x 1 male connector

### Wiring diagram



### Technical data

|                                  |                                                                              |
|----------------------------------|------------------------------------------------------------------------------|
| Type                             | BID2-G180-AP6-H1141/S212                                                     |
| ID                               | 16885                                                                        |
| Special version                  | S212 Corresponds to: new production technology (core and coil encapsulated ) |
| <b>General data</b>              |                                                                              |
| 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                  | $\leq 500$ bar                                                               |
| Dynamic pressure                 | $\leq 350$ bar                                                               |
| Permissible contact medium       | electrically non-conductive                                                  |
| Temperature drift                | $\leq \pm 10$ %                                                              |
| Hysteresis                       | 3...15 %                                                                     |
| <b>Electrical data</b>           |                                                                              |
| Operating voltage $U_s$          | 10...30 VDC                                                                  |
| Ripple $U_{ss}$                  | $\leq 10$ % $U_{smax}$                                                       |
| DC rated operating current $I_s$ | $\leq 200$ mA                                                                |
| No-load current                  | $\leq 15$ mA                                                                 |
| Residual current                 | $\leq 0.1$ mA                                                                |
| Isolation test voltage           | 0.5 kV                                                                       |
| Short-circuit protection         | yes/Cyclic                                                                   |
| Voltage drop at $I_s$            | $\leq 1.8$ V                                                                 |

### Functional principle

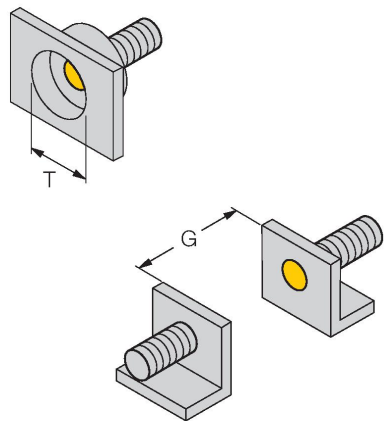
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Pressure resistant inductive sensors withstand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

## Technical data

|                                        |                                            |
|----------------------------------------|--------------------------------------------|
| Wire break/reverse polarity protection | yes/Complete                               |
| Output function                        | 3-wire, NO contact, PNP                    |
| Switching frequency                    | 2 kHz                                      |
| <b>Mechanical data</b>                 |                                            |
| Design                                 | Threaded barrel, M18 x 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                  | Connector, M12 × 1                         |
| <b>Environmental conditions</b>        |                                            |
| Ambient temperature                    | -25...+85 °C                               |
| 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

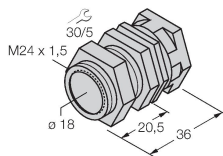
Mounting instructions/Description



|                        |         |
|------------------------|---------|
| 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 |

Accessories

QM-18 6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

Wiring accessories

| Dimension drawing                                                                 | Type        | ID      |                                                                                                                         |
|-----------------------------------------------------------------------------------|-------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | RKC4T-2/TEL | 6625010 | Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |