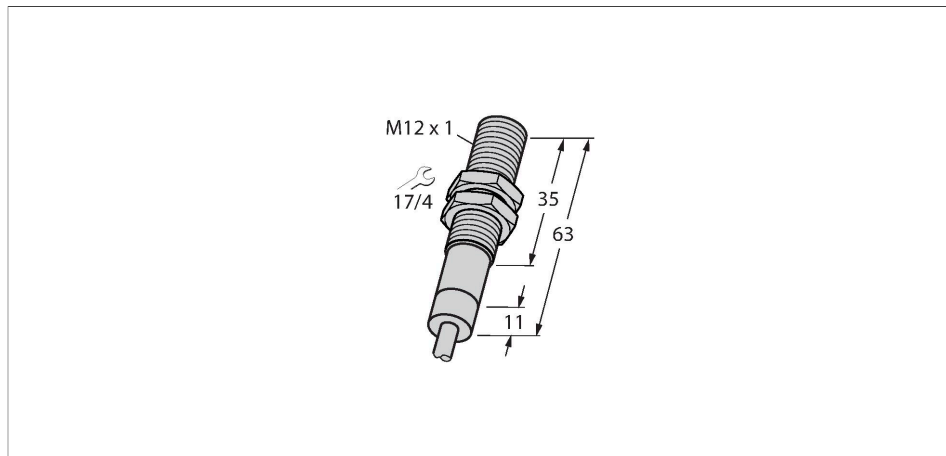


BI2-EM12D-AP6/S120

Inductive Sensor – For Harsh Environments and Temperatures up to 120°C



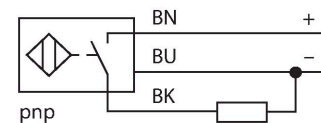
Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4571
- Viton sealing ring
- Protection class IP68/IP69K
- For temperatures up to +120 °C
- PTFE front cap
- Climate-proof
- Resistance to cooling lubricants, cutting and grinding oils
- Suitable for applications in the food industry
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Technical data

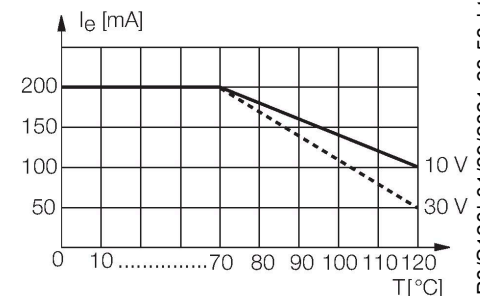
| | |
|--------------------------------|---|
| Type | BI2-EM12D-AP6/S120 |
| ID no. | 4614512 |
| Remark to product | S969: without polarity protection diode |
| Special version | S120 corresponds to: Operating temperature 120°C |
| Rated switching distance | 2 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0.81 × S _n) mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % ≤ ± 20 %, ≥ +70 °C |
| Hysteresis | 3...15 % |
| Ambient temperature | -25...+120 °C |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| DC rated operational current | ≤ 200 mA |
| Rated operational current | See derating curve |
| 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 |

Wiring diagram



Functional principle

TURCK offers leak-proof sensors for the food industry and machine engineering that are resistant to cleaning agents, cooling lubricants, cutting and grinding oils. They are made for rough environmental conditions and not only meet but even exceed the requirements of the protection classes IP68 and IP69. Special versions are available for ambient temperatures between -60°C and +250°C.



BI2-EM12D-AP6/S120 | 01/29/2021 23-56 | technical changes reserved

Technical data

| | |
|---|--------------------------------------|
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |
| Switching frequency | 0.1 kHz |
| Design | Threaded barrel, M12 × 1 |
| Dimensions | 63 mm |
| Housing material | Stainless steel, 1.4571 (AISI 316Ti) |
| Active area material | Plastic, PTFE |
| End cap | Plastic, PTFE |
| Admissible pressure on front cap | ≤ 10 bar |
| Max. tightening torque of housing nut | 10 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 3.7 mm, PTFE, FEP, 2 m |
| Core cross-section | 3 x 0.34 mm ² |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 IP69K |
| Switching state | LED, Yellow |

Mounting instructions

Mounting instructions/Description

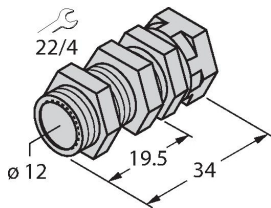


| | |
|------------------------|---------|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 12 mm |

Accessories

QM-12

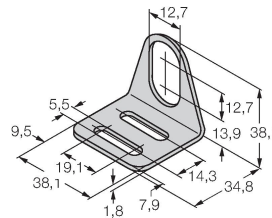
6945101



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW-12

6945003



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)