

BI7C-EM18-VP6X-H1141

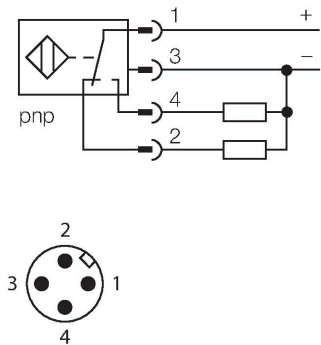
Inductive Sensor – For Detecting Carbon Materials



Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4301
- Carbon detection
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Wiring diagram



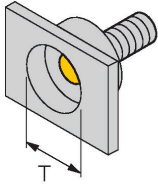
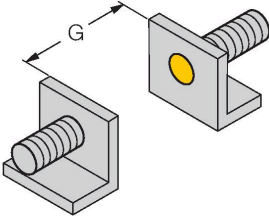
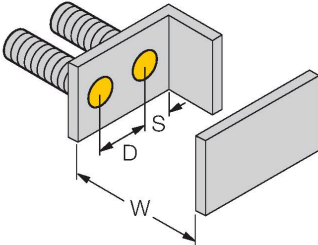
Technical data

| | |
|--|--|
| Type | BI7C-EM18-VP6X-H1141 |
| ID | 100015715 |
| General data | |
| Rated switching distance | 7 mm |
| | The rated operating distance is based on a standard target made of steel. The operating distance may vary depending on the composition of the carbon material. |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage U_B | 10...30 VDC |
| Ripple U_{ss} | $\leq 10 \%$ U_{Bmax} |
| DC rated operating current I_o | ≤ 100 mA |
| No-load current | ≤ 20 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 |
| Wire break/reverse polarity protection | yes/Complete |
| Output function | 4-wire, Complementary contact, PNP |
| Switching frequency | 1.5 kHz |

Technical data

| Mechanical data | |
|---------------------------------------|---|
| Design | Threaded barrel, M18 x 1 |
| Dimensions | 52 mm |
| Housing material | Stainless steel, 1.4301 (AISI 304) |
| Active area material | Plastic, LCP |
| Max. tightening torque of housing nut | 25 Nm |
| Electrical connection | Connector, M12 x 1 |
| Environmental conditions | |
| Ambient temperature | 0...+100 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

Mounting instructions

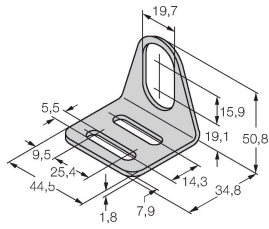
| Mounting instructions/Description | |
|---|-------------------------------|
|  | Distance D36 mm |
| | Distance W3 x Sn |
| | Distance T3 x B |
|  | Distance S1.5 x B |
| | Distance G6 x Sn |
|  | Diameter active area BØ 18 mm |
| | |
| All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn. | |

BITC-EM18-VP6X-H1141 | 02/21/2025 14-38 | technical changes reserved

Accessories

MW18

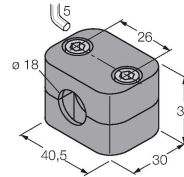
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Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-18

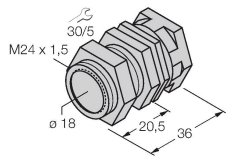
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Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

QM-18

6945102



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