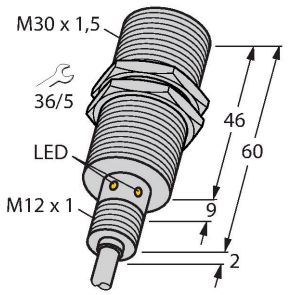
# BI15U-EM30WD-VP6X/S90 20M
# Inductive sensor – For the food industry



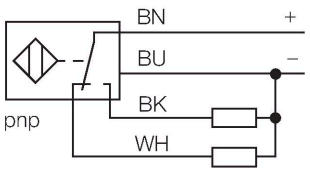

## Technical data

| | |
|---|---|
| Type | BI15U-EM30WD-VP6X/S90 20M |
| Ident. no. | 100000633 |
| Rated switching distance | 15 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0.81 × Sn) mm |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| Hysteresis | 3…15 % |
| Ambient temperature | -30…+85 °C |
| Operating voltage | 10…30 VDC |
| Residual ripple | ≤ 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 |
| Output function | 4-wire, Complementary contact, PNP |
| Switching frequency | 0.75 kHz |
| Design | Threaded barrel, M30 × 1.5 |
| Dimensions | 66 mm |
| Housing material | Stainless steel, V4A (1.4404) |
| Active area material | Plastic, LCP |

## Features

- Threaded barrel, M30 x 1.5
- Stainless steel, 1.4404
- Front cap made of liquid crystal polymer
- Factor 1 for all metals
- Resistant to magnetic fields
- Extended temperature range
- High protection class IP69K, for harsh environments
- Special double-lip seal
- Protection against all common acid and alkaline cleaning agents
- Laser engraved label, permanently legible
- For the food industry
- DC 4-wire, 10…30 VDC
- Changeover contact, PNP output
- Cable connection

## Wiring diagram




## Functional principle

*uprox*®+ sensors from TURCK are the perfect solution for dairies, breweries, industrial bakeries, frozen food, packaging and filling applications. They are absolutely tight and resistant to cleaning agents and disinfectants and well exceed the rerquirements of the protection classes IP68 and IP69K thanks to the LCP front cap and the stainless steel housing.

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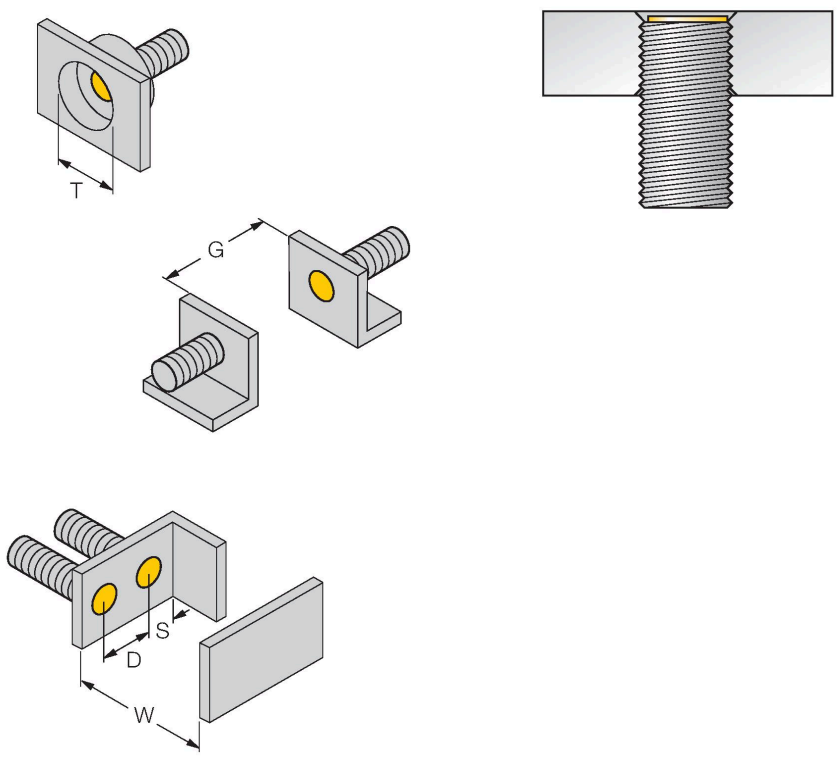
## Technical data

| | |
|---|---|
| End cap | Plastic, PP, transparent |
| Admissible pressure on front cap | ≤ 10 bar |
| Max. tightening torque housing nut | 75 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY-11Y, PUR, 20 m |
| Core cross-section | 4 x 0.34 mm² |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 / IP69K |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

## Mounting instructions

**Mounting instructions/Description**




| | |
|---|---|
| Distance D | 60 mm |
| 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 30 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.

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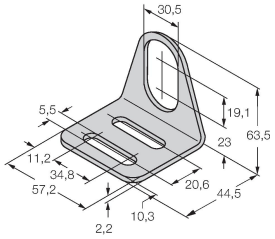
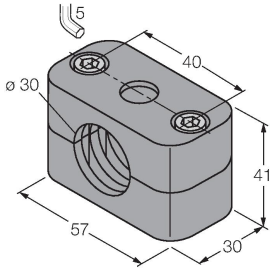
## Accessories

**MW30** **6945005**



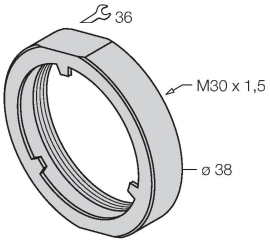

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

**BSS-30** **6901319**




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

**PN-M30** **6905308**




Protective nut for M30 x 1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)

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