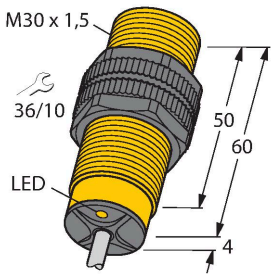
# BI10-S30-VP4X/S100
# Inductive Sensor – With Increased Temperature Range



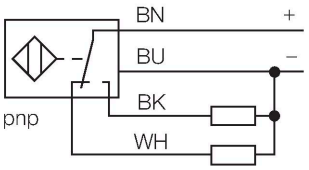

## Technical data

| Type | BI10-S30-VP4X/S100 |
|---|---|
| ID no. | 15140 |
| Special version | S100 corresponds to:<br>Maximum ambient temperature = 100 °C |
| Rated switching distance | 10 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0.81 × Sn) 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…+100 °C |
| Operating voltage | 10…65 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 |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 4-wire, Complementary contact, PNP |

## Features

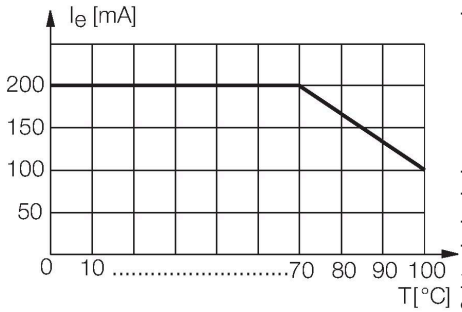
- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- DC 4-wire, 10…65 VDC
- Changeover contact, PNP output
- Cable connection

## Wiring diagram




## 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.
Special versions are available for ambient temperatures between -60°C and +250°C.

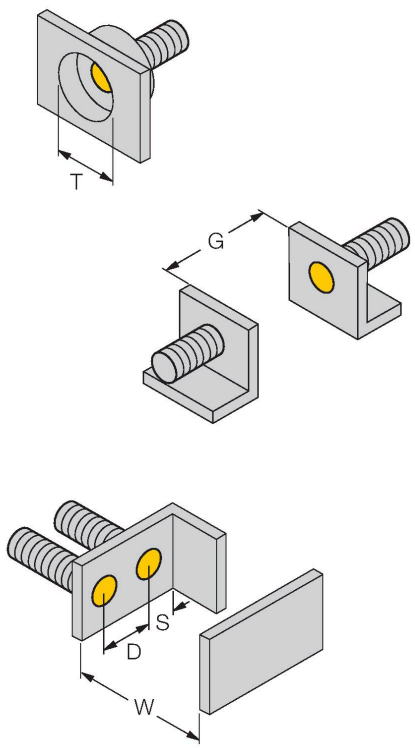


## Technical data

| | |
|---|---|
| Switching frequency | 0.5 kHz |
| Design | Threaded barrel, M30 × 1.5 |
| Dimensions | 64 mm |
| Housing material | Plastic, PA12-GF30 |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 5 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY-T105, PVC, 2 m |
| Core cross-section | 4 x 0.34 $mm^2$ |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP67 |
| MTTF | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

## Mounting instructions

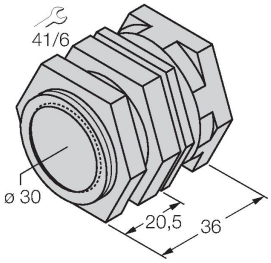
Mounting instructions/Description




| | |
|---|---|
| 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 30 mm |

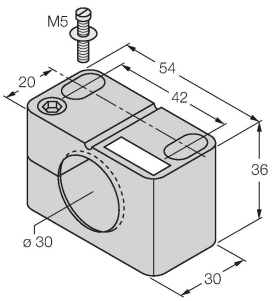
## Accessories

| QM-30 | 6945103 |
|---|---|



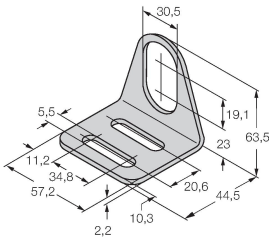

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

| BST-30B | 6947216 |
|---|---|



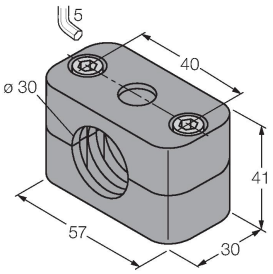

Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

| MW-30 | 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

BI10-S30-VP4X/S100| 04/15/2021 20-29 | technical changes reserved