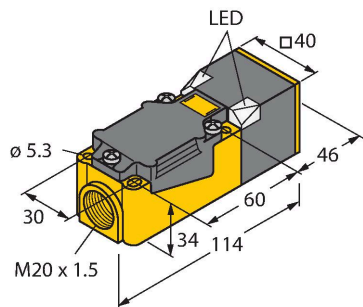


# BI30U-CP40-AN6X2

## Inductive Sensor – With Extended Switching Distance



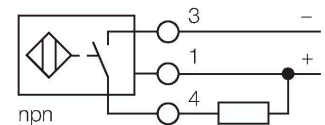
### Features

- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large coverage
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Terminal chamber

### Technical data

|                                        |                             |
|----------------------------------------|-----------------------------|
| Type                                   | BI30U-CP40-AN6X2            |
| ID                                     | 1625102                     |
| <b>General data</b>                    |                             |
| Rated switching distance               | 30 mm                       |
| 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 %                    |
| <b>Electrical data</b>                 |                             |
| Operating voltage $U_B$                | 10...30 VDC                 |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$      |
| DC rated operating current $I_e$       | $\leq 200$ 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 $I_e$                  | $\leq 1.8$ V                |
| Wire break/reverse polarity protection | yes/Complete                |
| Output function                        | 3-wire, NO contact, NPN     |
| DC field stability                     | 300 mT                      |
| AC field stability                     | 300 mT <sub>ss</sub>        |
| Insulation class                       | □                           |
| Switching frequency                    | 0.25 kHz                    |
| <b>Mechanical data</b>                 |                             |
| Design                                 | Rectangular, CP40           |
| Dimensions                             | 114 x 40 x 40 mm            |

### Wiring diagram



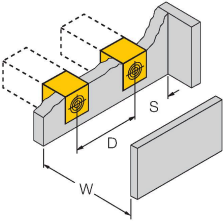
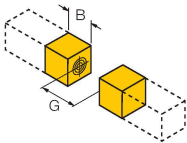
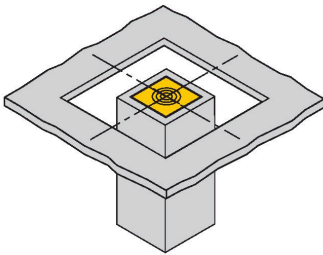
### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

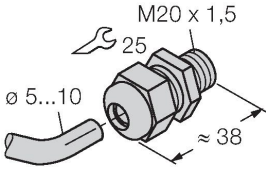
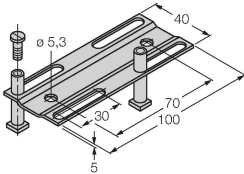
Technical data

|                          |                                           |
|--------------------------|-------------------------------------------|
| Housing material         | Plastic, PBT-GF30-V0, Black               |
| Active area material     | Plastic, PA6-GF30-X, yellow               |
| Electrical connection    | Terminal chamber                          |
| Clamping ability         | ≤ 2.5 mm²                                 |
| Environmental conditions |                                           |
| Ambient temperature      | -10...+60 °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 |
| Power-on indication      | 2 × LEDs, Green                           |
| Switching state          | 2 × LEDs, Yellow                          |

Mounting instructions

| Mounting instructions/Description                                                                                                                                  |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                                                                                 | Distance D80 mm        |
|                                                                                                                                                                    | Distance W90 mm        |
|                                                                                 | Distance S40 mm        |
|                                                                                                                                                                    | Distance G180 mm       |
|                                                                                 | Width active area40 mm |
|                                                                                                                                                                    | B                      |
| When installing the sensor in an aperture plate (sheet metal, e.g., a step plate) the sensor must be fully embedded in metal for reliable detection of the target. |                        |

Accessories

|                                                                                     |         |                                                                                      |       |
|-------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|-------|
| STRM M20X1.5 SCHWARZ                                                                | 6965902 | JS025/037                                                                            | 69429 |
| M20 × 1.5 cable gland                                                               |         | Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301                  |       |
|  |         |  |       |

**BSS-CP40****6901318**

Mounting clamp for rectangular  
 housings 40 x 40 mm; material:  
 Polypropylene

