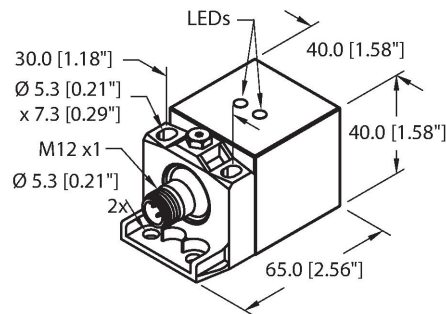


# BI20U-CA40-RP6X2-H1143 W/BS2.1

## Inductive Sensor



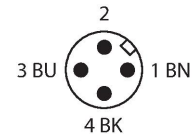
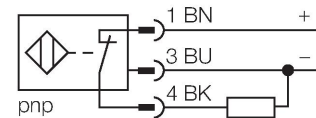
### Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Sensor housing GD-ALSI 12
- Active face PA6-GF30
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large coverage
- High switching frequency
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- M12 x 1 male connector

### Technical data

|                                           |                                     |
|-------------------------------------------|-------------------------------------|
| Type                                      | BI20U-CA40-RP6X2-H1143 W/BS2.1      |
| Ident. no.                                | 1627790                             |
| Rated switching distance                  | 20 mm                               |
| Mounting conditions                       | Flush                               |
| Secured operating distance                | $\leq (0.81 \times S_n) \text{ mm}$ |
| Repeat accuracy                           | $\leq 2 \text{ \% of full scale}$   |
| Temperature drift                         | $\leq \pm 10 \text{ \%}$            |
| Hysteresis                                | 3...15 %                            |
| Ambient temperature                       | -30...+85 °C                        |
| Operating voltage                         | 10...30 VDC                         |
| Residual ripple                           | $\leq 10 \text{ \% } U_{ss}$        |
| DC rated operational current              | $\leq 200 \text{ mA}$               |
| No-load current                           | $\leq 15 \text{ mA}$                |
| Residual current                          | $\leq 0.1 \text{ mA}$               |
| Isolation test voltage                    | $\leq 0.5 \text{ kV}$               |
| Short-circuit protection                  | yes / Cyclic                        |
| Voltage drop at $I_o$                     | $\leq 1.8 \text{ V}$                |
| Wire breakage/Reverse polarity protection | yes / Complete                      |
| Output function                           | 3-wire, NC contact, PNP             |
| Insulation class                          | □                                   |
| Switching frequency                       | 0.25 kHz                            |
| Design                                    | Rectangular, CA40                   |
| Dimensions                                | 65 x 40 x 40 mm                     |

### Wiring diagram



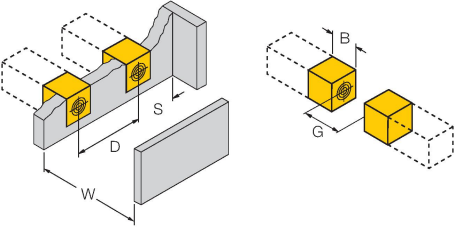
### Functional principle

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.

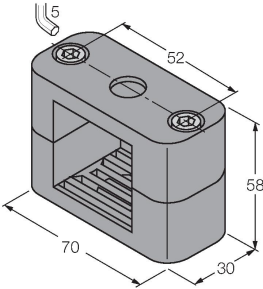
Technical data

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
|                       | variable orientation of active face in 5 directions |
| Housing material      | Metal, GD-AISI 12                                   |
| Active area material  | Plastic, PA6-GF30, black                            |
| Electrical connection | Connector, M12 × 1                                  |
| 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   | LED, Green                                          |
| Switching state       | LED, Yellow                                         |
| Included in delivery  | BS2.1                                               |

Mounting instructions

| Mounting instructions/Description                                                  |                           |
|------------------------------------------------------------------------------------|---------------------------|
|  | Distance D 2 x B          |
|                                                                                    | Distance W 3 x Sn         |
|                                                                                    | Distance G 6 x Sn         |
|                                                                                    | Width active area B 40 mm |
|                                                                                    |                           |

Accessories

|                                                                                     |                                                                             |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| BSS-CP40                                                                            | 6901318                                                                     |
|  | Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene |

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