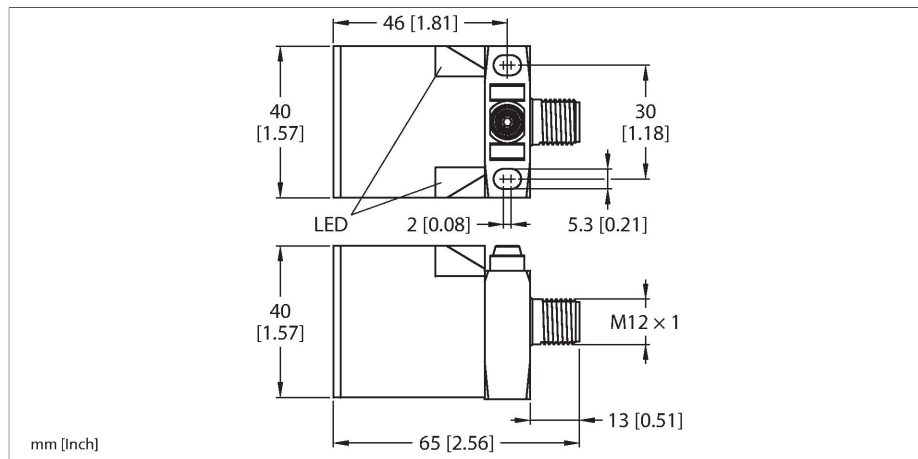


# BI11-CK40-IOLU69X2-H1141

## Inductive Sensor – With Analog Output and IO-Link Communication



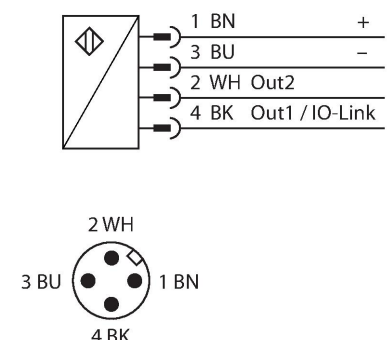
### Technical data

|                                        |                                                                                     |
|----------------------------------------|-------------------------------------------------------------------------------------|
| Type                                   | BI11-CK40-IOLU69X2-H1141                                                            |
| ID                                     | 100001081                                                                           |
| <b>General data</b>                    |                                                                                     |
| Measuring range                        | 3...11 mm                                                                           |
| Mounting conditions                    | Flush                                                                               |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                                                         |
| Correction factors                     | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4                                 |
| Repeatability                          | $\leq 1 \%$ of measuring range [A - B]                                              |
| Linearity deviation                    | 0.25 % of full scale, after 0.5 h warm-up                                           |
| Temperature drift                      | $\leq \pm 1 \%$                                                                     |
|                                        | $\leq \pm 5 \%, \leq 0 \text{ }^{\circ}\text{C}, \geq +50 \text{ }^{\circ}\text{C}$ |
| <b>Electrical data</b>                 |                                                                                     |
| Operating voltage $U_B$                | 15...30 VDC                                                                         |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                                                             |
| No-load current                        | $\leq 20 \text{ mA}$                                                                |
| Isolation test voltage                 | 0.5 kV                                                                              |
| Short-circuit protection               | yes                                                                                 |
| Wire break/reverse polarity protection | no/Complete (analog output restricted)                                              |
| Communication protocol                 | IO-Link                                                                             |
| Output function                        | 4-wire, PNP/NPN, analog output                                                      |
| Voltage output                         | 0...10 V                                                                            |
| Load resistance voltage output         | $\geq 4.7 \text{ k}\Omega$                                                          |
| Response time                          | 0.0015 s                                                                            |
|                                        | At the output                                                                       |

### Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Configuration and communication via IO-Link v1.1 or standard I/O
- Adjustable distance value in 12-bit IO-Link process data
- Switchpoint configurable via two teach points
- Switching output freely configurable
- Identification via 32-byte memory
- Temperature monitoring with adjustable limits
- 4-wire, 15...30 VDC
- Analog output, 0...10 V (2...10 V parameterizable)
- M12 x 1 connector

### Wiring diagram

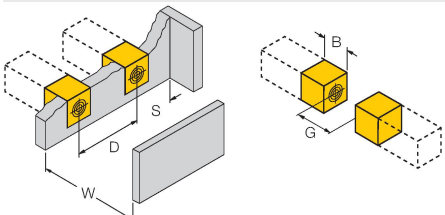


Technical data

| IO-Link                    |                                                     |
|----------------------------|-----------------------------------------------------|
| IO-Link specification      | V 1.1                                               |
| IO-Link port type          | Class A                                             |
| Communication mode         | COM 2 (38.4 kBaud)                                  |
| Process data width         | 16 bit                                              |
| Switchpoint information    | 1 bit                                               |
| Status bit information     | 2 bit                                               |
| Frame type                 | 2.2                                                 |
| Minimum cycle time         | 2.3 ms                                              |
| Function pin 4             | IO-Link                                             |
| Function Pin 2             | Analog                                              |
| Maximum cable length       | 20 m                                                |
| Included in the SIDI GSDML | Yes                                                 |
| Mechanical data            |                                                     |
| Design                     | Rectangular, CK40                                   |
| Dimensions                 | 65 x 40 x 40 mm                                     |
|                            | variable orientation of active face in 5 directions |
| Housing material           | Plastic, PBT-GF20-V0, Black                         |
| Active area material       | Plastic, PA12-GF30, yellow                          |
| Electrical connection      | Connector, M12 × 1                                  |
| Environmental conditions   |                                                     |
| Ambient temperature        | -25...+70 °C                                        |
| Vibration resistance       | 55 Hz (1 mm)                                        |
| Shock resistance           | 30 g (11 ms)                                        |
| Protection class           | IP67                                                |
| MTTF                       | 751 years acc. to SN 29500 (Ed. 99) 40 °C           |
| Power-on indication        | 2 × LEDs, Green                                     |
| Switching state            | 2 × LEDs, Yellow                                    |
| Included in delivery       | BS1-CK40                                            |

Mounting instructions

Mounting instructions/Description



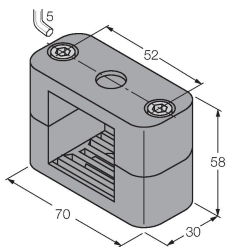
|                        |        |
|------------------------|--------|
| Distance D             | 2 x B  |
| Distance W             | 3 x Sn |
| Distance S             | 1 x B  |
| Distance G             | 6 x Sn |
| Width active area<br>B | 40 mm  |

Functional principle

Inductive sensors with analog output from TURCK accomplish simple control tasks. They provide a distance-proportional current, voltage or frequency signal. With TURCK analog sensors, this output signal is linear to the distance of the target over the entire sensing range. Using an IO-Link Master also enables various functions to be configured and certain parameters of analog IO-Link sensors to be adjusted within predefined limits to suit customer needs. Please refer to the operating instructions for the analog IO-Link sensor for more detailed information.

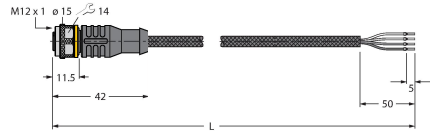
Accessories

|          |         |
|----------|---------|
| BSS-CP40 | 6901318 |
|----------|---------|

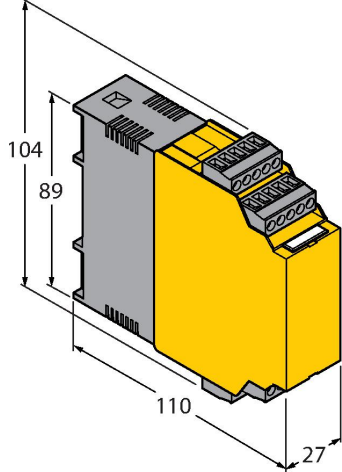


Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene

Accessories

| Dimension drawing                                                                  | Type              | ID      |                                                                                                                                                         |
|------------------------------------------------------------------------------------|-------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | RKC4.4T-2/TXL1001 | 6628825 | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C |

Accessories

| Dimension drawing                                                                   | Type       | ID      |                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | IM43-13-SR | 7540041 | Trip amplifier; 1-channel; input 0/4... 20 mA or 0/2...10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20...250 VUC; further Limit value indicators are described in our "Interface Technology" catalog. |

| Dimension drawing | Type           | ID      |                                         |
|-------------------|----------------|---------|-----------------------------------------|
|                   | USB-2-IOL-0002 | 6825482 | IO-Link Master with integrated USB port |

