Inductive sensor
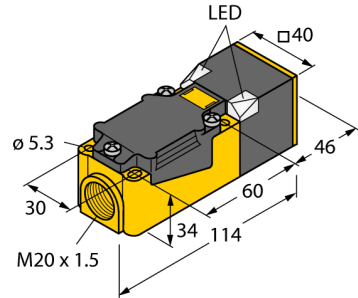# BI15-CP40-AP6X2
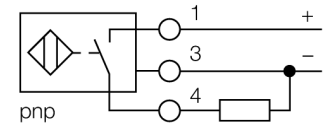
- **Rectangular, height 40 mm**
- **Variable orientation of active face in 9 directions**
- **Plastic, PBT-GF30-V0**
- **High luminance corner LEDs**
- **Optimum view on supply voltage and switching state from any position**
- **DC 3-wire, 10…30 VDC**
- **NO contact, PNP output**
- **Terminal chamber**

Wiring Diagram


Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Type code	BI15-CP40-AP6X2
Ident no.	16023

Rated switching distance Sn	15 mm
Mounting conditions	flush
Assured switching distance	$\leq (0{,}81 \times Sn)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq$ 2 % of full scale
Temperature drift	$\leq \pm$ 10 %
Hysteresis	3…15 %
Ambient temperature	-25…+70 °C

Operating voltage	10… 30VDC
Residual ripple	$\leq$ 10 % U_{ss}
DC rated operational current	$\leq$ 200 mA
No-load current I_0	$\leq$ 15 mA
Residual current	$\leq$ 0.1 mA
Rated insulation voltage	$\leq$ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I_e	$\leq$ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.15 kHz

Construction	rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, black
Connection	terminal chamber
Clamping ability	$\leq$ 2.5 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

Power-on indication	2 LEDs green
Switching state	LED yellow

Inductive sensor
BI15-CP40-AP6X2

Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn

Width of the active face B	40 mm
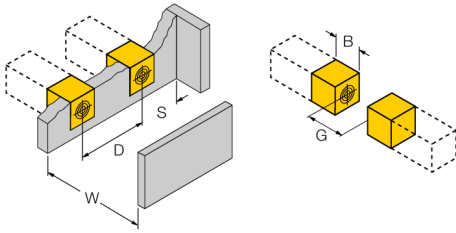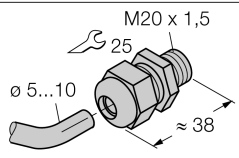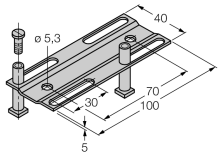
Accessories

Type code	Ident no.	Description	
STRM M20X1,5 BLACK	6965902	Cable glands M20 x 1.5	
Adjusting bar JS 025/037	69429	Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301	
BSS-CP40	6901318	Mounting bracket for rectangular devices; material: Polypropylene	