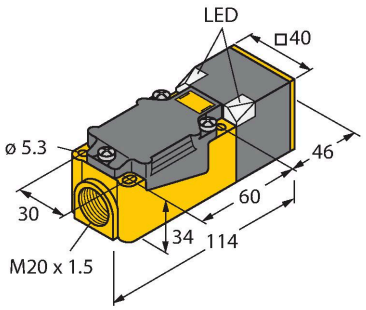
BI15-CP40-FDZ30X2
Inductive Sensor



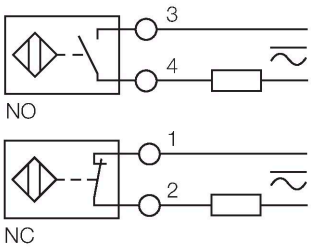
Technical data

Type	BI15-CP40-FDZ30X2
ID	42231
General data	
Rated switching distance	15 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 %
Hysteresis	3…15 %
Electrical data	
Operating voltage	20…250 VAC
Operating voltage	10…300 VDC
AC rated operational current	≤ 400 mA
DC rated operational current	≤ 300 mA
Frequency	≥ 50…≤ 60 Hz
Residual current	≤ 1.7 mA
Isolation test voltage	≤ 1.5 kV
Surge current	≤ 3 A (≤ 20 ms max. 5 Hz)
Short-circuit protection	yes / Latching
Voltage drop at I_e	≤ 6 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	2-wire, Connection programmable, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.02 kHz

Features

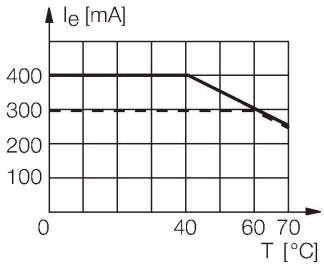
- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-VO
- AC 2-wire, 20…250 VAC
- DC 2-wire, 10…300 VDC
- NC/NO programmable
- Terminal chamber

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.



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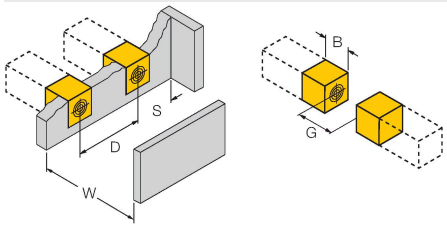
Technical data

Mechanical data	
Design	Rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PBT-GF30-V0, yellow
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm²
Environmental conditions	
Ambient temperature	-25…+70 °C
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	2 × LEDs, Red

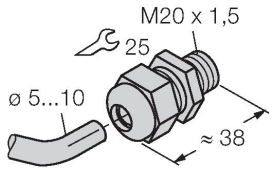
Mounting instructions

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 B	40 mm



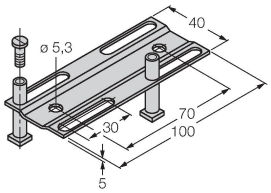
Accessories

STRM M20X1.5 SCHWARZ	6965902



M20 × 1.5 cable gland

JS025/037	69429



Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301

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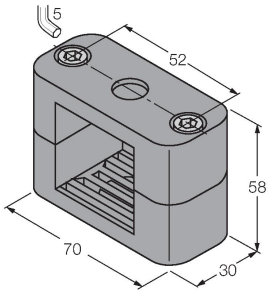
BSS-CP40	6901318



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

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