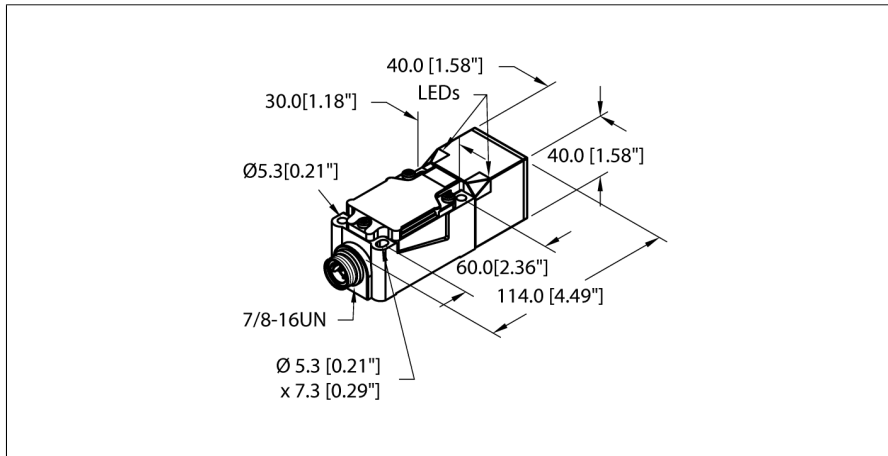


Inductive sensor

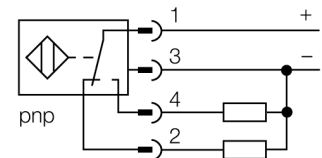
With increased switching distance

BI20-CP40-VP4X2-B1141



- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-VO
- High-luminance corner LEDs
- Optimum view of operating voltage and switching state from any position
- Large sensing range
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- 7/8" male connector

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.

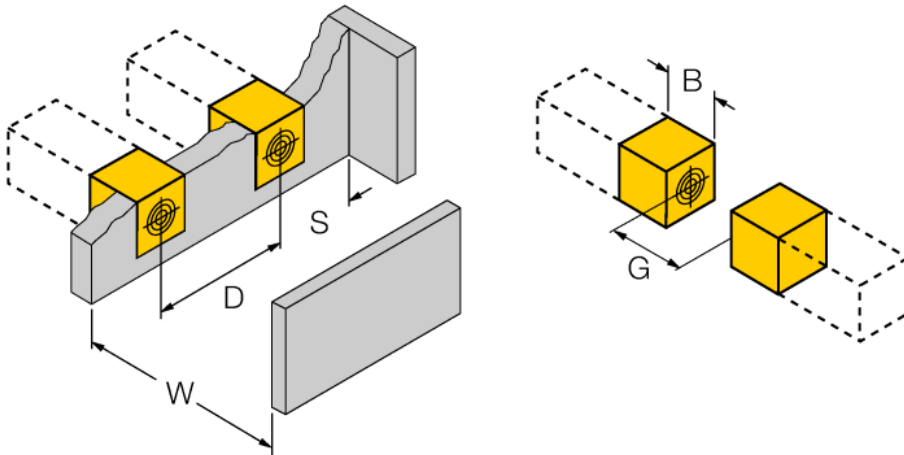
Type designation	BI20-CP40-VP4X2-B1141
Ident-No.	1501290
Rated switching distance S_n	20 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0,81 \times S_n) \text{ mm}$
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2 \text{ \% of full scale}$
Temperature drift	$\leq \pm 10 \text{ \%}$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	10...65 VDC
Residual ripple	$\leq 10 \text{ \% } U_{ss}$
DC rated operational current	$\leq 200 \text{ mA}$
No-load current I_o	$\leq 15 \text{ mA}$
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	4-wire, Complementary contact, PNP
Switching frequency	0.1 kHz
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
Connector housing	metal
Electrical connection	Connector, 7/8"
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 x LEDs, Green
Switching state	2 x LEDs, Yellow

Inductive sensor

With increased switching distance

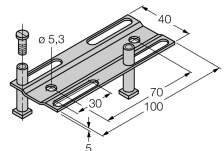
BI20-CP40-VP4X2-B1141

Distance D	$2 \times B$
Distance W	$3 \times S_n$
Distance S	$1 \times B$
Distance G	$6 \times S_n$
Width active area B	40 mm



Inductive sensor
With increased switching distance
BI20-CP40-VP4X2-B1141

Accessories

Type code	Ident-No.	Description	
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	