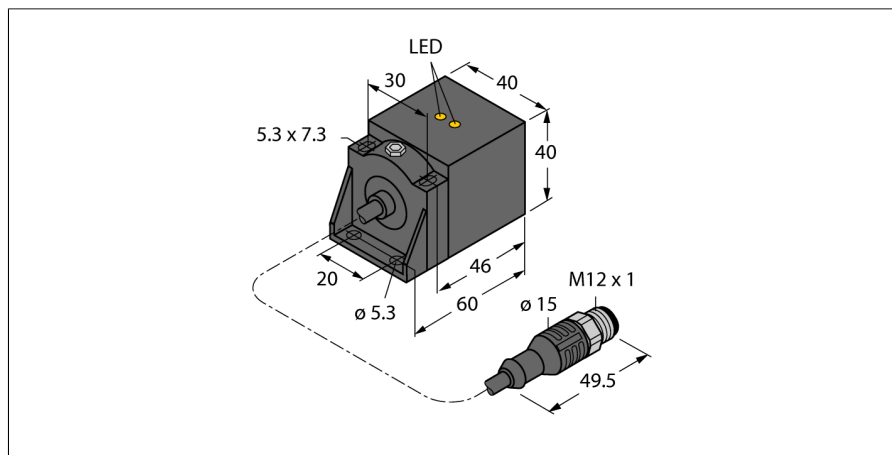


Inductive Sensor

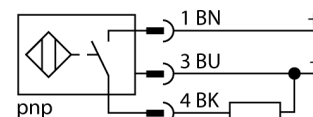
With WeldGuard™ Coating

BI20U-CA40-AP6X2-0.2-RS4/S1590/XOR



- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Sensor housing GD-ALSI 12
- Front cap with special coating, very resistant to thermal and mechanical load
- Factor 1 for all metals
- Protection class IP67
- Resistant to magnetic fields
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M12 x 1

Wiring Diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Turck WeldGuard sensors are equipped with a thin coating made of thermosetting plastic. This high-tech coating is resistant to abrasion and withstands mechanical stress, as occurring for example in welding systems.

Type	BI20U-CA40-AP6X2-0.2-RS4/S1590/XOR
ID	1627218
Special version	S1590 corresponds to: WeldGuard™ coating

General data	
Rated switching distance S_n	20 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	≤ 200 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes/ Cyclic
Voltage drop at I_L	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	0.25 kHz

Mechanical data	
Design	Rectangular, CA40
Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Metal, GD-AlSi 12
Active area material	Plastic, PA6-GF30, black
Material coupling nut	metal, 1.4404
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 5.2 mm, Orange, LifXX, PVC, 0.2 m
Core cross-section	3 x 0.34 mm ²
Environmental conditions	
Ambient temperature	0...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Power-on indication	
Switching state	LED, Green
Included in delivery	LED, Yellow
	BS1-CK40

Accessories

Type code	Ident no.		Dimension drawing
BSS-CP40	6901318	Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene	