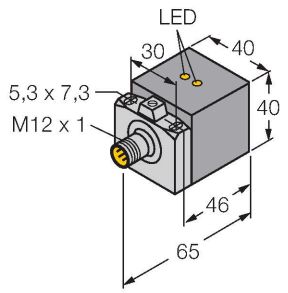
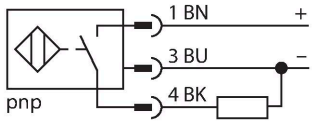
BI20U-CA40-AP6X2-H1141/S1590 W/BS2.0
Inductive Sensor – With WeldGuard™ Coating

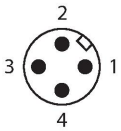


Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Sensor housing GD-ALSI 12
- Active face PA6-GF30
- Factor 1 for all metals
- Protection class IP67
- Resistant to magnetic fields
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram





Technical data

Type	BI20U-CA40-AP6X2-H1141/S1590 W/BS2.0
ID	1627297
Special version	S1590 corresponds to: WeldGuard™ coating
General data	
Rated switching distance	20 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
Hysteresis	3…15 %
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_e	≤ 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

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 occuring for example in welding systems.

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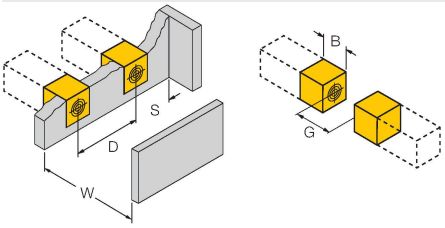
Technical data

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
Electrical connection	Connector, M12 × 1
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	LED, Green
Switching state	LED, Yellow
Included in delivery	BS2.0-CK40

Mounting instructions

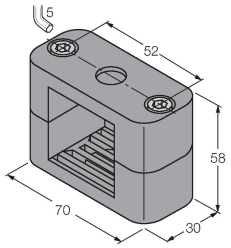
Mounting instructions/Description



Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn
Width active area B	40 mm

Accessories

BSS-CP40	6901318



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

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