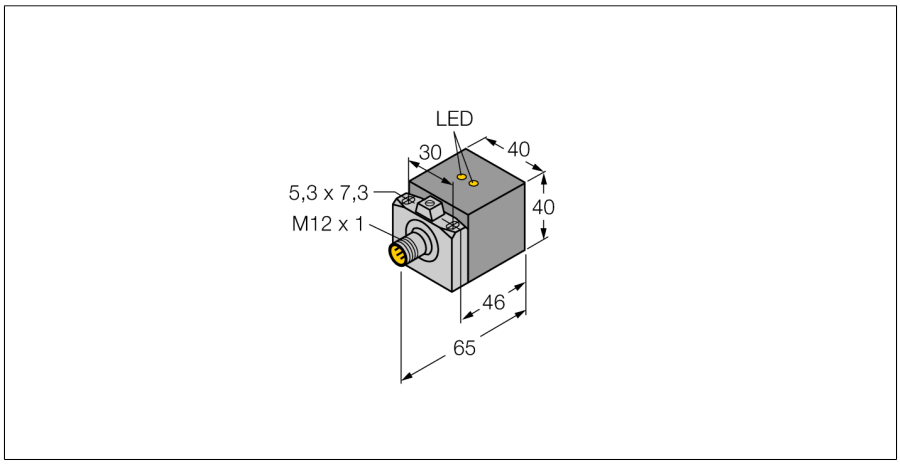
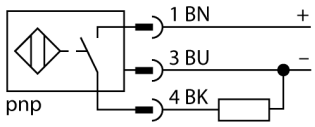
Inductive Sensor
With WeldGuard™ Coating
BI20U-CA40-AP6X2-H1141/S1590 W/BS2.0



- **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



Type designation	BI20U-CA40-AP6X2-H1141/S1590 W/BS2.0
Ident no.	1627205
Remark to product	Discontinued; Turck Inc. replacement item 1627297 BI20U-CA40-AP6X2-H1141/S1590 W/BS2.0
Special version	S1590 corresponds to: WeldGuard™ coating
Rated switching distance Sn	20 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
Hysteresis	3…15 %
Ambient temperature	0…+70 °C
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current I_0	≤ 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
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
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

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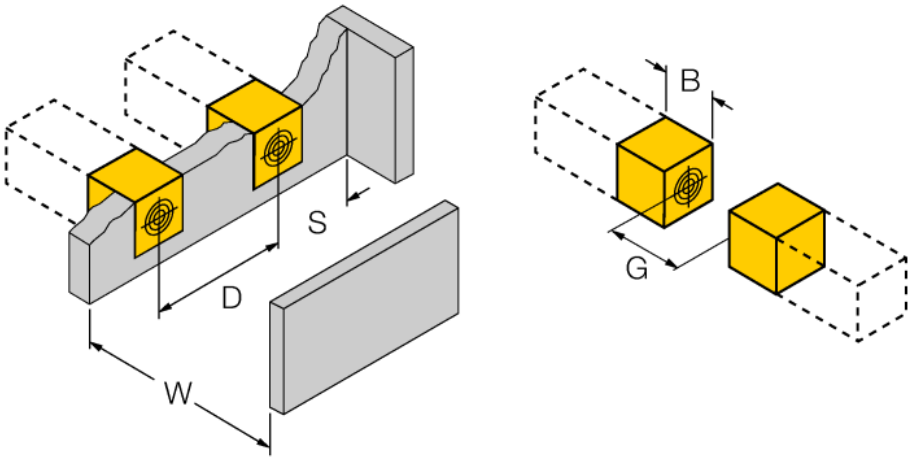
Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn

Width active area B	40 mm



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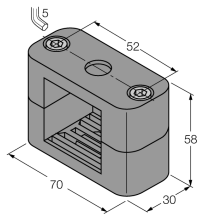
Accessories

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

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