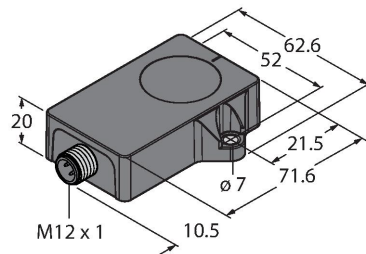


BI20C-QR20-VP6X2-H1141

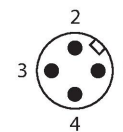
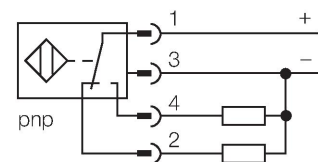
Inductive Sensor – For Detecting Carbon Materials



Features

- Rectangular, height 20 mm
- Active face on top
- Plastic, Ultem
- Carbon detection
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Wiring diagram



Technical data

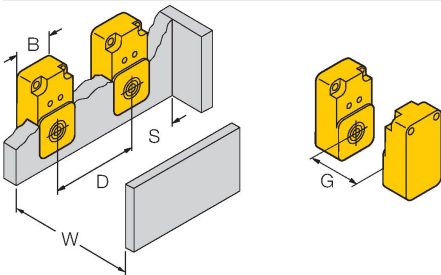
Type	BI20C-QR20-VP6X2-H1141
ID	100015717
General data	
Rated switching distance	20 mm
	The rated operating distance is based on a standard target made of steel. The operating distance may vary depending on the composition of the carbon material.
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_e	≤ 100 mA
No-load current	≤ 20 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 break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.25 kHz
Mechanical data	
Design	Rectangular, QR20
Dimensions	71.6 x 62.6 x 20 mm

Technical data

Housing material	Plastic, Ultem
Active area material	Ultem
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	0...+100 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



The figure contains two technical diagrams. The left diagram shows two yellow sensor units mounted on a grey panel. Dimension lines indicate: 'B' for the width of one sensor, 'D' for the distance between the centers of the two sensors, 'S' for the distance from the panel edge to the center of the first sensor, and 'W' for the total width of the mounting area. The right diagram shows a single yellow sensor unit with dimension 'G' indicating its height.

Distance D	$1.5 \times B$
Distance W	$3 \times Sn$
Distance S	$1 \times B$
Distance G	$6 \times Sn$
Width active area	40 mm
B	