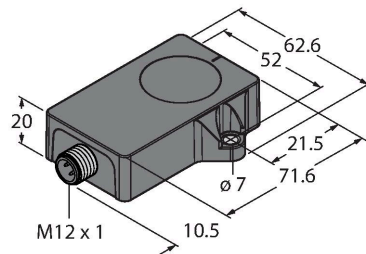


BI20C-QR20-VP6X2-H1141

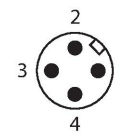
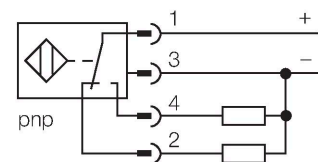
Inductive Sensor – For Detecting Carbon Materials



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

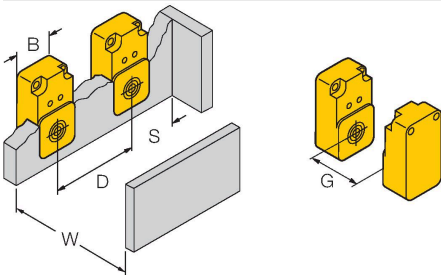
Type	BI20C-QR20-VP6X2-H1141
ID	100015717
General data	
Rated switching distance	20 mm
	The rated operating distance is based on a standard target made of steel. The operating distance may vary depending on the composition of the carbon material.
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ 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_o	≤ 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_o	≤ 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 illustrates the sensor's mounting on a panel, showing dimensions B (sensor width), D (mounting distance), S (panel thickness), and W (total width). The right diagram shows the sensor's profile with dimension G (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	