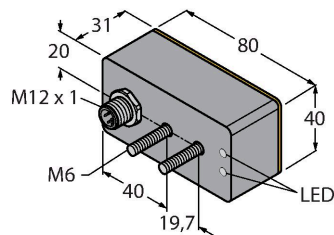


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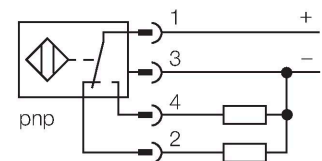
Inductive Sensor



Features

- Rectangular, height 40 mm
- Sensor housing, POM plastic
- Active face, POM plastic
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

Type	BI20-CK4080-VP4X2-H1141/S1009
ID	4283496
Special version	S1009 Corresponds to:250 ms Internal off delay
General data	
Rated switching distance	20 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...65 VDC
Ripple U_{rs}	≤ 10 % U_{Bmax}
DC rated operating current I_B	≤ 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_B	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.1 kHz

Technical data

Mechanical data	
Design	Rectangular, CK4080
Dimensions	80 x 40 x 40 mm
Housing material	Plastic, POM, Black
Active area material	POM, black
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



This diagram shows a grey L-shaped mounting bracket being attached to a grey rectangular panel. Two yellow rectangular sensors are shown being inserted into the bracket. Dimension lines indicate: 'B' for the width of the sensors, 'D' for the distance between the sensor centers, 'S' for the distance from the sensor center to the bracket's inner corner, and 'W' for the total width of the bracket assembly.



This diagram shows two grey L-shaped mounting brackets, one with a yellow sensor inserted. A dimension line labeled 'G' indicates the distance between the front faces of the two brackets.

Distance D	3 x B
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Distance W	3 x Sn
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Distance S	1.5 x B
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Distance G	6 x Sn
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