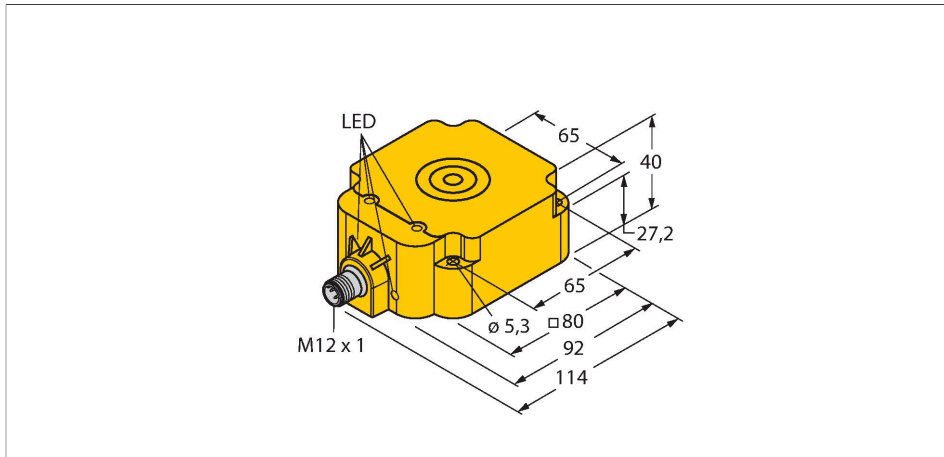


BI50U-Q80-AP6X2-H1141/S1751

Inductive Sensor – With Extended Switching Distance

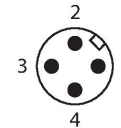
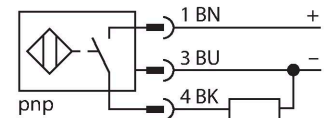
With FM Approval



Features

- Rectangular, height 40 mm
- Active face on top
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Resistant to magnetic fields
- DC 3-wire, 10...30 VDC
- NO 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

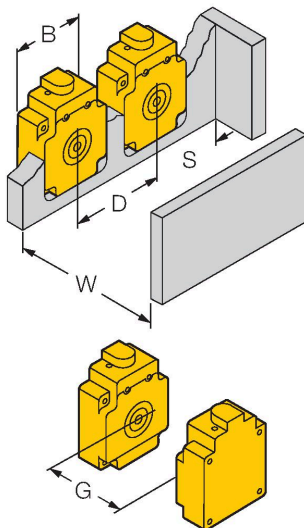
Type	BI50U-Q80-AP6X2-H1141/S1751
ID	1608980
Special version	S1751 corresponds to: FM — Class I Div 2 approval
General data	
Rated switching distance	50 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
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_o	≤ 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}

Technical data

Insulation class	□
Switching frequency	0.25 kHz
Mechanical data	
Design	Rectangular, Q80
Dimensions	92 x 80 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Yellow
Active area material	PBT-GF30-V0, yellow
Tightening torque fixing screw	4 Nm
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	874 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



Distance D	240 mm
Distance W	150 mm
Distance S	80 mm
Distance G	300 mm
Width active area B	80 mm

Wiring accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

