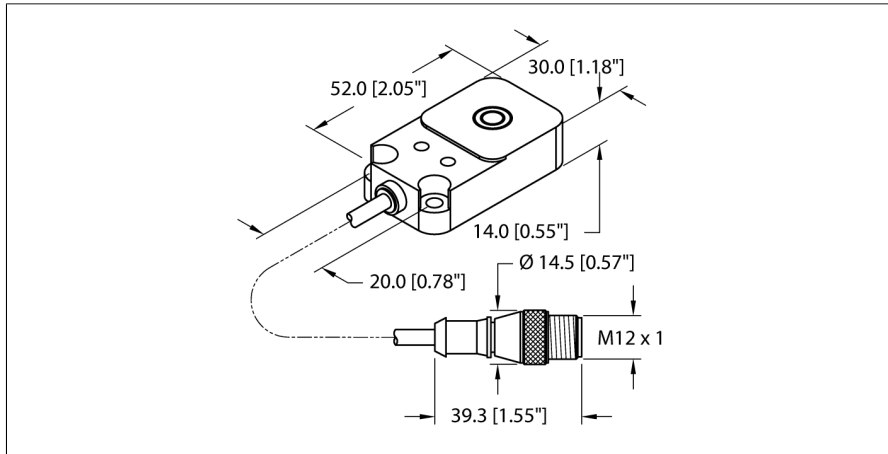


Inductive Sensor

For Use in Vehicle Board Nets

BI10-Q14-AP45X2LD-1-RS4T



Type	BI10-Q14-AP45X2LD-1-RS4T
ID	1584093

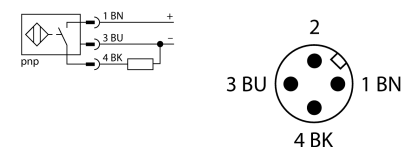
General data	
Rated switching distance S_n	10 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2\%$ of full scale
	$\leq \pm 15\%$, $\leq -25\text{ }^\circ\text{C}$ v $\geq +70\text{ }^\circ\text{C}$
Hysteresis	3...15 %

Electrical data	
Operating voltage U_o	8.6...65 VDC
Ripple U_{res}	$\leq 10\%$ U_{Bmax}
DC rated operating current I_o	≤ 200 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	3-wire, NO contact, PNP
Load-dump protection (DIN ISO 7637-2)	Severity degree IV/Level 4
Switching frequency	0.5 kHz

Mechanical data	
Design	Rectangular, Q14
Dimensions	52 x 30 x 14 mm
Housing material	Plastic, PBT-GF30-V0
Material coupling nut	metal, CuZn, nickel-plated
Electrical connection	Cable with connector, M12 x 1
Cable quality	$\varnothing$ 5.2mm, Lif32Y32Y, TPE, 1 m
Core cross-section	3 x 0.5 mm ²

- Rectangular, height 14 mm
- Active face on top
- Plastic, PBT-GF30-V0
- For vehicle board nets, 12 V and 24 V
- Increased interference immunity 100 V/m radiated acc. ISO 11452-4 and 100 mA BCI acc. to ISO 11452-2
- Load-dump protection acc. to DIN ISO 7637-2 (SAE J 113-11)
- Extended temperature range
- High protection class IP68/IP69K
- Protection against salt spray and rapid temperature change
- Laser engraved label, permanently legible
- DC 3-wire, 8.4...65 VDC
- NO contact, PNP output
- Pigtail with M12 x 1 male connector

Wiring Diagram



Functional principle

Maximum reliability even under the most extreme environmental conditions is guaranteed by our sensors for mobile applications. TURCK's inductive sensors for extremely hostile industrial environments not only meet, but even exceed the requirements of the protection classes IP68 and IP69.

Applied in vehicles for road construction or in agricultural machines, these sensors excel in

Environmental conditions	
Ambient temperature	-40...+85 °C
Temperature changes (EN60068-2-14)	-40... +85 °C; 20 cycles
Vibration resistance	55 Hz (1 mm)
Vibration resistance (EN 60068-2-6)	20 g; 10...3000 Hz; 50 cycles; 3 axes
Shock resistance	30 g (11 ms)
Shock resistance (EN 60068-2-27)	150 g; 6 ms ½ sine; 3 × each; 3 axes
Continuous shock resistance (EN 60068-2-29)	100 g; 11 ms ½ sine; 3 × each; 3 axes
Salt spray test (EN 60068-2-52)	Severity degree 5 (4 test cycles)
Protection class	IP68 IP69K
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	
LED, Green	
Switching state	LED, Yellow

high vibration and shock resistance and they withstand fast temperature cycles.

12 V Bordnet						
Impulse	1	2	3a	3b	4	5
Severity level	IV	IV	IV	IV	IV	IV
Failure criterion	C	C	A	A	C	C

24 V Bordnet						
Impulse	1	2	3a	3b	4	5
Severity level	III	IV	IV	IV	III	IV
Failure criterion	C	C	A	A	A	C

Accessories

Type code	Ident-No.		Dimension drawing
MW-Q14/Q20	6945006	Mounting bracket for rectangular Q14 or Q20; material VA 1.4301	