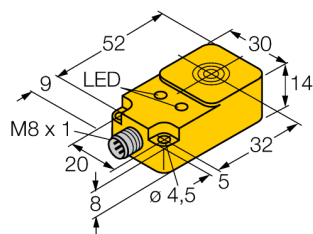


Inductive sensor for use in vehicle board nets BI10-Q14-AP68X2LD-V1131

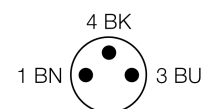
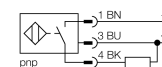
TURCK

Industrial
Automation



- e1 type approval from German federal office for motor vehicles
- Rectangular, height 14 mm
- Active face on top
- Plastic, PBT-GF30-V0
- For vehicle board nets, 12 V and 24 V
- Increased interference immunity 100V/m radiated and 100mA BCI
- Load-Dump protection according to DIN 7637 (SAE J 113-11)
- Extended temperature range
- High protection classes IP68/IP69K
- Protection against salt spray and thermal shock
- Laser engraved label, permanently legible
- DC 3-wire, 8.4...30 VDC
- NO contact, PNP output
- Connector, M8 x 1

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 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

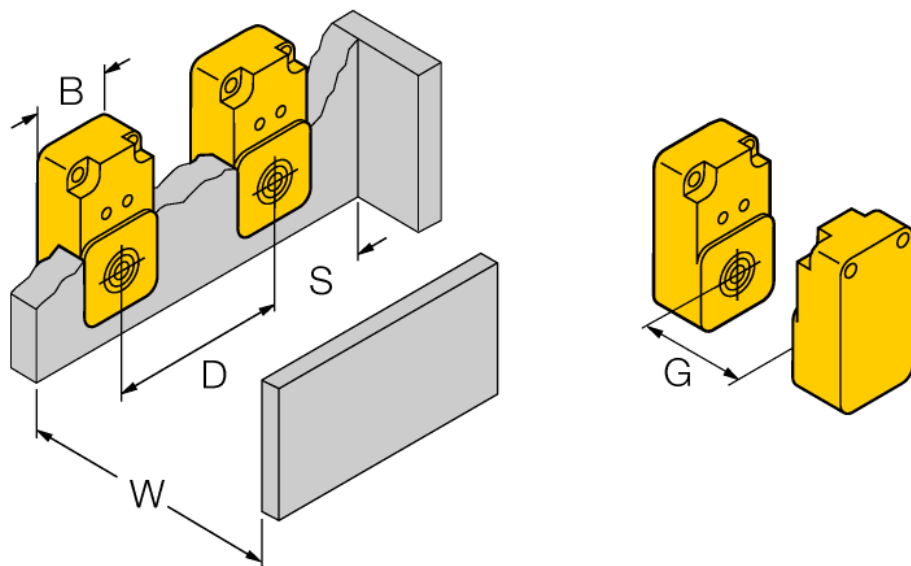
24 V Bordnet						
Impulse	1	2	3a	3b	4	5
Severity level	III	IV	IV	IV	III	IV
Failure criterion	C	C	A	A	A	C

Type code	BI10-Q14-AP68X2LD-V1131
Ident no.	1584030
Rated operating distance Sn	10 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperaturdrift	10 %
Hysteresis	≤ ± 15 %, ≤ -25 °C v ≥ +70 °C
Ambient temperature	3...15 %
Temperature changes (EN60068-2-14)	-40... +85 °C
Operating voltage	8.4...30VDC
Residual ripple	≤ 10 % U _{in}
DC rated operational current	≤ 200 mA
No-load current I ₀	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I _N	≤ 1.8 V
Wire breakage / 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
Design	rectangular, Q14
Dimensions	52x 30x 14 mm
Housing material	Plastic, PBT
Connection	male, M8 x 1
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)	40 g; 6 ms ½ sinus; each 4000x; 3 axes
Continuous shock resistance (EN 60068-2-29)	100 g; 11 ms ½ sinus; each 3x; 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
Operating voltage	LED green
Switching state	• yellow

Inductive sensor for use in vehicle board nets BI10-Q14-AP68X2LD-V1131

Distance D	1.5 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn

Width of the active face B	30 mm
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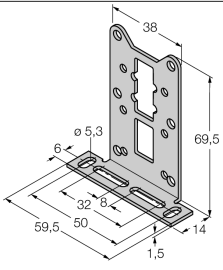


**Inductive sensor
for use in vehicle board nets
BI10-Q14-AP68X2LD-V1131**

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Accessories

Type code	Ident no.	Description	Dimension drawing
MW-Q14/Q20	6945006	Mounting bracket for rectangular Q14 or Q20; material VA 1.4301	
MH-Q14MONTAGEHÜLSEN	6950011	Mounted with active face downwards, for Q14	