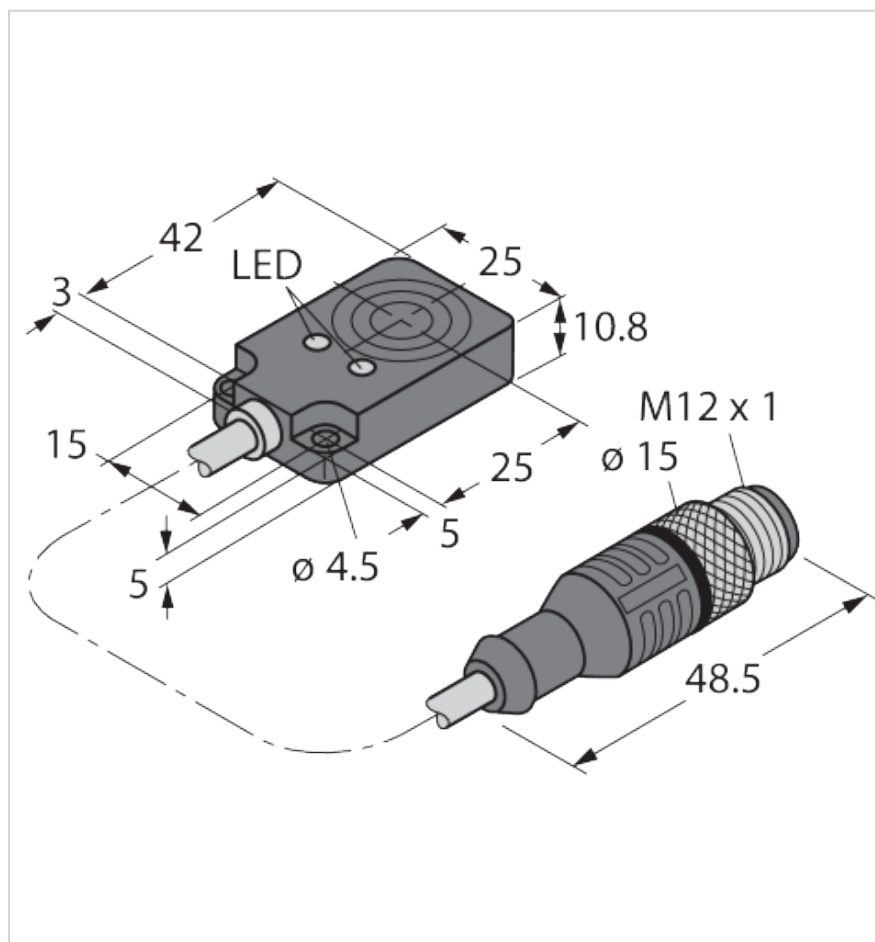


BI8-Q10-VP68X2-0.3-RS4.4

Inductive Sensor For Use in Vehicle Electrical Systems



Type designation	BI8-Q10-VP68X2-0.3-RS4.4
Ident-No.	4616405

Technical data

General data	
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Detection area/measuring range	
Rated switching distance	8 mm
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Power supply	
Operating voltage U_B	8.6...30 VDC

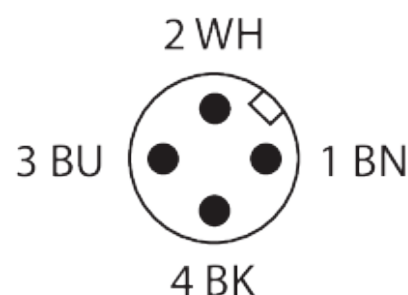
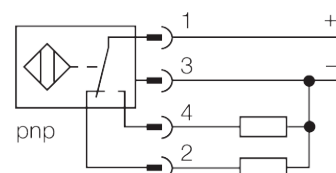
Features

- Rectangular, height 10.8 mm
- Active face on top
- Plastic, PBT-GF30-V0
 - For vehicle electrical systems, 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
- Extended temperature range
- High protection class IP68/IP69K
- Protected against salt spray and rapid temperature change
- Laser engraved label, permanently legible

Technical data

Voltage drop at I_e	$\leq 1,8 \text{ V}$
Electrical data	
No-load current	15 mA
Output function	4-wire, Complementary contact, PNP
Short-circuit protection	yes/Cyclic
Wire break/reverse polarity protection	yes/Complete
DC rated operational current	$\leq 200 \text{ mA}$
Isolation test voltage	$\leq 0,5 \text{ kV}$
Residual current	$\leq 0,1 \text{ mA}$
Residual ripple	$\leq 10 \% U_{SS}$
Switching frequency	1 kHz
Accuracy/deviation	
Hysteresis	3 % v. E...15 % v. E.
Temperature drift	10 %
Repeat accuracy	$\leq 2 \% \text{ v. E.}$
	$\leq \pm 15 \%, \leq -25^\circ \text{C} \vee \geq +70^\circ \text{C}$
Mechanical data	
Design	Rectangular, Q10
Construction type designation	Q10
Dimensions	42 mm x 25 mm x 10,8 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Material coupling nut	metal, CuZn, nickel-plated
Electrical connection	Cable with connector, M12 x 1
Number of pins	4
Pressure resistant	no
Mounting conditions	Flush
Cable	
Cable length	0,3 m
Cable jacket	Gray
Core cross-section	4 x 0,14 mm ²
Cable type	LifY-11Y
External Diameter of the Cable	Ø 3 mm
Cable Jacket Material	PUR
Ambient conditions	
Ambient temperature	-40...+85 °C
Temperature changes (EN60068-2-14)	-40... +85 °C; 20 cycles

- DC 4-wire, 10...30 VDC
- Complementary contact, PNP output
- Cable with M12 x 1 male connector
- E1 type approval from German federal office for motor vehicles



12 V Bordnetz					
Impuls	1	2	3a	3b	4
Schärfegrad	IV	IV	IV	IV	IV
Ausfallkriterium	C	C	A	A	C

24 V Bordnetz					
Impuls	1	2	3a	3b	4
Schärfegrad	III	IV	IV	IV	III
Ausfallkriterium	C	C	A	A	A

Functional principle

Highest reliability even under the most extreme conditions - this is guaranteed by our sensors for mobile applications. Securely protected and robustly designed, these sensors meet only the requirements of protection class IP68.

Thanks to their excellent resistance to constant vibration, impact and thermal shock, the sensors in this product series are the ideal choice for mobile applications, such as vehicles used in road construction and agricultural machinery.

Technical data

Pollution degree	3
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
Shock resistance	30 g (11 ms)
Vibration resistance (EN 60068-2-6)	20 g; 10...3000 Hz; 50 cycles; 3 axes
Vibration resistance	55 Hz (1 mm)
Salt spray test (EN 60068-2-52)	Severity degree 5 (4 test cycles)
Protection class	IP68 IP69K
Tests/approvals	
Approvals	E1 type approval
MTTF	2283 Years acc. to SN 29500 (Ed. 99) 40 °C
Displays/controls	
Power-on indication	LED, Green
Switching state	LED, Yellow

Assembly instructions



Distance D: 2 x B
Distance W: 3 x Sn
Distance S: 1 x B
Distance G: 6 x Sn
Width active area B: 25 mm