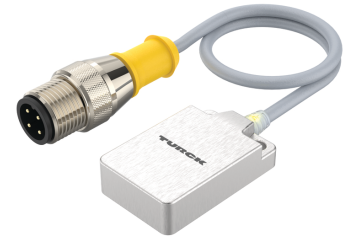
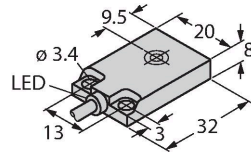


# BI7-Q08F-AP6X-0.2-RS4T

## Inductive Sensor – In Stainless Steel Housing



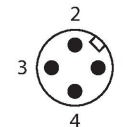
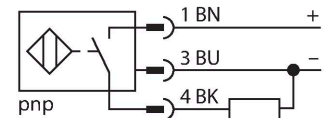
### Technical data

Type	BI7-Q08F-AP6X-0.2-RS4T
ID	16089160
<b>General data</b>	
Rated switching distance	5 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 1.0; Ms = 1.2; Stainless steel = 0.5/0.9
Repeat accuracy	$\leq 5 \%$ of full scale
Hysteresis	20 %
<b>Electrical data</b>	
Operating voltage $U_B$	10...30 VDC
Ripple $U_{ss}$	$\leq 20 \%$ $U_{Bmax}$
DC rated operating current $I_o$	$\leq 200$ mA
No-load current	$\leq 10$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_o$	$\leq 2$ V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.2 kHz
<b>Mechanical data</b>	
Design	Rectangular, Q08

### Features

- Rectangular, height 8 mm
- Active face on top
- Stainless steel housing 1.4401
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M12 x 1

### Wiring diagram



### Functional principle

The inductive all-metal switches operate on the basis of the electromagnetic pulse method. Unlike standard inductive sensors, the magnetic field is not generated through oscillation but through short, periodic current pulses flowing through the coil. The magnetic field induces voltage in the object to be detected, which, for its part creates a current flow in this object. After switching off the current pulse, the current in the object also drops, now inducing voltage back in the emitter coil. This voltage is the

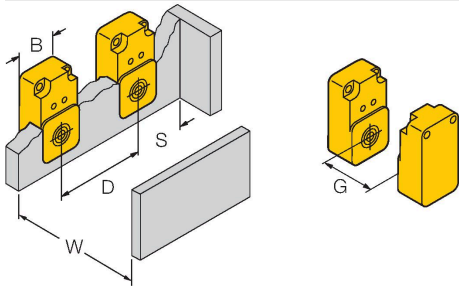
Technical data

Dimensions	32 x 20 x 8 mm
Housing material	Stainless steel, 1.4401/LCP
Active area material	Stainless steel, 1.4404 (AISI 316L)
Material coupling nut	metal, CuZn, nickel-plated
Tightening torque fixing screw	2 Nm
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 3.5 mm, PUR, 0.2 m
Core cross-section	3 x 0.14 mm <sup>2</sup>
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
MTTF	336 years acc. to SN 29500 (Ed. 99) 20 °C
Switching state	LED, Yellow, LED flashing: 0.8 s <sub>r</sub> < s ≤ s <sub>r</sub>

wanted signal and remains unaffected by energy dissipation in the magnetic field. Only non-ferromagnetic or poorly conductive metals provide a low signal.

Mounting instructions

Mounting instructions/Description



Distance D	80 mm
Distance W	21 mm
Distance S	21 mm
Distance G	6 x Sn
Width active area B	20 mm

Different reduction factors apply when flush-mounted in the following metals:  
Steel: 0.9  
Aluminium: 0.9  
Brass:0.8  
Stainless steel:1.1

BI7-Q08F-AP6X-0.2-RS4-T | 02/21/2025 14-42 | technical changes reserved