



BTL6-abcd-Mnnnn-f-lm

**BTL6**

Magnetostrictive linear position sensor Generation 6

**a Interface**

A = Voltage output 0 ... 10 V

G = voltage output -10 ... 10 V

**b Operating voltage**

5 = 10 ... 30 V

**c + d Interface characteristic 1 + 2**

00 = 1 output, rising

**Mnnnn Nominal length (4-position)**

M0500 = metric in mm  
(M0050...M5080)

**f Form factor**

PF = Flat profile

**l Connection type**

S = Connector

**m Connection type characteristic 1**

115 = M12x1 connector with 8 pins

Magnetostrictive Sensors  
 BTL6 -PF- Series - Analog Voltage



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical connection

Polarity reversal protected	Ub up to 36 V
Short-circuit protection	to GND and to 36 V DC

Electrical data

Current consumption max. at 24 V DC	150 mA
Inrush current	≤ 3 A/0.5 ms
Operating voltage Ub	10...30 VDC
Output current max.	5 mA
Output current max.	5 mA
Output signal adjustable	using programming inputs
Overvoltage protection	Ub up to 36 V
Switch-on delay max.	500 ms
Voltage-proof up to (GND to housing)	500 V DC

Environmental conditions

Ambient temperature	-25...70 °C
EN 55016-2-3, Radiation	For industrial and residential use
EN 60068-2-27, Continuous shock	50 g, 2 ms
EN 60068-2-27, Shock	50 g, 6 ms
EN 60068-2-6, Vibration	12 g, 10...2000 Hz
EN 61000-4-2, ESD	Severity Level 3
EN 61000-4-3, RFI	Severity Level 3
EN 61000-4-4, Burst	Severity Level 3
EN 61000-4-5, Surge	Severity Level 2
EN 61000-4-6, High-frequency fields	Severity Level 3
EN 61000-4-8 Magnetic fields	Severity Level 4
IP rating	IP67 with connector
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...100 °C
Temperature coefficient typ.	≤ 30 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	61 a
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Interface

Interface	Analog, voltage
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Material

Cover material	Zinc, Die casting
Housing material	Aluminium, Anodized
Housing material, surface protection	Anodized

Mechanical data

Overall Length	nmm + 146 mm
Speed detectable max.	10 m/s

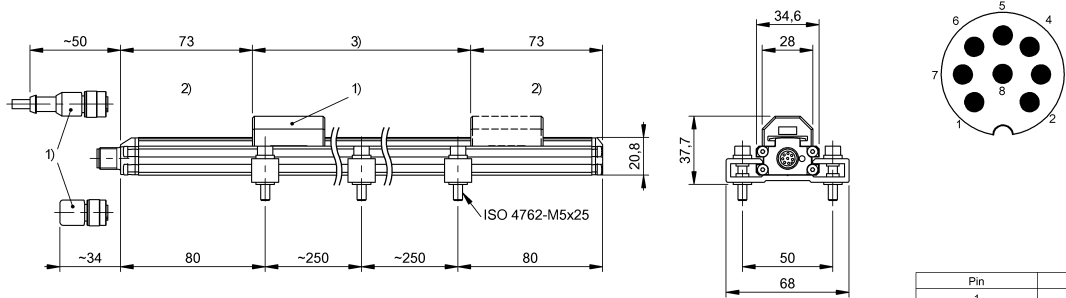
Range/Distance

Linearity deviation	nmm = 0050...0500: ± 200 µm nmm > 0500: ± 0.04% FS
Measuring length	50...5080 mm
Repeat accuracy	nmm ≤ 0250: 5 µm nmm > 0250: 0.002% FS
Sampling frequency max.	nmm = 0050...0600: 2000 Hz nmm = 0601...1300: 1000 Hz nmm = 1301...2700: 500 Hz nmm = 2701...5080: 250 Hz

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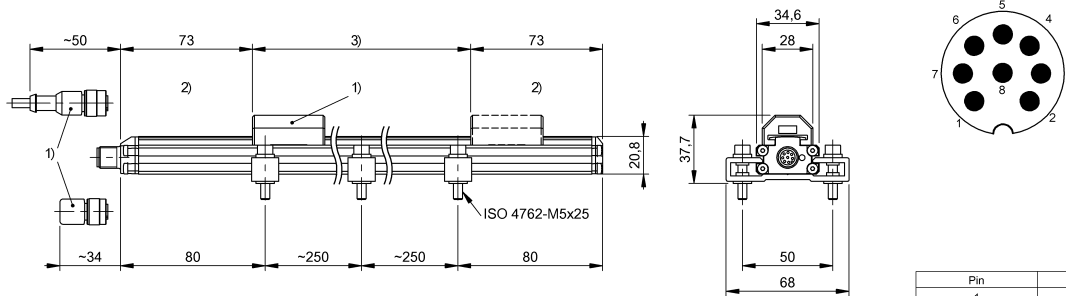
BTL6-A500-Mxxxx-PF-S115



Pin	
1	NC
2	0V
3	NC
4	La
5	0...10 V
6	GND
7	+24 V DC
8	Lb

- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length

BTL6-G500-Mxxxx-PF-S115



Pin	
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