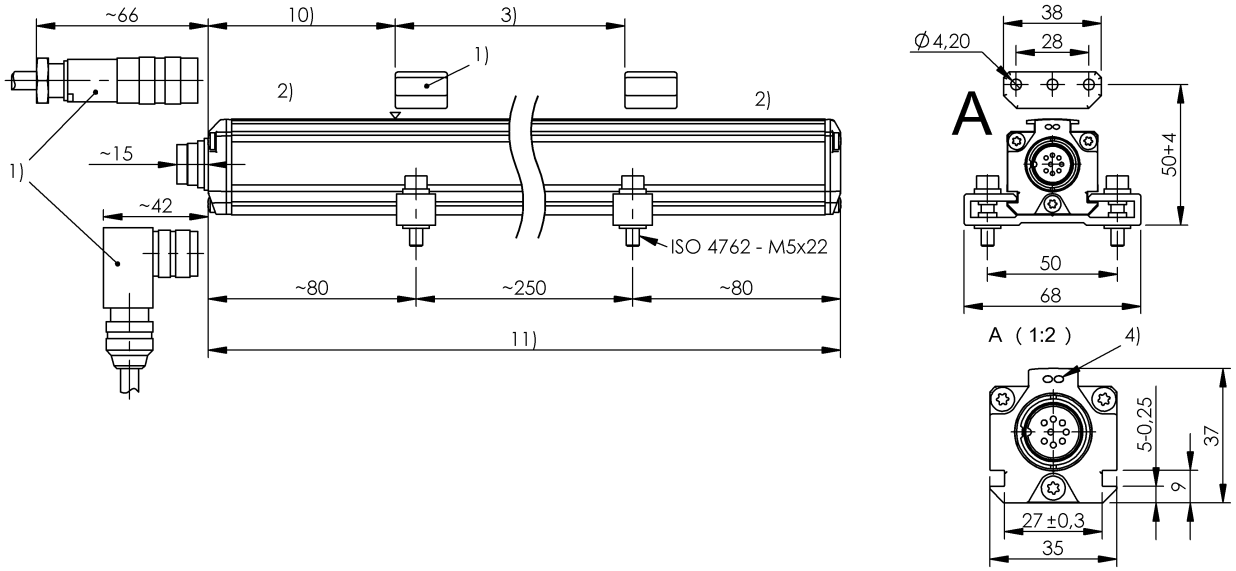
Magnetostrictive Sensors

BTL7-E501-M0200-P-S32
Order Code: BTL1E22



1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 4) LED function indicator, 10) Null point, 11) Installation length

Electrical connection

Connection	Connector, M16x0.75, 8-pin
Connection version	axial
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	180 mA
Error signal Ia falling	3.6 mA
Error signal Ia rising	3.6 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms
Operating voltage Ub	10...30 VDC
Output signal adjustable	with software tool
Overvoltage protection	Ub up to 36 V
Switch-on delay max.	600 ms
Voltage-proof up to (GND to housing)	500 V AC

Environmental conditions

Ambient temperature	-40...85 °C
EN 55016-2-3, Radiation	For industrial and residential use
EN 60068-2-27, Continuous shock	150 g, 2 ms
EN 60068-2-27, Shock	150 g, 6 ms
EN 60068-2-6, Vibration	20 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)	49 a

General data

Approval/Conformity	CE cULus EAC WEEE
Magnets, number (factory setting)	1
Magnets, number max.	2

Magnetostrictive Sensors

BTL7-E501-M0200-P-S32
Order Code: BTL1E22

Material

Cover material	Aluminum, Die-cast, nickel plated
Housing material	Aluminum
Housing material, surface protection	Anodized

Mechanical data

Installation length	345 mm
Minimum distance of the magnets	65 mm
Mounting	Mounting clamps
Null point	72.0 mm

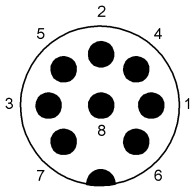
Output/Interface

Analog output	Analog, current 4…20 mA Analog, current 20…4 mA

Range/Distance

Measuring length	200 mm
Non-linearity max.	±50 µm
Repeat accuracy	± 5 µm
Sampling frequency max.	4000 Hz

Connector Drawings



Wiring Diagrams

Pin	
1	4...20 mA
2	0V
3	20...4 mA
4	La
5	NC
6	GND
7	+24 V DC
8	Lb