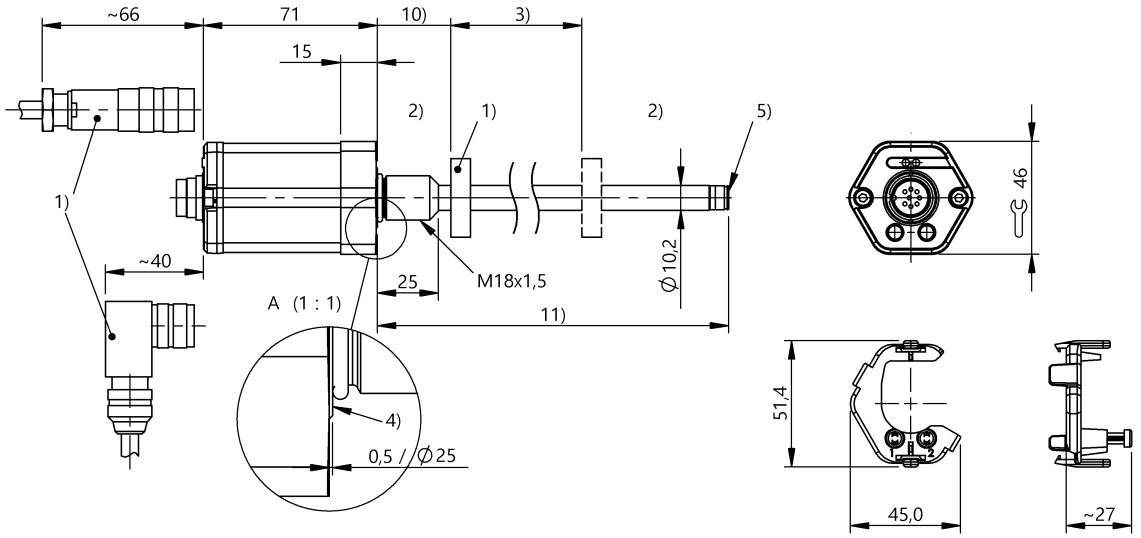
Magnetostrictive Sensors

BTL7-E100-M0250-B-S32
Order Code: BTL06YU



1) not included in scope of delivery
2) Non-usable area
3) Nominal length = Measuring length
4) Mounting surface
5) Internal threads M4x4/6 deep
10) Null point
11) Installation length

Basic features

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

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	150 mA
Error signal Ia rising	3.6 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms
Operating voltage Ub	20...28 VDC
Output signal adjustable	with calibration aid using programming inputs
Overvoltage protection	Ub up to 36 V
Switch-on delay max.	600 ms
Voltage-proof up to (GND to housing)	500 V AC

BTL7-E100-M0250-B-S32
Order Code: BTL06YU

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)	58 a

Material

Cover material	Aluminum, Die-cast, nickel plated
Housing material	Aluminum, Anodized
Housing material, surface protection	Anodized
Material flange	Stainless steel (1.3960)
O-ring material	Fluoroelastomer
Plug material	Stainless steel (1.4571)
Protection tube material	Stainless steel (1.4571)

Mechanical data

Installation length from contact surface	340 mm
Mounting	Threaded flange M18x1.5
Null point	30.0 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque max.	100 Nm

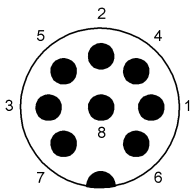
Output/Interface

Analog output	Analog, current 4…20 mA

Range/Distance

Measuring length	250 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	NC
4	La
5	NC
6	GND
7	+24 V DC
8	Lb