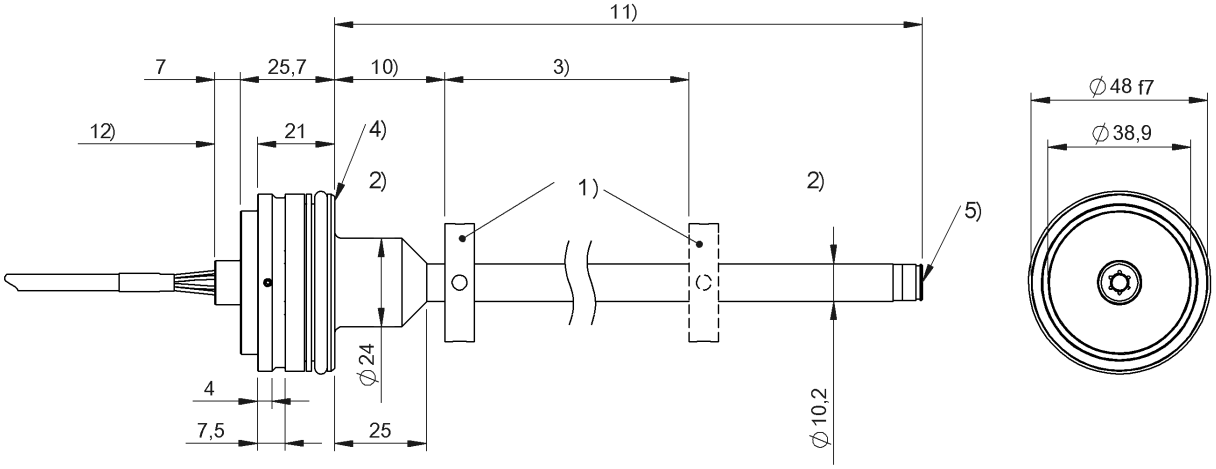
Magnetostrictive Sensors

BTL6-E500-M1700-E2-SA406-KA10
Order Code: BTL29R5



1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 4) Mounting surface, 10) Null point, 11) Installation length, 12) Cable length

Basic features

Approval/Conformity	CE
Base type	BTL6-E500-M....-E2-KA....
Base type deviation	Cable lead out cover Cable jacket partially removed Provide external strain relief Special installation specification Cable routed stationary only no UL
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical connection

Bending radius min., fixed cable	3 x D
Bending radius min., flexible cable	7.5 x D
Cable diameter D	4.25...4.55 mm
Cable length L	10 m, Drag chain compatible
Connection	Cable, 10.00 m, PUR
Connection version	axial
Polarity reversal protected	Ub up to 40 V
Short-circuit protection	to GND and to 36 V DC

Electrical data

Current consumption max. at 24 V DC	60 mA
Current consumption typ.	1.5 W
Error signal Ia rising	3.6 mA
Galvanic isolation	no
Inrush current	≤ 2.5 A/2 ms
Operating voltage Ub	10...30 VDC
Output signal adjustable	no
Overvoltage protection	to 36 V
Switch-on delay max.	600 ms
Voltage-proof up to (GND to housing)	500 V DC

Environmental conditions

Ambient temperature	-40...85 °C
Cable temperature, fixed routing	-40...80 °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	100 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
Protection degree	IP67
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...100 °C
Temperature coefficient typ.	25.0 µm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	101 a

Material

Cable flame-resistant	IEC 60332-1
Cable jacket, material	PUR
Cover material	Stainless steel (1.4305)
Housing material	Stainless steel (1.4404)
Material flange	Stainless steel (1.4404)
O-ring material	NBR
Plug material	Stainless steel (1.4571)
Protection tube material	Stainless steel (1.4571)
Support ring material	PTFE

Mechanical data

Housing diameter	48.00 mm
Installation length from contact surface	1794 mm
Mounting	Mounting flange Ø 48 f7
Null point	30.0 mm
Pressure rating max.	350 bar
Protection tube diameter	10.2 mm
Special installation specification	in grounded metal housing
Support ring	yes

Output/Interface

Analog output	Analog, current 4…20 mA

Range/Distance

Measuring length	1700 mm
Non-linearity max.	±0.04 %FS (typ. ±0.02 % FS)
Repeat accuracy	± 5 µm
Resolution	≤ 7 µA (typical)
Sampling rate max.	0.500 kHz

Wiring Diagrams

colour	
GY	GND Output
GN	4...20 mA
BU	GND
BN	10...30 DC