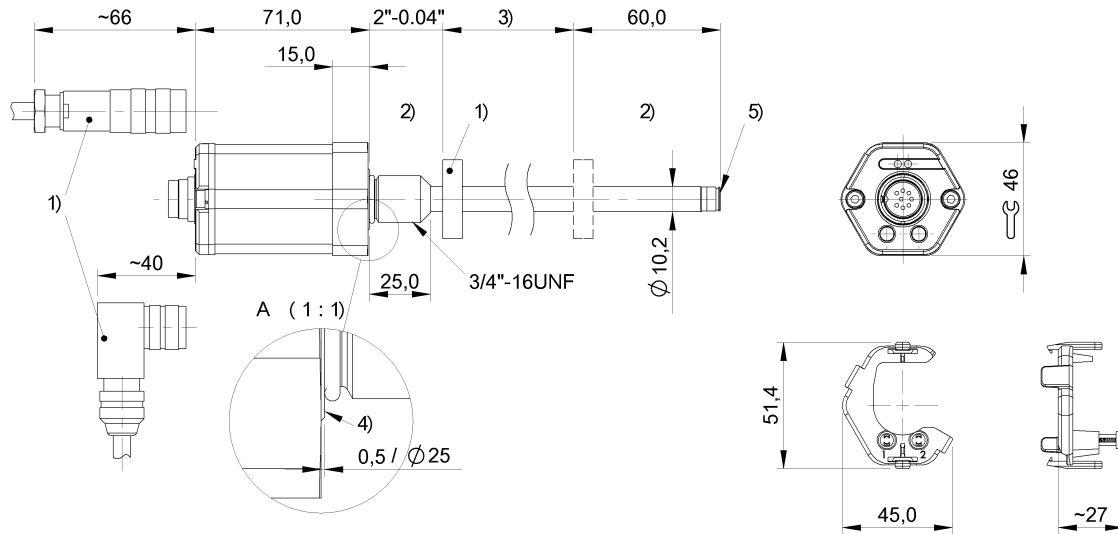


Magnetostrictive Sensors  
**BTL7-E500-M0152-Z-SA418-S32**  
 Order Code: BTL2197

**BALLUFF**



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



**Basic features**

Approval/Conformity	CE UKCA cULus WEEE
Base type	BTL7-E...-M....-Z-S...
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	10...30 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

**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
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**Interface**

Analog output	Analog, current 4...20 mA
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**BALLUFF**

**Material**

Cover material	Aluminium, Die-cast, nickel plated
Housing material	Aluminium, Anodized
Housing material, surface protection	Anodized
Material flange	1.3960 stainless steel
O-ring material	FKM
Plug material	1.4571 stainless steel
Protection tube material	1.4571 stainless steel

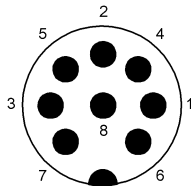
**Mechanical data**

Installation length from contact surface	263 mm
Mounting part	Threaded flange 3/4-16UNF
Null point	50.8 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque max.	100 Nm

**Range/Distance**

Measuring length	152 mm
Repeat accuracy	± 5 µm
Sampling frequency max.	1000 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