

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, 6) LED function indicator, 10) Null point, 11) Installation length



Basic features

Approval/Conformity	CE cULus WEEE
Base type	BTL7-E...-M...-TT-S...
Base type deviation	Error signal 1.8 mA
Magnets, number (factory setting)	1
Magnets, number max.	1
Measuring units, number	3

Electrical connection

Connection	Connector, M16x0.75, 8-pin
Connection 1	M16x0.75, 8-pin
Connection 2	M16x0.75, 8-pin
Connection 3	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 falling	1.8 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms per unit
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	100 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
IP rating	IP67, with connector
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...100 °C
Temperature coefficient typ.	≤ 20 ppm/K at 50% of nominal stroke 500mm

Magnetostrictive Sensors
BTL7-E505-M0250-TT3-SA348-S32
Order Code: BTL15C8

BALLUFF

Functional safety

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Interface

Analog output 3x Analog, current 20...4 mA

Material

Housing material Aluminium, Anodized
 Housing material, surface protection Anodized
 Material flange 1.4404 stainless steel
 O-ring material NBR
 Plug material 1.4571 stainless steel
 Protection tube material 1.4571 stainless steel

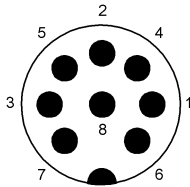
Mechanical data

Housing diameter 100 mm
 Installation length from contact surface 340 mm
 Mounting part Threaded flange M30x1.5
 Null point 30.0 mm
 Pressure rating max. 250 bar
 Protection tube diameter 21.0 mm
 Tightening torque max. 150 Nm

Range/Distance

Measuring length 250 mm
 Non-linearity max. ±200 µm
 Repeat accuracy ± 5 µm
 Sampling frequency max. 500 Hz

Connector Drawings



Wiring Diagrams

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