

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, 7) Ø6.1 for hook wrench Ø74, 10) Null point, 11) Installation length, 14) not installed



Basic features

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

Electrical data

Current consumption max. at 24 V DC	150 mA
Error signal I_a falling	1.8 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms per unit
Operating voltage U_b	10...30 VDC
Output signal adjustable	with software tool
Overvoltage protection	U _b up to 36 V
Switch-on delay max.	600 ms
Voltage-proof up to (GND to housing)	500 V AC

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	U _b up to 36 V
Short-circuit protection	to GND and to 36 V DC

Magnetostrictive Sensors
BTL7-E505-M0275-TK3-SA348-S32
Order Code: BTL1L7C

BALLUFF

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

Functional safety

MTTF (40 °C)	17 a
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Interface

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

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

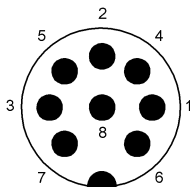
Mechanical data

Housing diameter	79 mm
Installation length from contact surface	375 mm
Mounting part	Flange Ø18h6 plus holes
Null point	40.0 mm
Pressure rating max.	250 bar
Protection tube diameter	10.2 mm
Tightening torque	9 Nm

Range/Distance

Measuring length	275 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