

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, 8) LED function indicator, 10) Null point, 11) Installation length, 12) Cable length



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Base type	BTL7-S...-M....-Z-K...
Base type deviation	Adjustment for MTS magnet OD33
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical data

Current consumption max. at 24 V DC	150 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/25 ms
Operating voltage U_b	10...30 VDC
Output signal adjustable	no
Output value	Position in μm
Overvoltage protection	U_b up to 36 V
Switch-on delay max.	500 ms
Synchronous mode	yes
Voltage-proof up to (GND to housing)	500 V DC

Electrical connection

Bending radius min., fixed cable	5 x D
Bending radius min., flexible cable	15 x D
Cable diameter D	6.4...7 mm
Cable length L	0.2 m, drag chain compatible
Connection	Cable with connector, M16x0.75, 7-pin, 0.20 m, PUR
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-S567F-M0914-ZO-MA000-KA00,2-ZA11

Order Code: BTL21K4

BALLUFF

Environmental conditions

Ambient temperature	-40...85 °C
Cable temperature, drag chain	-5...60 °C
Cable temperature, fixed routing	-40...90 °C
Cable temperature, flexible routing	-5...90 °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	IP68, with connector
IP rating IEC 60529 (connector)	IP67 with connector
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...100 °C
Temperature coefficient typ.	≤ 15 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	102 a
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Interface

Bits, number	25 Bit
Count direction	rising
Interface	SSI
Interface coding	Binary

Material

Cable flame-resistant	IEC 60332-1
Cable jacket, material	PUR
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

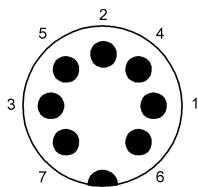
Mechanical data

Installation length from contact surface	1025 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	914 mm
Non-linearity max.	±30 µm
Repeat accuracy	≤ ± 5 µm (typical ± 2.5 µm)
Reproducibility	≤22 µm
Resolution, position	2 µm
Sampling frequency max.	382 Hz

Connector Drawings



Wiring Diagrams

PIN	
1	-Data
2	+Data
3	+Clk
4	-Clk
5	10...30 V DC
6	GND
7	NC