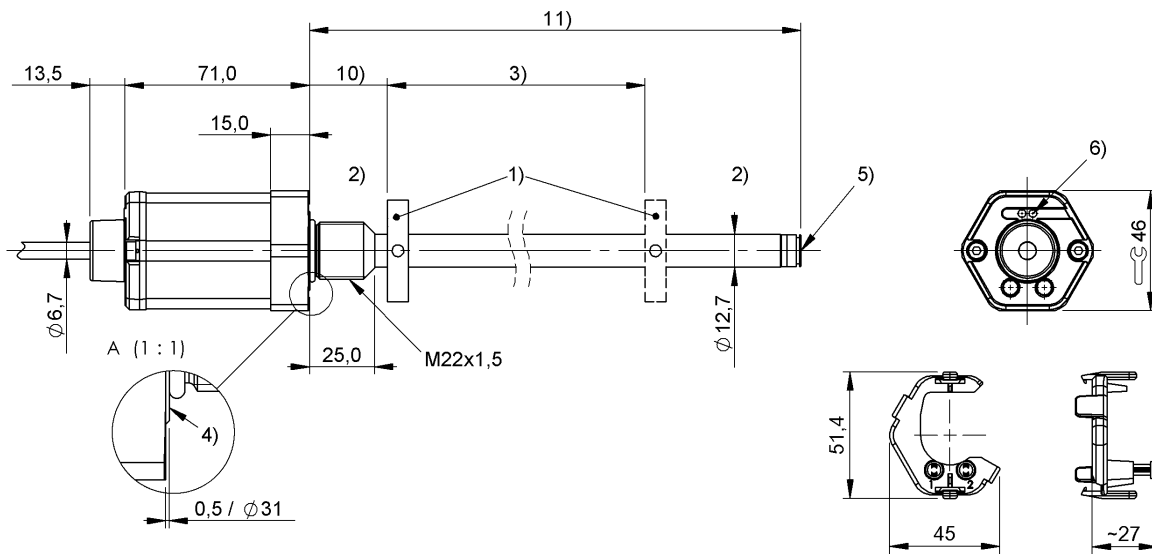


Magnetostrictive Sensors  
**BTL7-E500-M1200-CD-NEX-KA05**  
 Order Code: BTL2NMJ

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



**Basic features**

<b>Approval/Conformity</b>	CE UKCA CSA IECEX WEEE
<b>Ex marking</b>	ATEX: II 3 G Ex nA IIC T4 Gc II 2 D Ex tb IIIC T135°C Db IP6x -40°C ≤ Ta ≤ +60°C IECEX: Ex nA IIC T4 Gc Ex tb IIIC T135°C Db IP6x -40°C ≤ Ta ≤ +60°C NEC: NI: Class I, Division 2, Groups ABCD Class II, Division 2, Groups EFG T4 CAN: Class I, Zone 2, Ex nA IIC T4 Ex tb IIIC T135°C USA: Class I, Zone 2, AEx nA IIC Gc T4 AEx tb IIIC Db T135°C -40°C ≤ Ta ≤ +60°C
<b>Magnets, number (factory setting)</b>	1
<b>With float magnet</b>	no

**Electrical connection**

<b>Bending radius min., fixed cable</b>	5 x D
<b>Bending radius min., flexible cable</b>	15 x D
<b>Cable diameter D</b>	6.4...7 mm
<b>Cable length L</b>	5 m, drag chain compatible
<b>Connection</b>	Cable, 5.00 m, PUR
<b>Connection version</b>	axial
<b>Polarity reversal protected</b>	Ub up to 36 V
<b>Short-circuit protection</b>	to GND and to 36 V DC

**Electrical data**

<b>Current consumption max. at 24 V DC</b>	150 mA
<b>Error signal Ia rising</b>	3.6 mA
<b>Galvanic isolation</b>	no
<b>Inrush current</b>	≤ 500 mA/10 ms
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output signal adjustable</b>	using programming inputs with calibration aid
<b>Overvoltage protection</b>	Ub up to 36 V
<b>Switch-on delay max.</b>	600 ms
<b>Voltage-proof up to (GND to housing)</b>	500 V AC

**Magnetostrictive Sensors**  
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**Environmental conditions**

Ambient temperature	-40...60 °C
Cable temperature, fixed routing	-40...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
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...70 °C
Surface temperature max.	135 °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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**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	HP 160
O-ring material	FKM
Protection tube material	HP 160

**Mechanical data**

Installation length from contact surface	1290 mm
Mounting part	Threaded flange M22x1.5
Null point	30.0 mm
Pressure rating max.	1000 bar
Protection tube diameter	12.7 mm
Tightening torque max.	290 Nm

**Range/Distance**

Repeat accuracy	± 5 µm
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**Wiring Diagrams**

colour	
YE	4...20 mA
GY	0 V
PK	NC
RD	La
GN	NC
BU	GND
BN	+24 V DC
WH	Lb