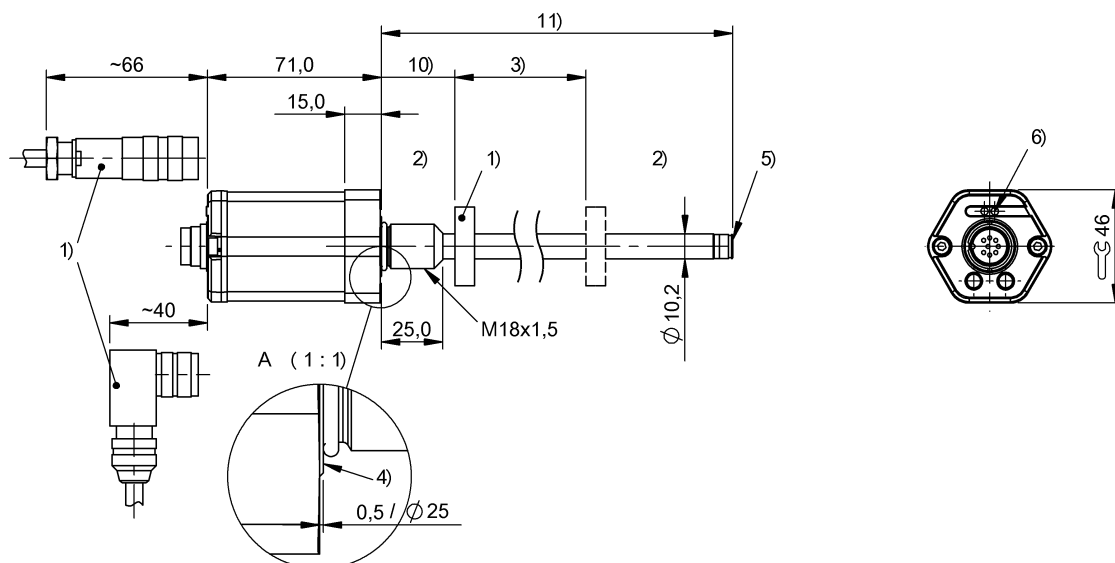




1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 4) Mounting surface, 5) Internal threads M4x4/6 deep, 6) LED function indicator, 10) Null point, 11) Installation length



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	120 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms
Operating voltage Ub	10...30 VDC
Output signal adjustable	no
Overvoltage protection	Ub up to 36 V
Switch-on delay max.	100 ms
Voltage-proof up to (GND to housing)	500 V DC

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.	≤ 15 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	102 a
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General data

Approval/Conformity	CE cULus EAC WEEE
Magnets, number max.	8

Magnetostrictive Sensors
BTL7-P511-M0500-B-S32
Order Code: BTL12NM

BALLUFF

Material

Cover material	Aluminum, Die-cast, nickel plated
Housing material	Aluminum
Housing material, surface protection	Anodized
Material flange	Stainless steel (1.3960)
O-ring material	Fluoroelastomer
Plug material	Stainless steel (1.4571)
Protection tube material	Stainless steel (1.4571)

Mechanical data

Installation length from contact surface	590 mm
Minimum distance of the magnets	65 mm
Mounting	Threaded flange M18x1.5
Null point	30.0 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque max.	100 Nm

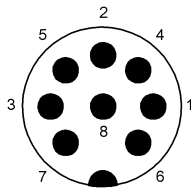
Output/Interface

Active flank	Rising/falling
DPI/IP protocol	yes
Interface	Start/Stop
	Start/Stop negative

Range/Distance

Measuring length	500 mm
Non-linearity max.	±50 µm
Repeat accuracy	≤ ± 5 µm (typical ± 2.5 µm)
Reproducibility	≤22 µm
Resolution, position	1 µm
Sampling frequency max.	2651 Hz

Connector Drawings



Wiring Diagrams

Pin	
1	+INIT
2	+START/STOP
3	-INIT
4	NC
5	-START/STOP
6	GND
7	10...30 V DC
8	NC