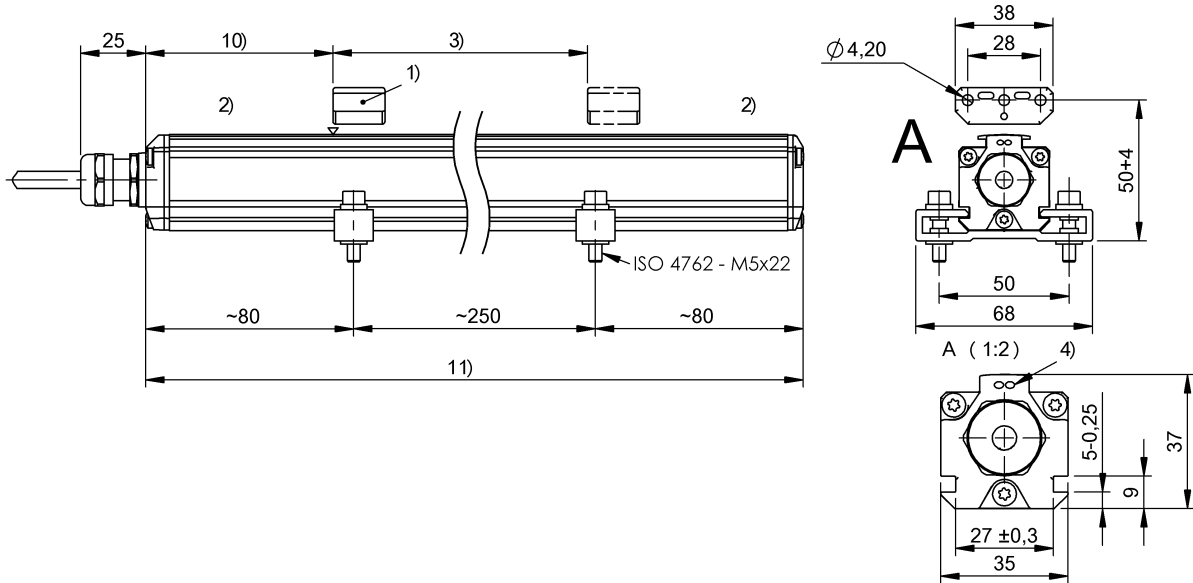


Magnetostrictive Sensors
BTL7-S561B-M0420-P-SA450-KA00,5
Order Code: BTL2WN3

BALLUFF



1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 4) LED function indicator, 10) Null point, 11) Installation length



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Base type deviation	Multi-transmission mode fixed monoflop time T_o/T_m of 20 μ s improved jitter characteristics
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical data

Current consumption max. at 24 V DC	100 mA
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms
Operating voltage U_b	10...30 VDC
Output signal adjustable	no
Output value	Position in μ m
Overvoltage protection	U_b up to 36 V
Switch-on delay max.	200 ms
Voltage-proof up to (GND to housing)	500 V AC

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	0.5 m, drag chain compatible
Connection	Cable, 0.5 m, PUR
Connection version	axial
Polarity reversal protected	U_b up to 36 V
Short-circuit protection	to GND and to 36 V DC

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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
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)	242 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

Mechanical data

Mounting part	Mounting clamps
Null point	72.0 mm
Overall Length	565 mm

Range/Distance

Measuring length	420 mm
Non-linearity max.	±30 µm
Repeat accuracy	≤ ± 5 µm (typical ± 2.5 µm)
Reproducibility	≤30 µm
Resolution, position	1 µm
Sampling frequency max.	2554 Hz

Wiring Diagrams

PIN	
YE	+Clk
GY	+Data
PK	-Clk
RD	NC
GN	-Data
BU	GND
BN	10...30 V DC
WH	NC