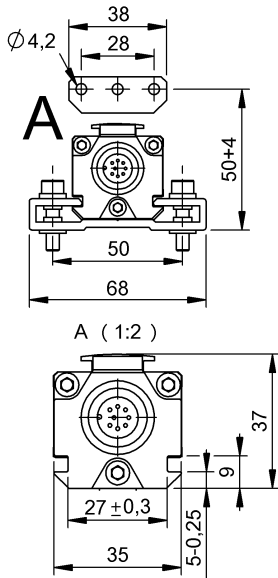
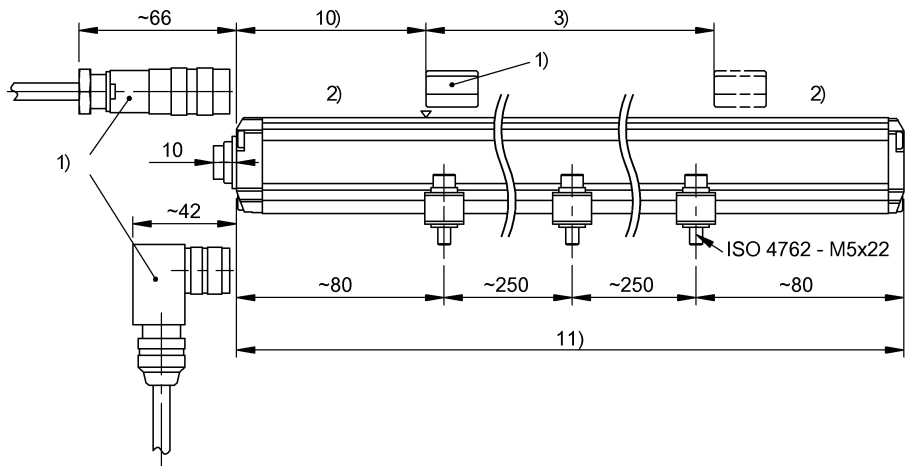


Magnetostrictive Sensors
BTL5-S101B-M0300-P-SA244-S32
Order Code: BTL03K4

BALLUFF



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



Basic features

Approval/Conformity	CE cULus EAC WEEE
Base type	BTL5-S1..B-M....-P-S32
Base type deviation	Without μ P averaging
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical connection

Connection	Connector, M16x0.75, 8-pin
Connection version	axial
Polarity reversal protected	Ub up to 28 V

Electrical data

Current consumption max. at 24 V DC	90 mA
Galvanic isolation	yes
Inrush current	≤ 3 A/0.5 ms
Operating voltage Ub	20...28 VDC
Output signal adjustable	no
Output value	Position in μ m
Overvoltage protection	Ub up to 28 V
Voltage-proof up to (GND to housing)	500 V DC

Environmental conditions

Ambient temperature	-40...85 °C
EN 55016-2-3, Radiation	Industrial areas
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.	≤ 35 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	91 a
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Interface

Bits, number	24 Bit
Count direction	rising
Interface	SSI
Interface coding	Binary

Material

Cover material	Aluminium, Die-cast, nickel plated
Housing material	Aluminium, Anodized
Housing material, surface protection	Anodized

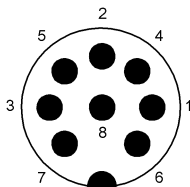
Mechanical data

Mounting part	Mounting clamps
Null point	73.0 mm
Overall Length	446 mm

Range/Distance

Measuring length	300 mm
Non-linearity max.	$\pm 30 \mu\text{m}$
Repeat accuracy	$\pm 1 \text{ LSB}$
Repeatability	$\pm 1 \text{ LSB}$
Resolution, position	$1 \mu\text{m}$
Sampling frequency max.	1000 Hz

Connector Drawings



Wiring Diagrams (Schematic)

Pin	
1	+Clk
2	+Data
3	-Clk
4	NC
5	-Data
6	GND
7	+24 V DC
8	NC