

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 UKCA cULus WEEE
Base type deviation	with copy protection Adjustment for BAM041Y Minimum distance of the magnets Magnets, number max.
Magnets, number (factory setting)	1
Magnets, number max.	3

Electrical data

Current consumption max. at 24 V DC	160 mA
Galvanic isolation	yes / EtherNet
Inrush current	≤ 500 mA/25 ms
Operating voltage U_b	10...30 VDC
Output signal adjustable	yes
Output value	Position in μm
Overvoltage protection	U_b up to 36 V
Switch-on delay max.	5 s
Synchronous mode	yes, configurable
Voltage-proof up to (GND to housing)	500 V AC

Electrical connection

Connection	Connector, M8x1, 4-pin
Connection 1	M8x1, 4-pin
Connection 2	M12x1, 4-pin, D-coded
Connection 3	M12x1, 4-pin, D-coded
Connection version	axial
Polarity reversal protected	U_b up to 36 V
Short-circuit protection	to GND

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.	≤ 18 ppm/K at 50% of nominal stroke 500mm

Magnetostrictive Sensors
BTL7-V50T-M3500-P-SA479-C003
Order Code: BTL3U0R



Functional safety

MTTF (40 °C) 119 a

Interface

Data format 32-bit signed
 Interface Profinet Encoder Profile V4.1
 Process data, Master – Device 4 bytes
 Prozess data, Device – Master ≥ 12 bytes

Material

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

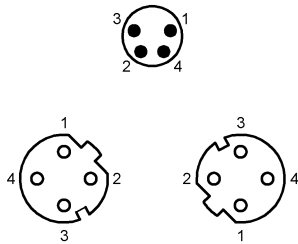
Mechanical data

Minimum distance of the magnets 260 mm
 Mounting part Mounting clamps
 Null point 260 mm
 Overall Length 3656 mm

Range/Distance

Measuring length 3500 mm
 Non-linearity max. ±30 µm
 Repeat accuracy ≤ ± 5 µm (typical ± 2.5 µm)
 Reproducibility ≤30 µm
 Resolution, position 1 µm
 Resolution, traverse speed 0.1 mm/s
 Sampling frequency max. 245 Hz

Connector Drawings



Wiring Diagrams

Pin	Bus Connectors
1	TX+
2	RX+
3	TX-
4	RX-

Pin	Power Connector
1	+24 V DC
2	NC
3	0 V GND
4	NC