

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 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 | Ub up to 36 V |
| Short-circuit protection | to GND |

Electrical data

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

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-M4500-P-SA479-C003
Order Code: BTL3U0U



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

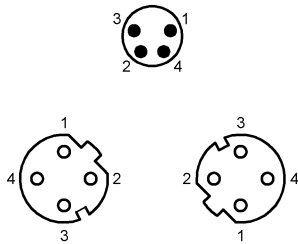
Mechanical data

Minimum distance of the magnets 260 mm
 Mounting part Mounting clamps
 Null point 260 mm
 Overall Length 4656 mm

Range/Distance

Measuring length 4500 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 |