



Figure can vary

Part no.: 66501400
MLD500-XT1
Single beam safety device transmitter



Contents

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Technical data

| Basic data | |
|--|---|
| Series | MLD 500 |
| Functions | |
| Functions | Range reduction |
| Characteristic parameters | |
| Type | 4 , IEC/EN 61496 |
| SIL | 3 , IEC 61508 |
| SILCL | 3 , IEC/EN 62061 |
| Performance Level (PL) | e , EN ISO 13849-1:2008 |
| MTTF _d | 204 years , EN ISO 13849-1 |
| Mission time T _M | 20 years , EN ISO 13849-1 |
| Category | 4 , EN ISO 13849:2008 |
| Protective field data | |
| Operating range | 20 ... 100 m |
| Optical data | |
| Light source | LED , Infrared |
| LED light wavelength | 850 nm |
| Transmitted-signal shape | Pulsed |
| LED group | Exempt group in acc. with EN 62471:2008 |
| Opening angle, max. | -2.5 ... 2.5 ° |
| Electrical data | |
| Protective circuit | Overvoltage protection Short circuit protected |
| Performance data | |
| Supply voltage U _B | 24 V , DC , -20 ... 20 % |
| Current consumption, max. | 50 mA , Without external load |
| Fuse | External with max. 3 A |
| Connection | |
| Number of connections | 1 Piece(s) |
| Connection 1 | |
| Type of connection | Connector |
| Function | Machine interface |
| Thread size | M12 |
| Material | Metal |
| No. of pins | 5 -pin |
| Cable properties | |
| Permissible conductor cross section, typ. | 0.25 mm ² |
| Permissible cable resistance to load, max. | 200 Ω |
| Mechanical data | |
| Design | Cubic |

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| | |
|-----------------------|---------------------------------|
| Dimension (W x H x L) | 52 mm x 193 mm x 64.7 mm |
| Housing material | Metal , Aluminum |
| Lens cover material | Plastic / PMMA |
| Material of end caps | Diecast zinc |
| Net weight | 600 g |
| Housing color | Yellow, RAL 1021 |
| Type of fastening | Groove mounting Swivel mount |

Operation and display

| | |
|-----------------|------------|
| Type of display | LED |
| Number of LEDs | 1 Piece(s) |

Environmental data

| | |
|------------------------------------|---------------|
| Ambient temperature, operation | -30 ... 55 °C |
| Ambient temperature, storage | -40 ... 75 °C |
| Relative humidity (non-condensing) | 0 ... 95 % |

Certifications

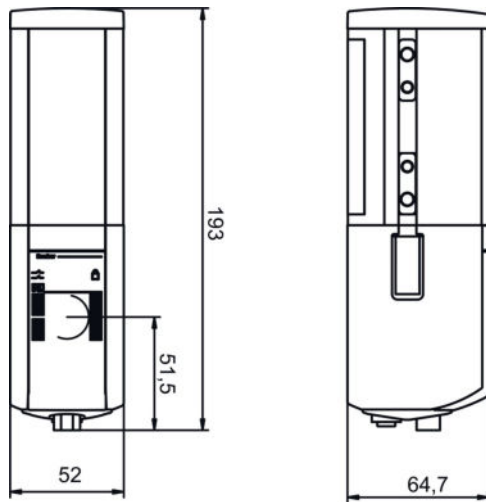
| | |
|----------------------|--------------------------------------|
| Degree of protection | IP 67 |
| Protection class | III |
| Certifications | c CSA US c TÜV NRTL US TÜV Süd |
| US patents | US 6,418,546 B US 7,741,595 B |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| eCl@ss 8.0 | 27272701 |
| eCl@ss 9.0 | 27272701 |
| ETIM 5.0 | EC001831 |
| ETIM 6.0 | EC001831 |

Dimensioned drawings

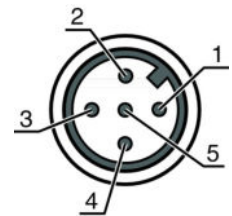
All dimensions in millimeters



Electrical connection

| Connection 1 | |
|--------------------|-------------------|
| Type of connection | Connector |
| Function | Machine interface |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | A-coded |

| Pin | Pin assignment | Conductor color |
|-----|----------------|-----------------|
| 1 | +24V | Brown |
| 2 | n.c. | White |
| 3 | 0 V | Blue |
| 4 | n.c. | Black |
| 5 | n.c. | Gray |






Operation and display

LEDs

| LEDs per light axis | Meaning |
|-------------------------|-----------------------------|
| Green, continuous light | Transmitted beam active |
| Off | Transmitted beam not active |

Suitable receivers

| | Part no. | Designation | Article | Description |
|---|----------|-------------|------------------------------------|---|
|  | 66533400 | MLD510-XR1 | Single beam safety device receiver | Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin |
|  | 66553400 | MLD520-XR1 | Single beam safety device receiver | Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin |
|  | 66563400 | MLD530-XR1 | Single beam safety device receiver | Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin |

Part number code

Part designation: **MLDxyy-zab/t**





| MLD | Multiple light beam safety device |
|-----|--|
| x | Series: 3: MLD 300 5: MLD 500 |
| yy | Function classes: 00: transmitter 10: automatic restart 12: external testing 20: EDM/RES 30: muting 35: timing controlled 4-sensor muting |
| z | Device type: T: transmitter R: receiver RT: transceiver xT: transmitter with high range xR: receiver for high range |
| a | Number of beams |
| b | Option: L: integrated laser alignment aid (for transmitter/receiver) M: integrated status indicator (MLD 320, MLD 520) or integrated status and muting indicator (MLD 330, MLD 335, MLD 510/A, MLD 530, MLD 535) E: connection socket for external muting indicator (AS-i models only) |
| /t | Safety-related switching outputs (OSSDs), connection technology: -: transistor output, M12 plug A: integrated AS-i interface, M12 plug, (safety bus system) |

Note


A list with all available device types can be found on the Leuze electronic website at www.leuze.com.

Accessories



Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|---|----------|--------------------|------------------|---|
|  | 50133859 | KD S-M12-5A-P1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR |
|  | 50133860 | KD S-M12-5A-P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |
|  | 50137014 | KD S-M12-5A-P1-150 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR |
|  | 50136146 | KD S-M12-5A-P1-250 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 10,000 mm Sheathing material: PVC |

Muting - Mounting systems

| | Part no. | Designation | Article | Description |
|---|----------|-------------|----------------------|---|
|  | 424421 | BT-SB10 | Mounting bracket set | Design of mounting device: Mounting clamp Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Swiveling Swivel range: -8 ... 8 ° Material: Metal |

Services

| | Part no. | Designation | Article | Description |
|---|----------|-------------|---|--|
|  | S981050 | CS40-I-140 | Safety inspection "Safety light barriers" | Details: Checking of a safety light barrier application in accordance with current standards and guidelines. Inclusion of the device and machine data in a database, production of a test log per application. Conditions: It must be possible to stop the machine, support provided by customer's employees and access to the machine for Leuze employees must be ensured. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure. |
|  | S981046 | CS40-S-140 | Start-up support | Details: For safety devices including stopping time measurement and initial inspection. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses. Restrictions: Max. 2 h., no mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment. |

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Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.