



Figure can vary

Part no.: 66501500
MLD500-XT2
Multiple light beam safety device
transmitter



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Part no.: 66501500 – MLD500-XT2 – Multiple light beam safety device

Technical data

| Basic data | |
|--|---|
| Series | MLD 500 |
| Device type | Transmitter |
| Functions | |
| Functions | Range reduction |
| Characteristic parameters | |
| Type | 4, IEC/EN 61496 |
| SIL | 3, IEC 61508 |
| SILCL | 3, IEC/EN 62061 |
| MTTF _d | 204 years, EN ISO 13849-1 |
| Mission time T _M | 20 years, EN ISO 13849-1 |
| Protective field data | |
| Operating range | 20 ... 70 m |
| Optical data | |
| Number of beams | 2 Piece(s) |
| Beam spacing | 500 mm |
| Light source | LED, Infrared |
| LED light wavelength | 850 nm |
| Mean power of transmitter diode | 1.369 µW |
| Transmitted-signal shape | Pulsed |
| LED group | Exempt group in acc. with EN 62471:2008 |
| Electrical data | |
| Protective circuit | Overvoltage protection Short circuit protected |
| Performance data | |
| Supply voltage | 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 |
| Length of connection cable, max. | 100 m |
| Permissible cable resistance to load, max. | 200 Ω |
| Mechanical data | |

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| | |
|-----------------------|---------------------------------|
| Dimension (W x H x L) | 52 mm x 600 mm x 64.7 mm |
| Housing material | Metal, Aluminum |
| Lens cover material | Plastic / PMMA |
| Material of end caps | Diecast zinc |
| Net weight | 1,400 g |
| Housing color | Yellow, RAL 1021 |
| Type of fastening | Groove mounting Swivel mount |

Operation and display

| | |
|-----------------|------------|
| Type of display | LED |
| Number of LEDs | 2 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 TÜV NRTL US c CSA US TÜV Süd |
| US patents | US 7,741,595 B US 6,418,546 B |




Classification

| | |
|------------|----------|
| eCl@ss 8.0 | 27272703 |
| eCl@ss 9.0 | 27272703 |
| ETIM 5.0 | EC001832 |

Suitable receivers

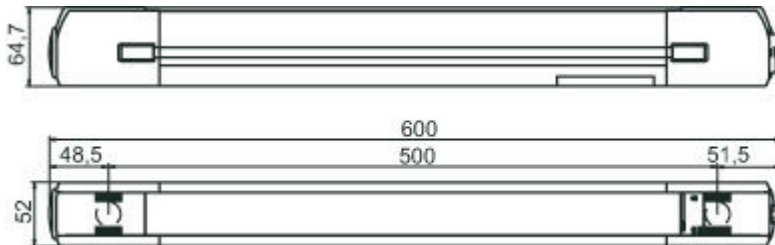
| | Part no. | Designation | Article | Description |
|---|----------|-------------|--|--|
|  | 66533500 | MLD510-XR2 | Multiple light beam safety device receiver | Number of beams: 2 Piece(s) Beam spacing: 500 mm Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin |
|  | 66553500 | MLD520-XR2 | Multiple light beam safety device receiver | Number of beams: 2 Piece(s) Beam spacing: 500 mm Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin |

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| | Part no. | Designation | Article | Description |
|---|----------|-------------|--|---|
|  | 66563500 | MLD530-XR2 | Multiple light beam safety device receiver | Number of beams: 2 Piece(s) Beam spacing: 500 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin |
|  | 66573500 | MLD535-XR2 | Multiple light beam safety device receiver | Number of beams: 2 Piece(s) Beam spacing: 500 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin |
|  | 66554500 | MLD520-XR2M | Multiple light beam safety device receiver | Number of beams: 2 Piece(s) Beam spacing: 500 mm Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin Special design: Integrated status indicator |

Dimensioned drawings

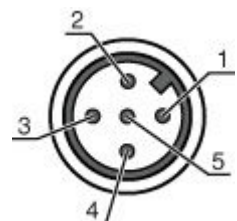
All dimensions in millimeters



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 |



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Operation and display

LEDs

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



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) |

Accessories









Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|---|----------|-------------------|------------------|---|
|  | 678057 | CB-M12-15000E-5GF | 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 |
|  | 678058 | CB-M12-25000E-5GF | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 25,000 mm Sheathing material: PUR |



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| | Part no. | Designation | Article | Description |
|---|----------|--------------------|------------------|---|
|    | 678059 | CB-M12-50000E-5GF | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 50,000 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 |
|    | 50133861 | KD S-M12-5A-P1-100 | 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: PUR |

Mounting technology - Swivel mounts










| | Part no. | Designation | Article | Description |
|--|----------|-----------------|----------------------|---|
|   | 560340 | BT-SET-240BC | Mounting bracket set | Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 240° Material: Metal |
|   | 540350 | BT-SET-240BC-E | Mounting bracket set | Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 240° Material: Metal, Plastic |
|   | 560342 | BT-SET-240BCS | Mounting bracket set | Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 240°, Shock absorber Material: Metal Shock absorber: Yes |
|   | 540352 | BT-SET-240BCS-E | Mounting bracket set | Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Shock absorber, Turning, 240° Material: Metal, Plastic Shock absorber: Yes |

Mounting technology - Other

| | Part no. | Designation | Article | Description |
|--|----------|-------------|----------------------|---|
|   | 424417 | BT-2P40 | Mounting bracket set | Contains: 2x BT-P40 clamp bracket Design of mounting device: Mounting clamp Mounting bracket, at system: Groove mounting Mounting bracket, at device: Groove mounting Type of mounting device: Clampable Material: Metal |



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Device columns

| | Part no. | Designation | Article | Description |
|---|----------|-------------|---------------|--|
|  | 549856 | UDC-1000-S2 | Device column | Dimensions: 160 mm x 1,060 mm x 149 mm Column height without foot: 1,000 mm Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |
|  | 549879 | UDC-1140-S2 | Device column | Dimensions: 160 mm x 1,200 mm x 149 mm Column height without foot: 1,140 mm Functions: Adjustable, 3 directions, Mounting and protection of light curtains and multiple light beam devices |
|  | 549852 | UDC-1300-S2 | Device column | Dimensions: 160 mm x 1,360 mm x 149 mm Column height without foot: 1,300 mm Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |
|  | 549853 | UDC-1600-S2 | Device column | Dimensions: 160 mm x 1,660 mm x 149 mm Column height without foot: 1,600 mm Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |
|  | 549854 | UDC-1900-S2 | Device column | Dimensions: 160 mm x 1,960 mm x 149 mm Column height without foot: 1,900 mm Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |
|  | 549867 | UDC-2100-S2 | Device column | Dimensions: 160 mm x 2,160 mm x 149 mm Column height without foot: 2,100 mm Functions: Adjustable, 3 directions, Mounting and protection of light curtains and multiple light beam devices |
|  | 549857 | UDC-2500-S2 | Device column | Dimensions: 160 mm x 2,560 mm x 149 mm Column height without foot: 2,500 mm Functions: Adjustable, 3 directions, Mounting and protection of light curtains and multiple light beam devices |
|  | 549865 | UDC-3100-S2 | Device column | Dimensions: 160 mm x 3,160 mm x 149 mm Column height without foot: 3,100 mm Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |
|  | 549855 | UDC-900-S2 | Device column | Dimensions: 160 mm x 960 mm x 149 mm Column height without foot: 900 mm Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |

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Deflecting mirror columns

| | Part no. | Designation | Article | Description |
|---|----------|-------------|---------------|--|
|  | 549791 | UMC-1002-S2 | Mirror column | Number of individual mirrors: 2 Piece(s) Dimensions: 160 mm x 1,060 mm x 149 mm Column height without foot: 1,000 mm Center-to-center spacing of individual mirrors: 500 mm Functions: Easy axial alignment, Simple height adjustment of the mirrors, Automatic resetting after mechanical impacts with special spring elements, Adjustable, 3 directions, Robust profile construction in high quality design, Precise alignment of the individual mirrors in all 3 axes |
|  | 549790 | UMC-902-S2 | Mirror column | Number of individual mirrors: 2 Piece(s) Dimensions: 160 mm x 960 mm x 149 mm Column height without foot: 900 mm Center-to-center spacing of individual mirrors: 500 mm Functions: Easy axial alignment, Simple height adjustment of the mirrors, Automatic resetting after mechanical impacts with special spring elements, Adjustable, 3 directions, Robust profile construction in high quality design, Precise alignment of the individual mirrors in all 3 axes |