

Technical data sheet

Single light beam safety device transmitter

Part no.: 66501400

MLD500-XT1

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Operation and display
- Suitable receivers
- Part number code
- Accessories



For illustration purposes only



Technical data

Basic data

Series	MLD 500
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Functions

Functions	Range reduction
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Characteristic parameters

Type	4, IEC/EN 61496
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SIL	3, IEC 61508
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SILCL	3, IEC/EN 62061
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Performance Level (PL)	e, EN ISO 13849-1:2008
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MTTF _d	204 years, EN ISO 13849-1
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Mission time T _M	20 years, EN ISO 13849-1
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Category	4, EN ISO 13849:2008
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Protective field data

Operating range	20 ... 100 m
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Optical data

Light source	LED, Infrared
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Wavelength	850 nm
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Transmitted-signal shape	Pulsed
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LED risk group	Exempt group (in acc. with EN 62471:2008)
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Opening angle, max.	-2.5 ... 2.5 °
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Electrical data

Protective circuit	Overvoltage protection Short circuit protected
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Performance data

Supply voltage U _B	24 V, DC, -20 ... 20 %
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Current consumption, max.	50 mA, Without external load
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Fuse	External with max. 3 A
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Connection

Number of connections	1 Piece(s)
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Connection 1

Function	Machine interface
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Type of connection	Connector
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Thread size	M12
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Material	Metal
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No. of pins	5 -pin
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Cable properties

Permissible conductor cross section, type.	0.25 mm ²
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Length of connection cable, max.	100 m
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Permissible cable resistance to load, max.	200 Ω
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Mechanical data

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

Type of display	LED
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Number of LEDs	1 Piece(s)
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Environmental data

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

Degree of protection	IP 67
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Protection class	III
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Approvals	c TÜV NRTL US
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	c UL US
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	TÜV Süd
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US patents	US 6,418,546 B
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	US 7,741,595 B
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Classification

Customs tariff number	85365019
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ECLASS 5.1.4	27272701
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ECLASS 8.0	27272701
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ECLASS 9.0	27272701
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ECLASS 10.0	27272701
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ECLASS 11.0	27272701
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ECLASS 12.0	27272701
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ECLASS 13.0	27272701
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ECLASS 14.0	27272701
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ECLASS 15.0	27272701
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ETIM 5.0	EC001831
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ETIM 6.0	EC001831
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ETIM 7.0	EC001831
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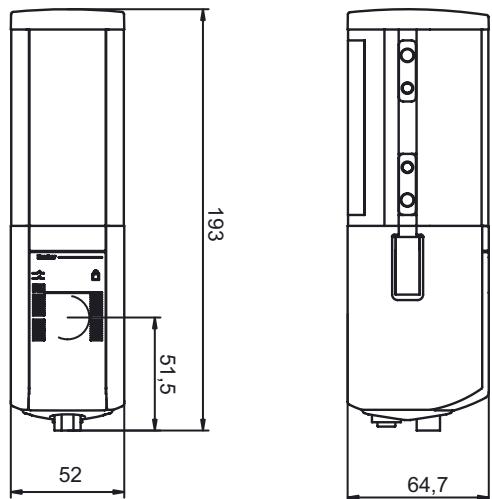
ETIM 8.0	EC001831
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ETIM 9.0	EC001831
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ETIM 10.0	EC001831
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Dimensioned drawings

All dimensions in millimeters

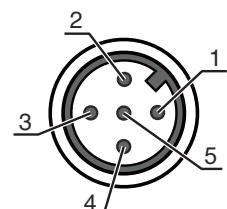


Electrical connection

Connection 1

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

Pin	Pin assignment	Conductor color
1	+24 V	Brown
2	n.c.	White
3	0 V	Blue
4	Transmitter range switching: 0 V = entire range, 24 V = reduced range	Black
5	n.c.	Gray



Operation and display

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 light beam safety device receiver Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin
	66553400	MLD520-XR1	Single light beam safety device receiver Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin
	66563400	MLD530-XR1	Single light 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 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 Connector, LED: No 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 Connector, LED: No 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 Connector, LED: No 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 Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 25.000 mm Sheathing material: PUR

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

Alignment aids

Part no.	Designation	Article	Description
	520023	LA-78M	Alignment aid Light source: Laser, Red Housing material: Metal

Accessories

Part no.	Designation	Article	Description
	520024 LA-78M-UDC	Alignment aid	Light source: Laser, Red Housing material: Metal

Services

Part no.	Designation	Article	Description
	S981050 CS40-I-140	Safety inspection	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.
	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.

Note

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