



Figure can vary

Part no.: 66002200
MLD300-T3L
Multiple light beam safety device
transmitter



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Technical data

Basic data	
Series	MLD 300
Device type	Transmitter
Special design	
Special design	Integrated laser alignment aid
Functions	
Functions	Range reduction
Characteristic parameters	
Type	2, IEC/EN 61496
SIL	1, IEC 61508
SILCL	1, 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	0.5 ... 50 m
Optical data	
Number of beams	3 Piece(s)
Beam spacing	400 mm
Light source	LED, Infrared
LED light wavelength	850 nm
Mean power of transmitter diode	1.369 µW
Transmitted-signal shape	Pulsed
LED group	1
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

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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

Dimension (W x H x L)	52 mm x 900 mm x 64.7 mm
Housing material	Metal, Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	2,000 g
Housing color	Yellow, RAL 1021
Type of fastening	Groove mounting Swivel mount

Operation and display

Type of display	LED
Number of LEDs	3 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 TÜV Süd c CSA US
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

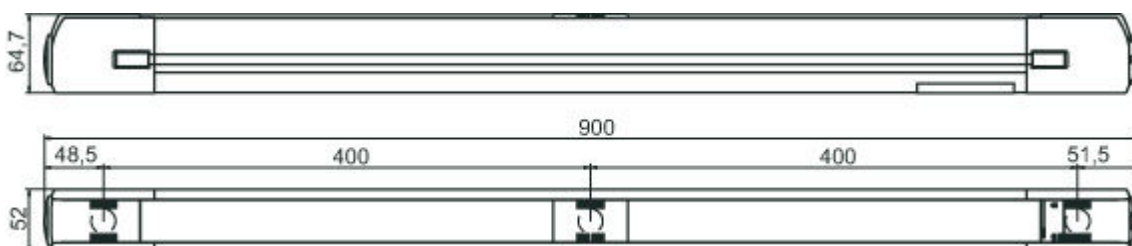
	Part no.	Designation	Article	Description
	66036200	MLD310-R3L	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin Special design: Reflective element for laser alignment aid

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	Part no.	Designation	Article	Description
	66046200	MLD312-R3L	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin Special design: Reflective element for laser alignment aid
	66056200	MLD320-R3L	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin Special design: Reflective element for laser alignment aid
	66065200	MLD330-R3LM	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin Special design: Integrated muting indicator, Integrated status indicator, Reflective element for laser alignment aid
	66066200	MLD330-R3L	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin Special design: Reflective element for laser alignment aid
	66075200	MLD335-R3LM	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin Special design: Integrated muting indicator, Integrated status indicator, Reflective element for laser alignment aid
	66076200	MLD335-R3L	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin Special design: Reflective element for laser alignment aid
	66055200	MLD320-R3LM	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin Special design: Integrated status indicator, Reflective element for laser alignment aid

Dimensioned drawings

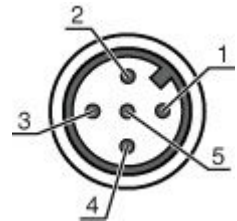
All dimensions in millimeters



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




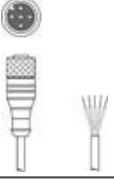











Part number code

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
  	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
  	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
  	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: 10,000 mm Sheathing material: PVC
  	50137013	KD S-M12-5A-P1-500	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

Mounting technology - Swivel mounts


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

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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 Fastening, at system: Groove mounting Mounting bracket, at device: Groove mounting Type of mounting device: Clampable Material: Metal


Alignment aids

	Part no.	Designation	Article	Description
	520071	AC-MK1	Adapter	Dimensions: 23.3 mm x 17.5 mm x 24 mm Net weight: 20 g Housing color: Black Functions: Activation of the laser alignment aid




Device columns

	Part no.	Designation	Article	Description
	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

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	Part no.	Designation	Article	Description
	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

Deflecting mirror columns

	Part no.	Designation	Article	Description
	549797	UMC-1143-S2	Mirror column	Number of individual mirrors: 3 Piece(s) Dimensions: 160 mm x 1,200 mm x 149 mm Column height without foot: 1,140 mm Center-to-center spacing of individual mirrors: 400 mm Functions: Automatic resetting after mechanical impacts with special spring elements, Adjustable, 3 directions, Easy axial alignment, Simple height adjustment of the mirrors, Precise alignment of the individual mirrors in all 3 axes, Robust profile construction in high quality design
	549792	UMC-1303-S2	Mirror column	Number of individual mirrors: 3 Piece(s) Dimensions: 160 mm x 1,360 mm x 149 mm Column height without foot: 1,300 mm Center-to-center spacing of individual mirrors: 400 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
	549796	UMC-1603-S2	Mirror column	Number of individual mirrors: 3 Piece(s) Dimensions: 160 mm x 1,660 mm x 149 mm Column height without foot: 1,600 mm Center-to-center spacing of individual mirrors: 400 mm Functions: Simple height adjustment of the mirrors, Easy axial alignment, Adjustable, 3 directions, Robust profile construction in high quality design, Precise alignment of the individual mirrors in all 3 axes, Automatic resetting after mechanical impacts with special spring elements