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Part no.: 66501201
MLD500-T3/A
Multiple light beam safety device
transmitter



Contents

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

Part no.: 66501201 – MLD500-T3/A – Multiple light beam safety device

Technical data

Basic data	
Series	MLD 500
Device type	Transmitter
Functions	
Functions	Range reduction
Integrated laser alignment aid	No
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	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	Exempt group in acc. with EN 62471:2008
Electrical data	
Performance data	
Supply voltage	26.5 ... 31.6 V
Current consumption from AS-i circuit	50 mA
Interface	
Type	AS-Interface Safety at Work
AS-i	
Function	Process
AS-i profile	S-7.B.1
Slave address	1..31 programmable, default=0
Cycle time acc. to AS-i specifications	Max. 5 ms
Connection	
Number of connections	1 Piece(s)

Part no.: 66501201 – MLD500-T3/A – Multiple light beam safety device
Connection 1

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

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	Swivel mount Groove mounting

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 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
	66533201	MLD510-R3/A	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 30 ms Type of interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5 -pin

Part no.: 66501201 – MLD500-T3/A – Multiple light beam safety device

	Part no.	Designation	Article	Description
	66533202	MLD510-R3E/A	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 30 ms Type of interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5 -pin Special design: Connection socket for external muting indicator
	66534201	MLD510-R3M/A	Multiple light beam safety device receiver	Number of beams: 3 Piece(s) Beam spacing: 400 mm Response time: 30 ms Type of interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5 -pin Special design: Integrated muting indicator, Integrated status indicator

Dimensioned drawings

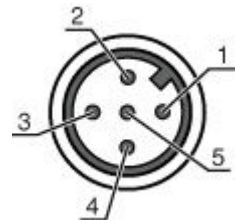
All dimensions in millimeters



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	AS-i+	Brown
2	n.c.	White
3	AS-i-	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: **MLD***xxyy-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


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

Part no.: 66501201 – MLD500-T3/A – Multiple light beam safety device

	Part no.	Designation	Article	Description
	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




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

Part no.: 66501201 – MLD500-T3/A – Multiple light beam safety device

	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