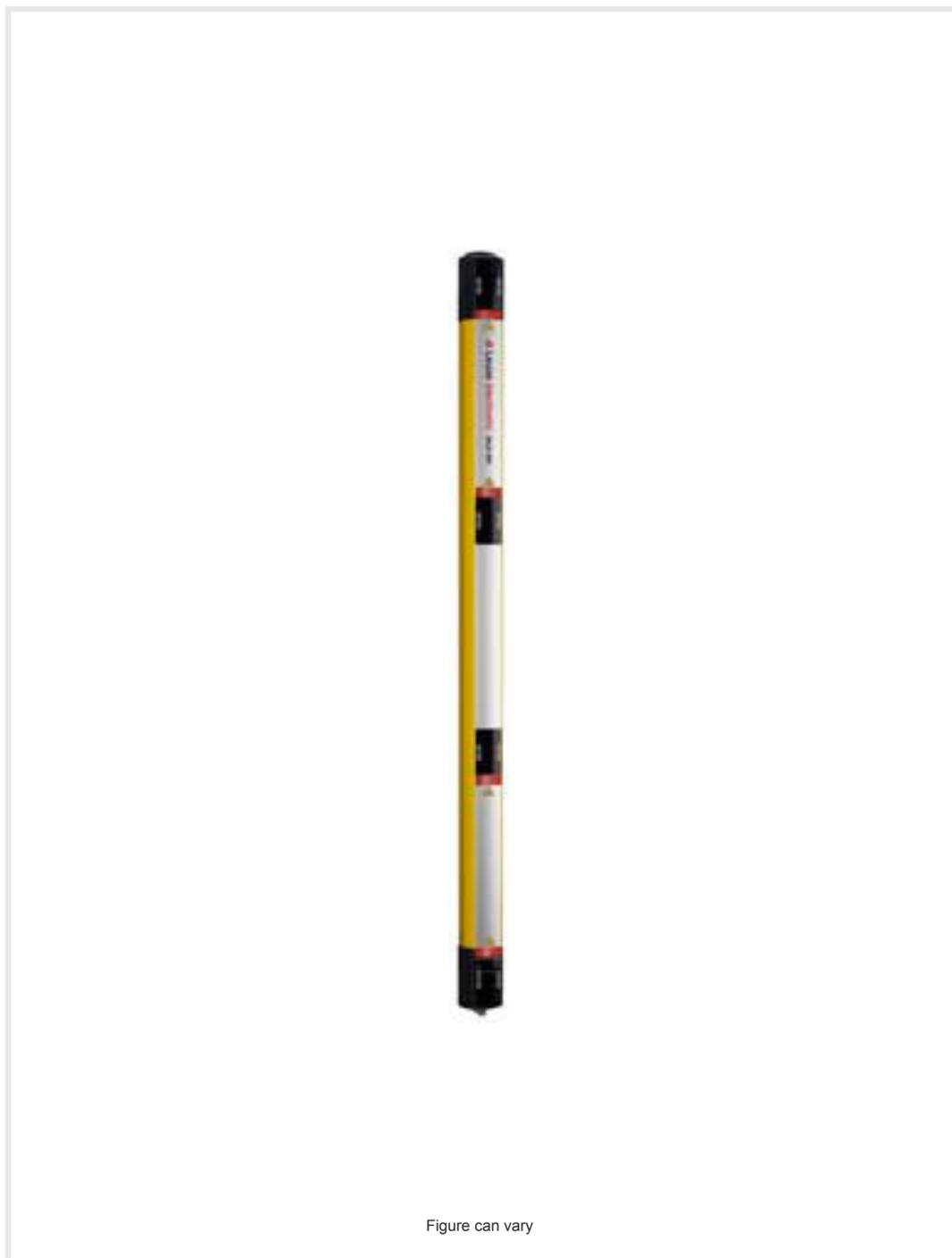


Technical data sheet

Multiple light beam safety device

Part no.: 66502301

MLD500-T4L/A



Contents

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



Technical data

Basic data

Series	MLD 500
Device type	Transmitter

Functions

Functions	Range reduction
Integrated laser alignment aid	Yes

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
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Optical data

Number of beams	4 Piece(s)
Beam spacing	300 mm
Light source	LED, Infrared
LED light wavelength	850 nm
Transmitted-signal shape	Pulsed

Electrical data

Performance data	
Supply voltage U _B	26.5 ... 31.6 V
Current consumption from AS-i circuit	50 mA

Interface

Type	AS-Interface Safety at Work
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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)
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Connection 1

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

Mechanical data

Dimension (W x H x L)	52 mm x 1,000 mm x 64.7 mm
Housing material	Metal, Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	2,200 g
Housing color	Yellow, RAL 1021
Type of fastening	Groove mounting Swivel mount

Operation and display

Type of display	LED
Number of LEDs	4 Piece(s)

Environmental data

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

Certifications

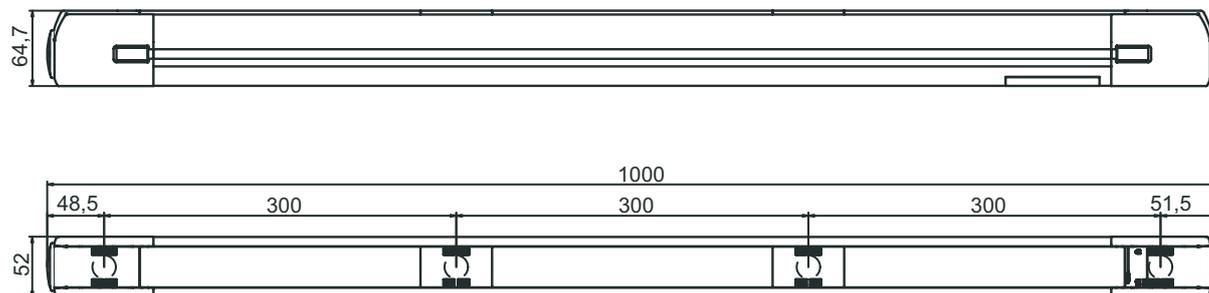
Degree of protection	IP 67
Protection class	III
Certifications	c CSA US c TÜV NRTL US TÜV Süd
US patents	US 6,418,546 B US 7,741,595 B

Classification

Customs tariff number	85365019
eCl@ss 8.0	27272703
eCl@ss 9.0	27272703
ETIM 5.0	EC001832
ETIM 6.0	EC001832

Dimensioned drawings

All dimensions in millimeters

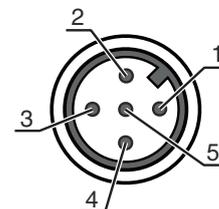


Electrical connection

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	AS-i+	Brown
2	n.c.	White
3	AS-i-	Blue
4	n.c.	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
	66536301	MLD510-R4L/A	Multiple light beam safety device receiver	Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 30 ms Type of interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5 -pin Special design: Reflective element for laser alignment aid

Suitable receivers

	Part no.	Designation	Article	Description
	66536302	MLD510-R4LE/A	Multiple light beam safety device receiver	Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 30 ms Type of interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5 -pin Special design: Reflective element for laser alignment aid, Connection socket for external muting indicator
	66535301	MLD510-R4LM/A	Multiple light beam safety device receiver	Number of beams: 4 Piece(s) Beam spacing: 300 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, Reflective element for laser alignment aid

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 Connection 2: Open end Shielded: Yes Cable length: 2,000 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
				

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

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.

Note



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