Technical data sheet
Multiple light beam safety device
Part no.: 66002300
MLD300-T4L

Figure can vary

Contents

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

Technical data

Basic data

Series	MLD 300
Device type	Transmitter

Special version

Special version	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	4 Piece(s)
Beam spacing	300 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

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

Cable properties

Permissible conductor cross section, typ.	0.25 mm²
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 1,000 mm x 64.7 mm
Housing material	Metal
Metal housing	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

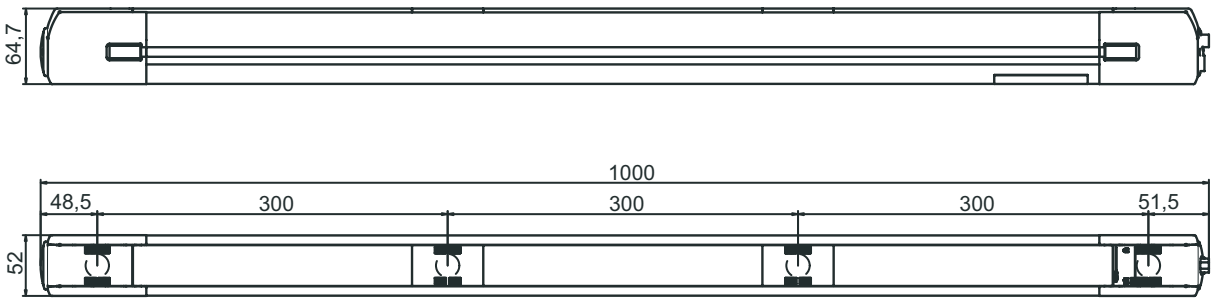
Degree of protection	IP 67
Protection class	III
Certifications	c CSA US
	c TÜV NRTL US
	TÜV Süd
US patents	US 6,418,546 B
	US 7,741,595 B

Classification

Customs tariff number	85365019
eCl@ss 5.1.4	27272703
eCl@ss 8.0	27272703
eCl@ss 9.0	27272703
eCl@ss 10.0	27272703
eCl@ss 11.0	27272703
ETIM 5.0	EC001832
ETIM 6.0	EC001832
ETIM 7.0	EC001832

Dimensioned drawings

All dimensions in millimeters

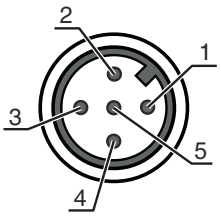


Electrical connection

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	+24V	Brown
2	With integrated alignment aid, 24 V activation red light beam	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
	66036300	MLD310-R4L	Multiple light beam safety device receiver	Special version: Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin

Suitable receivers

	Part no.	Designation	Article	Description
	66046300	MLD312-R4L	Multiple light beam safety device receiver	Special version: Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 25 ms Connection: Connector, M12, Metal, 5 -pin
	66056300	MLD320-R4L	Multiple light beam safety device receiver	Special version: Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin
	66055300	MLD320-R4LM	Multiple light beam safety device receiver	Special version: Integrated status indicator, Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 25 ms Connection: Connector, M12, Metal, 8 -pin
	66066300	MLD330-R4L	Multiple light beam safety device receiver	Special version: Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin
	66065300	MLD330-R4LM	Multiple light beam safety device receiver	Special version: Integrated muting indicator, Integrated status indicator, Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin
	66076300	MLD335-R4L	Multiple light beam safety device receiver	Special version: Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm Response time: 50 ms Connection: Connector, M12, Metal, 8 -pin
	66075300	MLD335-R4LM	Multiple light beam safety device receiver	Special version: Integrated muting indicator, Integrated status indicator, Reflective element for laser alignment aid Number of beams: 4 Piece(s) Beam spacing: 300 mm 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

Part number code

MLD	Multiple light beam safety device
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.

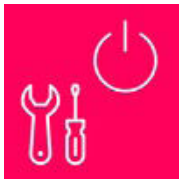
Accessories

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
	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
	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

Accessories

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.