

Technical data sheet Safety light curtain transmitter

Part no.: 68008103

MLC502T14-300



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Technical data



Basic data

Series	MLC 500
Device type	Transmitter
Contains	2x BT-NC sliding block
Application	Finger protection

Functions

Functions	Test signal input
	Transmission channel changeover

Characteristic parameters

Туре	4, IEC/EN 61496
SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Mission time T _M	20 years, EN ISO 13849-1

Protective field data

Resolution	14 mm
Protective field height	300 mm
Operating range	0 6 m

Optical data

Synchronization	Optical between transmitter and receiver
Light source	LED, Infrared
LED light wavelength	940 nm
Transmitted-signal shape	Pulsed
LED risk group	Exempt group (in acc. with EN 62471:2008)

Electrical data

Protective circuit	Overvoltage protection
	Short circuit protected
Doufousson and date	

Performance data

Supply voltage U _B	24 V, DC, -20 20 %
Current consumption, max.	50 mA
Fuse	2 A semi time-lag

Inputs Number of digital switching inputs 1 Piece(s)

Switching inputs	
Туре	Digital switching input
Switching voltage high, min.	18 V
Switching voltage low, max.	2.5 V
Switching voltage, typ.	22.5 V
Voltage type	DC

Connection

Number of connections

Connection 1	
Function	Machine interface
Type of connection	Connector
Thread size	M12
Material	Metal
No. of pins	5 -pin

1 Piece(s)

Cable properties	
Permissible conductor cross	0.25 mm²
section, typ.	
I enoth of connection cable may	100 m

 $200\;\Omega$

Permissible cable resistance to load, max.

Mechanical data	
Dimension (W x H x L)	29 mm x 366 mm x 35.4 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	450 g
Housing color	Yellow, RAL 1021
Type of fastening	Groove mounting
	Mounting bracket
	Mounting on Device Column
	Swivel mount

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data

Ambient temperature, operation	-30 55 °C
Ambient temperature, storage	-30 70 °C
Relative humidity (non-condensing)	0 95 %

Certifications

Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
	c TÜV NRTL US
	TÜV Süd
Vibration resistance	50 m/s ²
Shock resistance	100 m/s²
US patents	US 6,418,546 B

Classification

Customs tariff number	85365019
eCl@ss 5.1.4	27272704
eCl@ss 8.0	27272704
eCl@ss 9.0	27272704
eCl@ss 10.0	27272704
eCl@ss 11.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

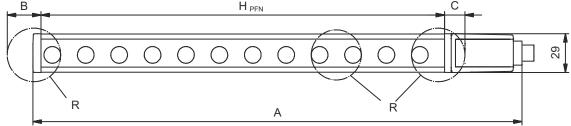
Dimensioned drawings



All dimensions in millimeters

Calculation of the effective protective field height H_{PFE} = H_{PFN} + B + C





 H_{PFE} Effective protective field height = 312 mm

 H_{PFN} Nominal protective field height = 300 mm

A Total height = 366 mm

B 6 mm

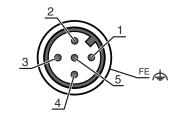
- C 6 mm
- R Effective protective field height H_{PFE} goes beyond the dimensions of the optics area to the outer borders of the circles labeled with R.

Electrical connection

Connection 1

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

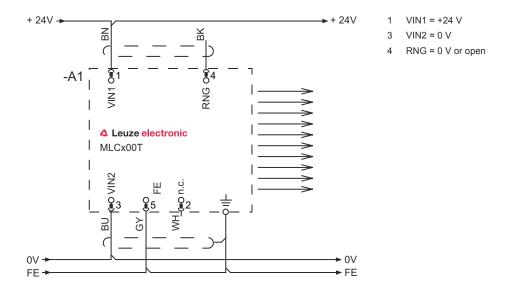
Pin	Pin assignment	Conductor color
1	VIN1	Brown
2	n.c.	White
3	VIN2	Blue
4	Test in	Black
5	FE/SHIELD	Gray



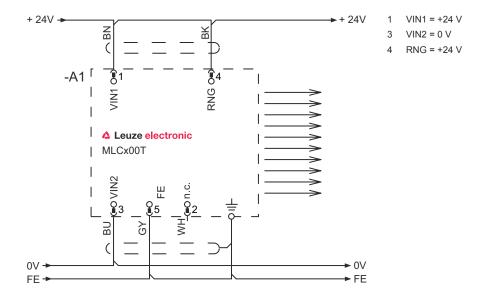
Circuit diagrams



Transmission channel C1, OSSDs deactivated on the receiver



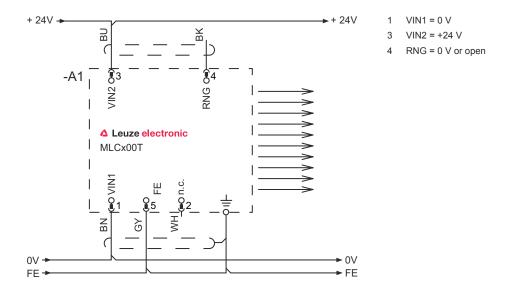
Transmission channel C1, OSSDs activated on the receiver



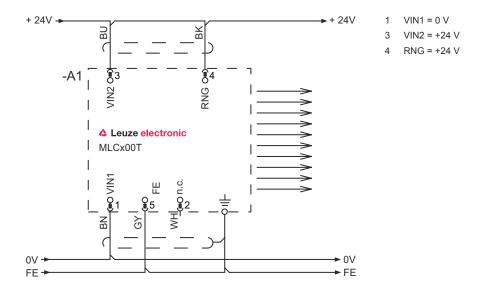
Circuit diagrams



Transmission channel C2, OSSDs deactivated on the receiver



Transmission channel C2, OSSDs activated on the receiver



Operation and display

LED	Display	Meaning
1	Off	Device switched off
	Red, continuous light	Device error
	Green, continuous light	Normal operation
2	Green, flashing, 10 s long after switching on	Test input activated
	Off	Transmission channel C1
	Green, continuous light	Transmission channel C2

Suitable receivers



Part no.	Designation	Article	Description
68001103	MLC510R14-300	Safety light curtain receiver	Resolution: 14 mm Protective field height: 300 mm Response time: 8 ms Connection: Connector, M12, Metal, 5 -pin Function package: Basic

Part number code

Part designation: MLCxyy-za-hhhhei-ooo

Safety light curtain
Series 3: MLC 300 5: MLC 500
Function classes 00: transmitter 01: transmitter (AIDA) 02: transmitter with test input 10: basic receiver - automatic restart 11: basic receiver - automatic restart (AIDA) 20: standard receiver - EDM/RES selectable 30: extended receiver - blanking/muting
Device type T: transmitter R: receiver
Resolution 14: 14 mm 20: 20 mm 30: 30 mm 40: 40 mm 90: 90 mm
Protective field height 150 3000: from 150 mm to 3000 mm
Host/Guest (optional) H: Host MG: Middle Guest G: Guest
Interface (optional) /A: AS-i
Option /V: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating

Note



🖔 A list with all available device types can be found on the Leuze website at www.leuze.com.

Notes



Observe intended use!



♥ The product may only be put into operation by competent persons.

Accessories



Connection technology - Connection cables

	Part no.	Designation	Article	Description
•	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

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
Paga	429393	BT-2HF	Mounting bracket set	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

Alignment aids

	Part no.	Designation	Article	Description
1	520101	AC-ALM-M	Alignment aid	Housing material: 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.