

Technical data sheet Safety light curtain transmitter

Part no.: 68000322 MLC500T30-2250



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We reserve the right to make technical changes eng • 2021-01-28

Technical data

Basic data

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

Functions

Range reduction 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

30 mm 2,250 mm

0 ... 10 m

Protective field data

Resolution Protective field height Operating range

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
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	1 Diago(a)

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 0.25 mm² section, typ. Length of connection cable, max. 100 m

200 Ω

Mechanical data

load, max.

Permissible cable resistance to

Dimension (W x H x L)	29 mm x 2,316 mm x 35.4 mm	
Housing material	Metal	
Metal housing	Aluminum	
Lens cover material	Plastic / PMMA	
Material of end caps	Diecast zinc	
Net weight	2,400 g	
Housing color	Yellow, RAL 1021	
Type of fastening	Groove mounting	
	Mounting bracket	
	Mounting on Device Column	
	Swivel mount	
Operation and display		
	1.55	

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
	S Mark
	TÜV Süd
Vibration resistance	50 m/s²
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	

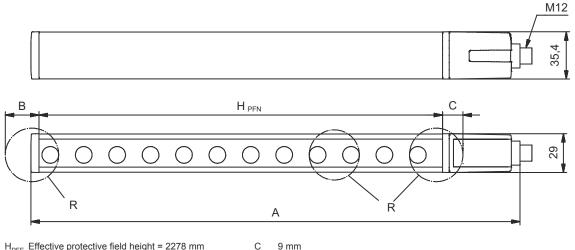
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Dimensioned drawings



All dimensions in millimeters

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



 H_{PFE} Effective protective field height = 2278 mm

9 mm

 H_{PFN} Nominal protective field height = 2250 mm

А Total height = 2316 mm

В 19 mm R

Effective protective field height $\rm H_{PFE}$ goes beyond the dimensions of the optics area to the outer borders of the circles labeled with R.

Electrical connection

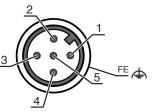
Connection 1

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**

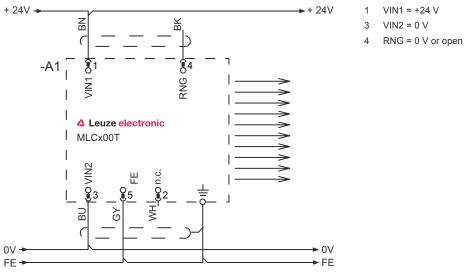
Conductor color

1	VIN1	Brown	
2	n.c.	White	
3	VIN2	Blue	3
4	RNG	Black	
5	FE/SHIELD	Gray	
			4

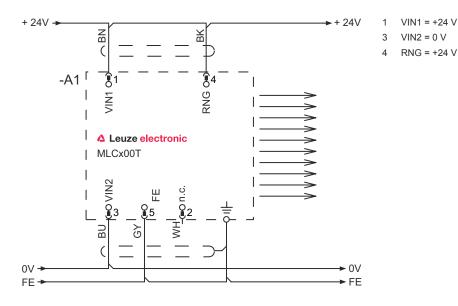


Circuit diagrams

Transmission channel C1, reduced range



Transmission channel C1, standard range



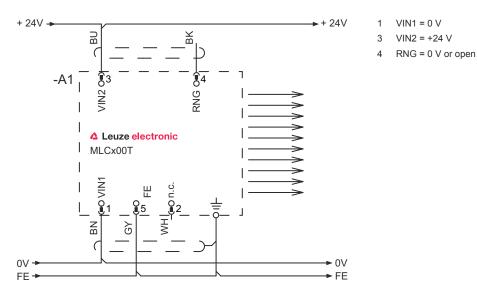
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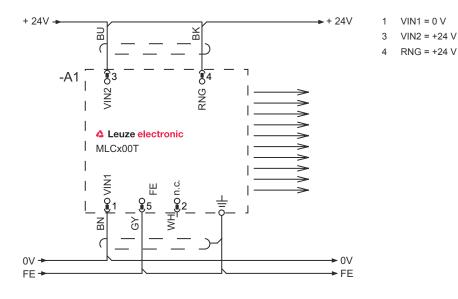
Circuit diagrams

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Transmission channel C2, reduced range



Transmission channel C2, standard range



Operation and display

Display	Meaning
Off	Device switched off
Red, continuous light	Device error
Green, continuous light	Normal operation
Green, flashing, 10 s long after switching on	Reduced range selected by the wiring of pin 4
Off	Transmission channel C1
Green, continuous light	Transmission channel C2
	Off Red, continuous light Green, continuous light Green, flashing, 10 s long after switching on Off

Suitable receivers

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Part no.	Designation	Article	Description
68001322	MLC510R30-2250	Safety light curtain receiver	Resolution: 30 mm Protective field height: 2,250 mm Response time: 20 ms Connection: Connector, M12, Metal, 5 -pin Function package: Basic
68002322	MLC520R30-2250	Safety light curtain receiver	Resolution: 30 mm Protective field height: 2,250 mm Response time: 20 ms Connection: Connector, M12, Metal, 8 -pin Function package: Standard
68003322	MLC530R30-2250	Safety light curtain receiver	Resolution: 30 mm Protective field height: 2,250 mm Response time: 20 ms Connection: Connector, M12, Metal, 8 -pin Function package: Extended
68009322	MLC530R30-2250- SPG	Safety light curtain receiver	Resolution: 30 mm Protective field height: 2,250 mm Response time: 100 ms Connection: Connector, M12, Metal, 8 -pin Function package: Smart Process Gating

Part number code

Part designation: MLCxyy-za-hhhhei-ooo

MLC	Safety light curtain
x	Series 3: MLC 300 5: MLC 500
уу	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
z	Device type T: transmitter R: receiver
а	Resolution 14: 14 mm 20: 20 mm 30: 30 mm 40: 40 mm 90: 90 mm
hhhh	Protective field height 150 … 3000: from 150 mm to 3000 mm
e	Host/Guest (optional) H: Host MG: Middle Guest G: Guest

Part number code



MLC	Safety light curtain
i	Interface (optional) /A: AS-i
000	Option /V: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating Note
0	∜ 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. ✤ Only use the product in accordance with its intended use.

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
P.a.	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

Alignment aid	Housing material: Plastic	

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Accessories

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