

## **Technical data sheet** Safety light curtain transmitter

Part no.: 68008106 MLC502T14-600



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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	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 <sub>M</sub>	20 years, EN ISO 13849-1

14 mm

600 mm

0 ... 6 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 <sub>B</sub>	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 Piece(s)

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

#### **Cable properties** 0.25 mm<sup>2</sup> Permissible conductor cross section, typ. Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω load, max.

#### **Mechanical data**

Dimension (W x H x L)	29 mm x 666 mm x 35.4 mm	
Housing material	Metal	
Metal housing	Aluminum	
Lens cover material	Plastic / PMMA	
Material of end caps	Diecast zinc	
Net weight	750 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/s²	
Shock resistance	100 m/s²	
US patents	US 6,418,546 B	

#### Classification

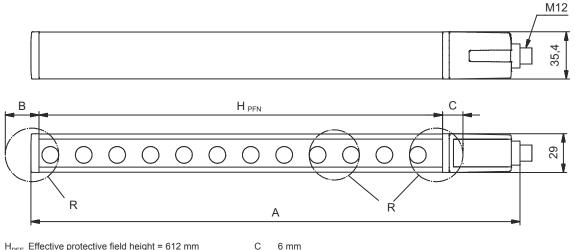
Customs tariff number	85365019
eCl@ss 5.1.4	27272704
eCl@ss 8.0	27272704
eCl@ss 9.0	27272704
eCl@ss 10.0	27272704
eCl@ss 11.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

## **Dimensioned drawings**



All dimensions in millimeters

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



R

 $H_{PFE}$  Effective protective field height = 612 mm

 $H_{PFN}$  Nominal protective field height = 600 mm

А Total height = 666 mm В 6 mm

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

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

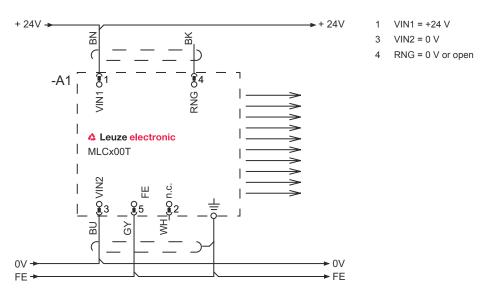
**Conductor color** 

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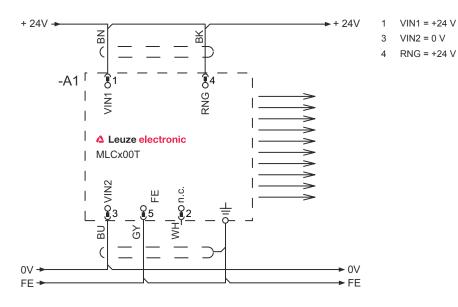
## **Circuit diagrams**

# Leuze

Transmission channel C1, OSSDs deactivated on the receiver



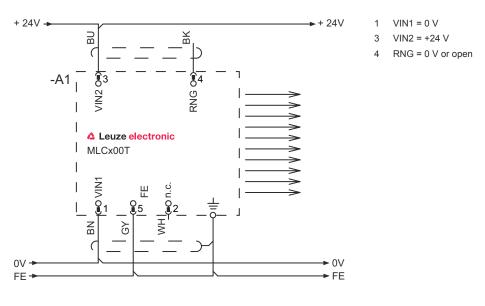
Transmission channel C1, OSSDs activated on the receiver



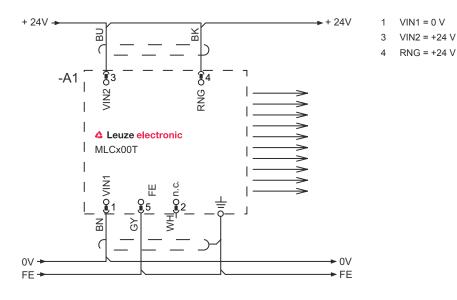
## **Circuit diagrams**

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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
68001106	MLC510R14-600	Safety light curtain receiver	Resolution: 14 mm Protective field height: 600 mm Response time: 14 ms Connection: Connector, M12, Metal, 5 -pin Function package: Basic

### Part number code

MLC	Safety light curtain	
x	<b>Series</b> 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	
i	Interface (optional) /A: AS-i	
000	Option /V: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating	
N	lote	

### Notes

 Observe intended use!

 Image: Serve intended use!

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## Accessories

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## 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. C.	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
-	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

No. A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.