

Technical data sheet Safety light curtain receiver

Part no.: 68001427 MLC510R40-2700



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Technical data

Basic data

Series	MLC 500
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Access guarding
	Danger zone guarding
	Hand protection

Functions

Function package	Basic
Functions	Automatic start/restart
	Transmission channel changeover

Characteristic parameters

Туре	4, IEC/EN 61496
SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
PFH _D	7.73E-09 per hour
Mission time T _M	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

Protective field data

40 mm
2,700 mm
Optical between transmitter and receiver
Overvoltage protection
Short circuit protected
24 V, DC, -20 20 %
150 mA
2 A semi time-lag
2 Piece(s)
outs
Safety-related switching output OSSD
18 V

Switching voltage high, min.	18 V
Switching voltage low, max.	2.5 V
Switching voltage, typ.	22.5 V
Voltage type	DC
Current load, max.	380 mA
Load inductivity	2,000 μH
Load capacity	0.3 µF
Residual current, max.	0.2 mA
Residual current, typ.	0.002 mA
Voltage drop	1.5 V

Safety-related switching output 1 Assignment Connect

Switching element

Connection 1, pin 2 Transistor, PNP

Assignment	Connection 1, pin 4
Switching element	Transistor, PNP
iming	
lesponse time	24 ms
Restart delay time	100 ms
Connection	
lumber of connections	1 Piece(s)
Connection 1	Mashina interfere
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 mm ²
Length of connection cable, max.	100 m
Permissible cable resistance to load, max.	200 Ω
Mechanical data	
Dimension (W x H x L)	29 mm x 2,766 mm x 35.4 mm
lousing material	Metal
etal housing	Aluminum
ens cover material	Plastic / PMMA
aterial of end caps	Diecast zinc
et weight	2,850 g
ousing color	Yellow, RAL 1021
ype of fastening	Groove mounting
, po or rectoring	Mounting bracket
	Mounting on Device Column
	Swivel mount
peration and display	
ype of display	LED
lumber 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
rotection class	
ertifications	c CSA US
	c TÜV NRTL US
	S Mark
	TÜV Süd
libration registeres	
ibration resistance	50 m/s ²
hock resistance	100 m/s² US 6,418,546 B
S patents	

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2/6

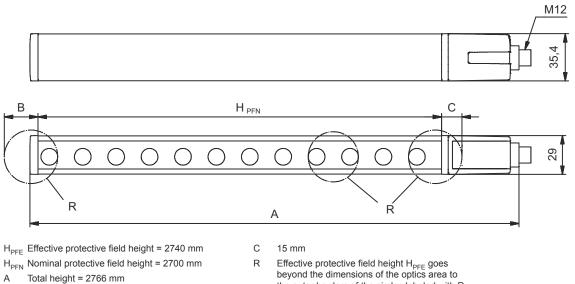
Technical data

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 $H_{PFF} = H_{PFN} + B + C$



В 25 mm 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

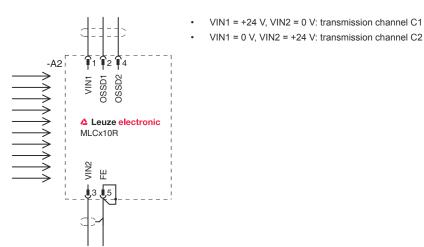
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Electrical connection

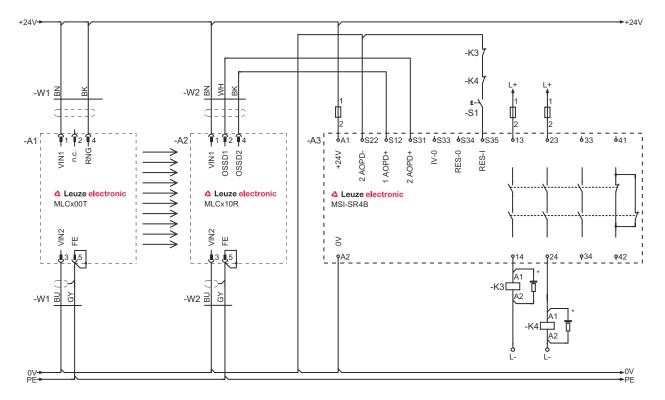
Pin	Pin assignment	Conductor color	2
1	VIN1	Brown	
2	OSSD1	White	
3	VIN2	Blue	3
4	OSSD2	Black	
5	FE/SHIELD	Gray	

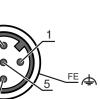
Circuit diagrams

Connection diagram receiver



Circuit diagram example with downstream MSI-SR4B safety relay





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Operation and display

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LED	Display	Meaning
1	Off	Device switched off
	Red, continuous light	OSSD off.
	Red, flashing, 1 Hz	External error
	Red, flashing, 10 Hz	Internal error
	Green, flashing, 1 Hz	OSSD on, weak signal
	Green, continuous light	OSSD on
2	Off	Transmission channel C1
	Red, continuous light	OSSD off, transmission channel C2

Suitable transmitters

 Part no.	Designation	Article	Description
68000427	MLC500T40-2700	Safety light curtain transmitter	Resolution: 40 mm Protective field height: 2,700 mm Operating range: 0 20 m Connection: Connector, M12, Metal, 5 -pin

Part number code

Part designation: MLCxyy-za-hhhhei-ooo

MIC Safety light curtain

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
i	Interface (optional) /A: AS-i
000	Option /V: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating
N	Note

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

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Notes





Observe intended use!

 $\ensuremath{\mathfrak{b}}$ 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
R. R. GA	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

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

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