Leuze

Technical data sheet Safety light curtain receiver

Part no.: 68017209 MLC510R20-900H/A



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We reserve the right to make technical changes

Technical data

Basic data

Series	MLC 500
Device type	Receiver
Cascading	Host
Contains	2x BT-NC sliding block
Application	Hand protection

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

Resolution	20 mm
Protective field height	900 mm

Optical data

Number of beams	72 Piece(s)
Synchronization	Optical between transmitter and receiver

Electrical data

Protective circuit

Performance data Supply voltage U_B Current consumption from AS-i circuit

26.5 ... 31.6 V 150 mA

100 ms

Overvoltage protection

Short circuit protected

Time behavior

Response time

Restart delay time

Interface

Туре

AS-Interface Safety at Work

17 ms, plus response times of the Middle Guest/Guest devices

AS-i

Function	Process
AS-i profile	S-0.B.F
Slave address	131 programmable, default=0
Cycle time acc. to AS-i specifica- tions	Max. 5 ms ms

Connection

Number of connections

2 Piece(s)

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



Connection 2	
Function	Cascade, Guest Out
	Cascade, Middle Guest Out
Type of connection	Cable with connector
Cable length	330 mm
Sheathing material	PUR
Thread size	M12
Material	Plastic
No. of pins	8 -pin
Cable properties	
Permissible conductor cross section, type.	0.25 mm ²
Length of connection cable, max.	100 m
Permissible cable resistance to	200 Ω
load, max.	
load, max. Mechanical data	
Mechanical data	29 mm x 966 mm x 53 mm
	29 mm x 966 mm x 53 mm Metal
Mechanical data Dimension (W x H x L)	
Mechanical data Dimension (W x H x L) Housing material	Metal
Mechanical data Dimension (W x H x L) Housing material Metal housing	Metal Aluminum
Mechanical data Dimension (W x H x L) Housing material Metal housing Lens cover material	Metal Aluminum Plastic / PMMA
Mechanical data Dimension (W x H x L) Housing material Metal housing Lens cover material Material of end caps	Metal Aluminum Plastic / PMMA Diecast zinc

Operation and display

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

Mounting brackets

Swivel mount

Environmental data

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

Certifications

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

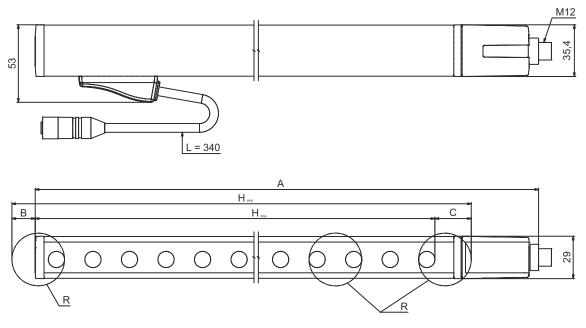
Technical data

Customs tariff number	85365019
ECLASS 5.1.4	27272704
ECLASS 8.0	27272704
ECLASS 9.0	27272704
ECLASS 10.0	27272704
ECLASS 11.0	27272704
ECLASS 12.0	27272704
ECLASS 13.0	27272704
ECLASS 14.0	27272704
ECLASS 15.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	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 = 917 mm

C R

H_{PFN} Nominal protective field height = 900 mm A Total height = 966 mm

B 7 mm

 C 10 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. Leuze

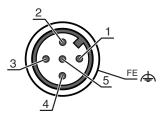
Electrical connection

Connection 1

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

Pin Pin assignment

1	AS-i+	
2	n.c.	
3	AS-i-	
4	n.c.	
5	n.c.	



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Connection 2

Cascade, Guest Out
Cascade, Middle Guest Out
Cable with connector
330 mm
PUR
Black
0.14 mm ²
Pair stranding (twisted pair)
M12
Female
Plastic
8 -pin
A-coded

Operation and display

LED	Display	Meaning
1	Off	Device switched off
	Red, continuous light	Protective field interrupted
	Red, flashing, 1 Hz	External error
	Red, flashing, 10 Hz	Internal error
	Green, flashing, 1 Hz	Protective field free, weak signal
	Green, continuous light	Protective field free
2	Off	No voltage
	On	OSSD off, transmission channel C2
	Green, continuous light	AS-i slave communicating with AS-i master
	Red, continuous light	AS-i slave not communicating with AS-i master
	Yellow, flashing	AS-i slave has invalid address 0
	Red, flashing	AS-i slave device error or AS-i connection defective
	Red/green, flashing alternately	Periphery error

Suitable transmitters

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 Part no.	Designation	Article	Description
68016209	MLC500T20-900H/A	Safety light curtain transmitter	Resolution: 20 mm Protective field height: 900 mm Operating range: 0 15 m Interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5 -pin

Part number code

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 or gating 35: Extended receiver – Gating
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 SPG RR: Smart Process Gating – Reduced resolution



Notes



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Observe intended use!

 $\ensuremath{\mathfrak{b}}$ The product may only be put into operation by competent persons.

Accessories

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Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	429278	CB-M12-2000E-8TP	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 8 -pin Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
Rea	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	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.
J.	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.

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