Leuze

Technical data sheet Safety light curtain receiver

Part no.: 68017915 MLC510R90-1500H/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	Access guarding
	Danger zone guarding

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 Protective field height

Optical data

Number of beams	20 Piece(s)
Synchronization	Optical between transmitter and receiver

90 mm

1,500 mm

Electrical data

Protective circuit	Overvoltage protection
	Short circuit protected
Porformanco data	

Performance data 26.5 ... 31.6 V Supply voltage U_B Current consumption from AS-i 150 mA circuit

Time behavior

6 ms, plus response times of the Middle Guest/Guest devices Response time Restart delay time 100 ms

Interface

Туре

AS-i	
Function	Process
AS-i profile	S-0.B.F
Slave address	131 programmable, default=0

Max. 5 ms ms

AS-Interface Safety at Work

Cycle time acc. to	AS-i specifica-
tions	

Connection

Number of connections

2 Piece(s)

Machine interface
Connector
M12
Metal
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 M12		
Thread size			
Material	Plastic		
No. of pins	8 -pin		
	- F		
Cable properties			
Permissible conductor cross section, type.	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 1,566 mm x 53 mm		
Housing material	Metal		
Metal housing	Aluminum		
Lens cover material	Plastic / PMMA		
Material of end caps	Diecast zinc		
Net weight	1,725 g		
Housing color	Yellow, RAL 1021		
Type of fastening	Groove mounting Mounting brackets		
	Swivel mount		
Operation and display			
Type of display	LED		
Number of LEDs	2 Piece(s)		
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		

TÜV Süd Vibration resistance 50 m/s² Shock resistance 100 m/s² US patents US 6,418,546 B

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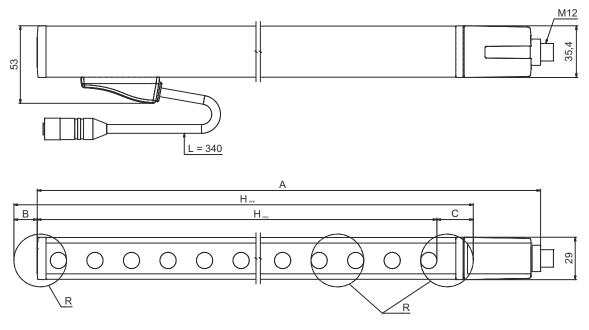
Technical data

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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 = 1590 mm

C 40 mm

 H_{PFN} Nominal protective field height = 1500 mm

- A Total height = 1566 mm
- B 50 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.

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Electrical connection

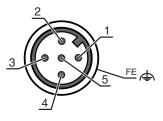
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Connection 1

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.		



Connection 2

Function	Cascade, Guest Out	
runction		
	Cascade, Middle Guest Out	
Type of connection	Cable with connector	
Cable length	330 mm	
Sheathing material	PUR	
Cable color	Black	
Wire cross section	0.14 mm²	
Type of stranding	Pair stranding (twisted pair)	
Thread size	M12	
Туре	Female	
Material	Plastic	
No. of pins	8 -pin	
Encoding	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



 Part no.	Designation	Article	Description
68016915	MLC500T90-1500H/A	Safety light curtain transmitter	Resolution: 90 mm Protective field height: 1,500 mm Operating range: 0 20 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 - Joaning 35: Extended receiver - Gating
z	Device type T: transmitter R: receiver
a	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



Mounting technology - Swivel mounts

 Part no.	Designation	Article	Description
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.
с. 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.

	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.