

Technical data sheet Safety light curtain receiver

Part no.: 68007416 MLC510R40-1650/A



The Sensor People In der Braike 1, 73277 Owen

Leuze electronic GmbH + Co. KG info@leuze.com • www.leuze.com

Phone: +49 7021 573-0 • Fax: +49 7021 573-199

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

Technical data

Basic data

Series	MLC 500
Device type	Receiver
	Access guarding
	Danger zone guarding
	Hand protection

Characteristic parameters

4, IEC/EN 61496
3, IEC 61508
3, IEC/EN 62061
e, EN ISO 13849-1
7.73E-09 per hour
20 years, EN ISO 13849-1
4, EN ISO 13849

Protective field data

Resolution	40 mm
Protective field height	1,650 mm
Optical data	
Synchronization	Optical between transmitter and receiver

Synchronization

Electrical data

Protective circuit

Performance data Supply voltage U_B Current consumption from AS-i

Timing

circuit

Response time Restart delay time

Interface

Туре

AS-Interface Safety at Work

Overvoltage protection Short circuit protected

26.5 ... 31.6 V

150 mA

15 ms

100 ms

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

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

1 Piece(s)

Leuze

Permissible conductor cross section, typ. 0.25 mm² Length of connection cable, max. 100 m Permissible cable resistance to local max. 200 Ω	Cable properties	
Permissible cable resistance to 200 Ω		0.25 mm ²
	Length of connection cable, max.	100 m
ioau, max.	Permissible cable resistance to load, max.	200 Ω

Mechanical data

Dimension (W x H x L)	29 mm x 1,716 mm x 35.4 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	1,800 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	0 55 °C
Ambient temperature, operation Ambient temperature, storage	-30 70 °C
Ambient temperature, operation	• … • • •
Ambient temperature, operation Ambient temperature, storage	-30 70 °C
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications	-30 70 °C 0 95 %
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection	-30 70 °C 0 95 % IP 65
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection Protection class	-30 70 °C 0 95 % IP 65 III
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection	-30 70 °C 0 95 % IP 65 III c CSA US
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection Protection class	-30 70 °C 0 95 % IP 65 III c CSA US c TÜV NRTL US
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection Protection class Certifications	-30 70 °C 0 95 % IP 65 III c CSA US c TÜV NRTL US TÜV Süd
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection Protection class	-30 70 °C 0 95 % IP 65 III c CSA US c TÜV NRTL US
Ambient temperature, operation Ambient temperature, storage Relative humidity (non-condensing) Certifications Degree of protection Protection class Certifications	-30 70 °C 0 95 % IP 65 III c CSA US c TÜV NRTL US TÜV Süd

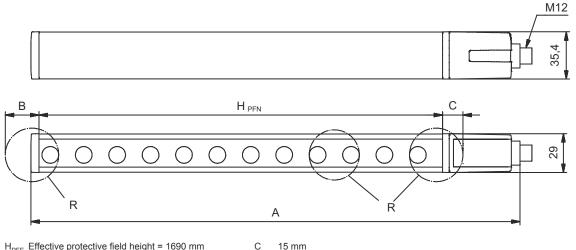
Customs tariff number	85365019
eCl@ss 5.1.4	27272704
eCl@ss 8.0	27272704
eCl@ss 9.0	27272704
eCl@ss 10.0	27272704
eCl@ss 11.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

Dimensioned drawings

Leuze

All dimensions in millimeters

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



 H_{PFE} Effective protective field height = 1690 mm

15 mm

 H_{PFN} Nominal protective field height = 1650 mm

А Total height = 1716 mm

В 25 mm R

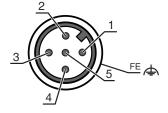
Effective protective field height $H_{\rm PFE}$ goes beyond the dimensions of the optics area to the outer borders of the circles labeled with R.

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

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



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

Operation and display

LED	Display	Meaning
2	Yellow, flashing	AS-i slave has invalid address 0
Red, t	Red, flashing	AS-i slave device error or AS-i connection defective
	Red/green, flashing alternately	Periphery error

Suitable transmitters

Part no	o. Designation	Article	Description
6800641	6 MLC500T40-1650/A	Safety light curtain transmitter	Resolution: 40 mm Protective field height: 1,650 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 - blanking/muting
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
N	lote

Leuze

Notes





Observe intended use!

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

b Only use the product in accordance with its intended use.

Accessories

\î

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
Ra	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.
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. 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
A	to A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.