

Technical data sheet Safety light curtain transmitter

Part no.: 68016204 MLC500T20-450H/A



The Sensor People In der Braike 1, 73277 Owen

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We reserve the right to make technical changes eng • 2021-02-02

Technical data

Basic data

Series	MLC 500
Device type	Transmitter
Cascading	Host
Application	Hand protection

Characteristic parameters

Туре	4, IEC/EN 61496
SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Mission time T _M	20 years, EN ISO 13849-1

Protective field data

Resolution	20 mm
Protective field height	450 mm
Operating range	0 15 m

Optical data

Number of beams	36 Piece(s)
Synchronization	Optical between transmitter and receiver
Light source	LED, Infrared
LED light wavelength	940 nm
Transmitted-signal shape	Pulsed

Electrical data

Protective circuit	Overvoltage protection
	Short circuit protected
Performance data	
Supply voltage U _B	26.5 31.6 V
Current consumption from AS-i circuit	50 mA
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.

Voltage type

Interface

Type

AC ;

A3-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

22.5 V

AS-Interface Safety at Work

DC

Connection

Number of connections

2 Piece(s)

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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 M12
Thread size Material	
No. of pins	Plastic 8 -pin
No. or pilla	o pin
Cable properties	
Permissible conductor cross	0.25 mm ²
section, typ.	
Length of connection cable, max.	100 m
Permissible cable resistance to load, max.	200 Ω
echanical data	
imension (W x H x L)	29 mm x 516 mm x 35.4 mm
ousing material	Metal
etal housing	Aluminum
-	Aluminum Plastic / PMMA
ens cover material	
ens cover material aterial of end caps	Plastic / PMMA
ens cover material aterial of end caps et weight	Plastic / PMMA Diecast zinc
ens cover material aterial of end caps et weight ousing color	Plastic / PMMA Diecast zinc 675 g
ens cover material aterial of end caps et weight ousing color	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket
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ens cover material aterial of end caps et weight ousing color ype of fastening peration and display ype of display	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount
ens cover material aterial of end caps et weight ousing color ype of fastening peration and display ype of display umber of LEDs	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount
ens cover material aterial of end caps et weight ousing color ype of fastening peration and display ype of display umber of LEDs nvironmental data	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount LED 2 Piece(s)
ens cover material aterial of end caps et weight ousing color ype of fastening peration and display ype of display umber of LEDs nvironmental data mbient temperature, operation	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount LED 2 Piece(s) 0 55 °C
ens cover material laterial of end caps et weight ousing color ype of fastening peration and display ype of display umber of LEDs nvironmental data mbient temperature, operation mbient temperature, storage	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount LED 2 Piece(s) 0 55 °C -30 70 °C
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ens cover material aterial of end caps et weight ousing color ype of fastening peration and display ype of display umber of LEDs nvironmental data mbient temperature, operation mbient temperature, storage elative humidity (non-condensing) ertifications egree of protection	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount LED 2 Piece(s) 0 55 °C -30 70 °C 0 95 %
letal housing ens cover material laterial of end caps et weight ousing color ype of fastening operation and display ype of display umber of LEDs invironmental data mbient temperature, operation mbient temperature, storage elative humidity (non-condensing) certifications egree of protection rotection class ertifications	Plastic / PMMA Diecast zinc 675 g Yellow, RAL 1021 Groove mounting Mounting bracket Swivel mount LED 2 Piece(s) 0 55 °C -30 70 °C 0 95 %

c TÜV NRTL US TÜV Süd US patents US 6,418,546 B

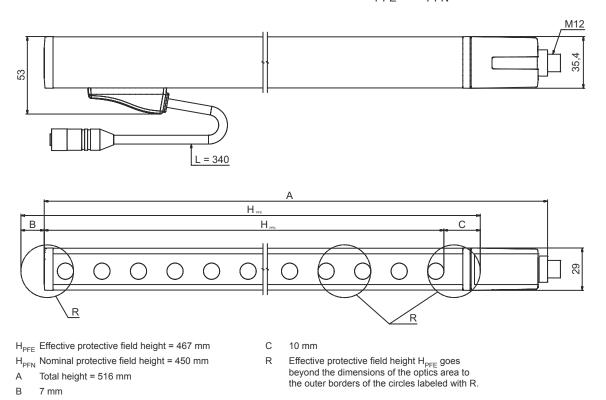
Technical data

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_{PFE} = H_{PFN} + B + C



Electrical connection

Connection 1

Machine interface
Connector
M12
Male
Metal
5 -pin
A-coded

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Electrical connection

Pin assignment

AS-i+

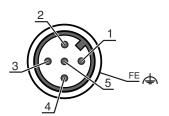
n.c.

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AS-i-

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Connection 2

Pin

1 2

3

4

5

Function	Cascade, Guest Out
	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	Device error
	Green, continuous light	Normal operation

Suitable receivers

 Part no.	Designation	Article	Description
68017204	MLC510R20-450H/A	Safety light curtain receiver	Resolution: 20mm Protective field height: 450mm Response time: 9ms Interface: AS-Interface Safety at Work Connection: Connector, M12, Metal, 5-pin

Part number code

Part designation: MLCxyy-za-hhhhei-ooo

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

Part number code

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MLC	Safety light curtain
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
(P)	A list with all available device types can be found on the Leuze website at www.leuze.com.

Notes

Observe intended use!				
 The product may only be put into operation by competent persons. Only use the product in accordance with its intended use. 				

Accessories

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
P. P. Q.	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

Accessories

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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.

A

Note

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