

Technical data sheet Safety light curtain transmitter

Part no.: 68016202 MLC500T20-225H/A



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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	Finger 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	225 mm
Operating range	0 6 m

Optical data

Number of beams	18 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.	22.5 V
Voltage type	DC

Interface

Туре

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)

AS-Interface Safety at Work

Leuze Machine interface Connector M12 Metal

No. of pins5 - pinConnection 2FunctionCascade, Guest Out Cascade, Middle Guest OutType of connectionCable with connectorCable length330 mmSheathing materialPURThread sizeM12MaterialPlasticNo. of pins8 - pinCable propertiesPermissible conductor cross section, typ.0.25 mm²Length of connection cable, max.100 m		
Function Cascade, 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 0.25 mm² Section, typ. 100 m Length of connection cable, max. 200 Ω	No. of pins	5 -pin
Function Cascade, 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 0.25 mm² Section, typ. 100 m Length of connection cable, max. 200 Ω		
Cascade, Middle Guest OutType of connectionCable with connectorCable length330 mmSheathing materialPURThread sizeM12MaterialPlasticNo. of pins8 -pinCable propertiesO.25 mm²Permissible conductor cross section, typ.0.25 mm²Length of connection cable, max.100 mPermissible cable resistance to200 Ω	Connection 2	
Type of connectionCable with connectorCable length330 mmSheathing materialPURThread sizeM12MaterialPlasticNo. of pins8 -pinCable propertiesPermissible conductor cross section, typ.Length of connection cable, max.100 mPermissible cable resistance to200 Ω	Function	Cascade, Guest Out
Cable length 330 mm Sheathing material PUR Thread size M12 Material Plastic No. of pins 8 -pin Cable properties Permissible conductor cross section, typ. Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω		Cascade, Middle Guest Out
Sheathing material PUR Thread size M12 Material Plastic No. of pins 8 -pin Cable properties Permissible conductor cross section, typ. 0.25 mm² Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	Type of connection	Cable with connector
Thread size M12 Material Plastic No. of pins 8 -pin Cable properties Permissible conductor cross section, typ. 0.25 mm² Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	Cable length	330 mm
Material Plastic No. of pins 8 -pin Cable properties Permissible conductor cross section, typ. 0.25 mm² Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	Sheathing material	PUR
No. of pins 8 -pin Cable properties 0.25 mm² Permissible conductor cross section, typ. 100 m Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	Thread size	M12
Cable properties Permissible conductor cross 0.25 mm² section, typ. 00 m Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	Material	Plastic
Permissible conductor cross section, typ. 0.25 mm² Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	No. of pins	8 -pin
Permissible conductor cross section, typ. 0.25 mm² Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω		
section, typ. 100 m Length of connection cable, max. 100 m Permissible cable resistance to 200 Ω	Cable properties	
Permissible cable resistance to 200 Ω		0.25 mm ²
	Length of connection cable, max.	100 m
		200 Ω

Mechanical data

Connection 1 Function

Thread size

Material

Type of connection

Dimension (W x H x L)	29 mm x 291 mm x 53 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	450 g
Housing color	Yellow, RAL 1021
Type of fastening	Groove mounting
	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	111	
Certifications	c CSA US	
	c TÜV NRTL US	
	TÜV Süd	
US patents	US 6,418,546 B	

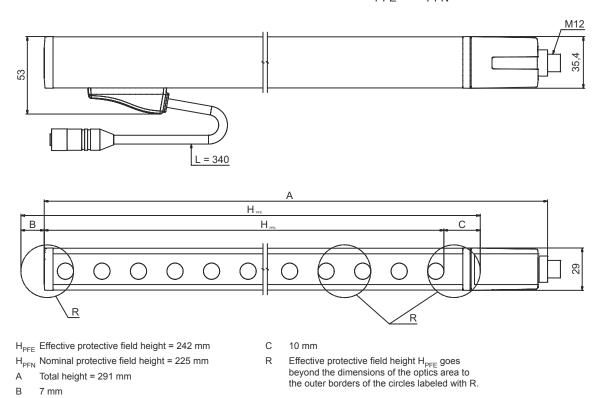
Technical data

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

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

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Electrical connection

Pin assignment

AS-i+

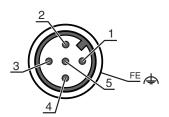
n.c.

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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 mm ²
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
68017202	MLC510R20-225H/A	Safety light curtain receiver	Resolution: 20mm Protective field height: 225mm Response time: 5ms 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
No	ote
()	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.