



the sensor people





Part no.: 68006216 MLC500T20-1650/A Safety light curtain transmitter















Figure can vary

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#### **Technical data**

Basic data			
Series Series	MLC 500		
Device type	Transmitter		
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		
Mission time T <sub>M</sub>	20 years , EN ISO 13849-1		
Protective field data			
Resolution	20 mm		
Protective field height	1,650 mm		
Operating range	0 15 m		
Optical data			
Synchronization	Optical between transmitter and receiver		
Light source	LED , Infrared		
LED light wavelength	940 nm		
Transmitted-signal shape	Pulsed		
LED group	Exempt group in acc. with EN 62471:2008		
Electrical data			
Protective circuit	Overvoltage protection Short circuit protected		
Performance data			
Supply voltage U <sub>B</sub>	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			
Type	AS-Interface Safety at Work		
	Ao-interface datety at work		
AS-i Function	Process		
AS-i profile	S-0.B.F		
Slave address	131 programmable, default=0		
	<u> </u>		
Cycle time acc. to AS-i specifications	Max. 5 ms		



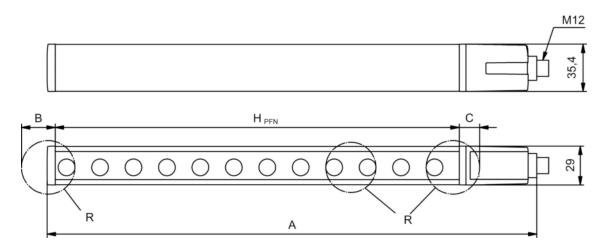
Number of connections	1 Piece(s)			
Connection 1				
Type of connection	Connector			
Function	Machine interface			
Thread size	M12			
Material	Metal			
No. of pins	5 -pin			
Cable properties				
Permissible conductor cross section, typ.	0.25 mm²			
Length of connection cable, max.	100 m			
Permissible cable resistance to load, max.	200 Ω			
Mechanical data				
Dimension (W x H x L)	29 mm x 1,716 mm x 35.4 mm			
Housing material	Metal , 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, storage	-30 70 °C			
Relative humidity (non-condensing)	0 95 %			
Certifications				
Degree of protection				
	IP 65			
Protection class	IP 65			
Protection class  Certifications				
	III c CSA US c TÜV NRTL US			
Certifications	III c CSA US c TÜV NRTL US TÜV Süd			
Certifications  Vibration resistance	III c CSA US c TÜV NRTL US TÜV Süd 50 m/s²			
Certifications  Vibration resistance  Shock resistance	III c CSA US c TÜV NRTL US TÜV Süd 50 m/s² 100 m/s²			
Vibration resistance Shock resistance US patents	III c CSA US c TÜV NRTL US TÜV Süd 50 m/s² 100 m/s²			
Vibration resistance Shock resistance US patents  Classification	III  c CSA US c TÜV NRTL US TÜV Süd  50 m/s²  100 m/s²  US 6,418,546 B			
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#### **Dimensioned drawings**

All dimensions in millimeters

Calculation of the effective protective field height HPFE = HPFN + B + C



HPFE Effective protective field height = 1667 mm

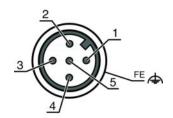
H<sub>PFN</sub> Nominal protective field height = 1650 mm

- A Total height = 1716 mm
- B 7 mm
- C 10 mm
- R Effective protective field height HPFE goes beyond the dimensions of the optics area to the outer borders of the circles labeled with R.

#### **Electrical connection**

Connection 1	
Type of connection	Connector
Function	Machine interface
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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### **Operation and display**

#### **LEDs**

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
68007216	MLC510R20-1650/ A	Safety light curtain receiver	Resolution: 20 mm Protective field height: 1,650 mm Response time: 29 ms 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
Х	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
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
е	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

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A list with all available device types can be found on the Leuze electronic 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**

### Mounting technology - Swivel mounts

Part no.	Designation	Article	Description
429393	BT-2HF	set	Contains: 2x BT-HF swivel mount, 1 cylinder for mounting on the light curtain Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

### Alignment aids

	Part no.	Designation	Article	Description
1	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.

#### Note

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