

# **Technical data sheet** Safety light curtain receiver

Part no.: 68023209

MLC520R20-900MG



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## **Technical data**



#### Basic data

| Series      | MLC 500                |
|-------------|------------------------|
| Device type | Receiver               |
| Cascading   | Middle Guest           |
| 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          |
| Performance Level (PL)      | e, EN ISO 13849-1        |
| Mission time T <sub>M</sub> | 20 years, EN ISO 13849-1 |
| Category                    | 4, EN ISO 13849          |
|                             |                          |

#### Protective field data

| Resolution              | 20 mm  |
|-------------------------|--------|
| Protective field height | 900 mm |

#### **Optical data**

#### Time behavior

15 ms, plus response times of the Host/ Guest devices Response time

#### Connection

Sheathing material

Thread size

No. of pins

Material

| N | umber of connections | 2 Piece(s)           |
|---|----------------------|----------------------|
|   | Connection 1         |                      |
|   | Function             | Cascade, Host In     |
|   | Type of connection   | Cable with connector |
|   | Cable length         | 330 mm               |
|   | Sheathing material   | PUR                  |
|   | Thread size          | M12                  |
|   | Material             | Plastic              |
|   | No. of pins          | 8 -pin               |
|   | Connection 2         |                      |
|   | Function             | Cascade, Guest Out   |
|   | Type of connection   | Cable with connector |
|   | Cable length         | 330 mm               |
|   |                      |                      |

PUR

M12

Plastic

8 -pin

#### Mechanical data

| Dimension (W x H x L) | 29 mm x 914 mm x 53 mm |
|-----------------------|------------------------|
| Housing material      | Metal                  |
| Metal housing         | Aluminum               |
| Lens cover material   | Plastic / PMMA         |
| Material of end caps  | Diecast zinc           |
| Net weight            | 1,098 g                |
| Housing color         | Yellow, RAL 1021       |
| Type of fastening     | Groove mounting        |
|                       | Mounting brackets      |
|                       | Swivel mount           |
|                       |                        |

#### **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              |
| Vibration resistance | 50 m/s <sup>2</sup>  |
| Shock resistance     | 100 m/s <sup>2</sup> |
| US patents           | US 6,418,546 B       |

#### Classification

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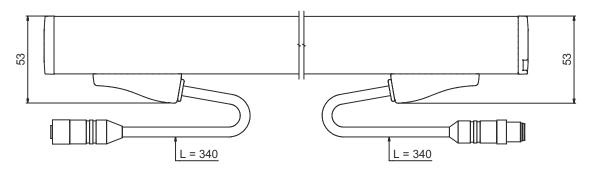
| Customs tariff number | 85365019 |
|-----------------------|----------|
| ECLASS 5.1.4          | 27272704 |
| ECLASS 8.0            | 27272704 |
| ECLASS 9.0            | 27272704 |
| ECLASS 10.0           | 27272704 |
| ECLASS 11.0           | 27272704 |
| ECLASS 12.0           | 27272704 |
| ECLASS 13.0           | 27272704 |
| ECLASS 14.0           | 27272704 |
| ECLASS 15.0           | 27272704 |
| ETIM 5.0              | EC002549 |
| ETIM 6.0              | EC002549 |
| ETIM 7.0              | EC002549 |
| ETIM 8.0              | EC002549 |
| ETIM 9.0              | EC002549 |
| ETIM 10.0             | EC002549 |
|                       |          |

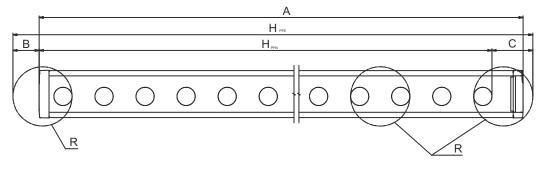
# **Dimensioned drawings**



All dimensions in millimeters

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





 ${\rm H_{PFE}}$  Effective protective field height = 917 mm

 ${\rm H}_{\rm PFN}$  Nominal protective field height = 900 mm

Total height = 914 mm

B 7 mm

- C 10 mm
- R Effective protective field height H<sub>PFE</sub> goes beyond the dimensions of the optics area to the outer borders of the circles labeled with R.

# **Electrical connection**

#### **Connection 1**

| Cascade, Host In              |
|-------------------------------|
| Cable with connector          |
| 330 mm                        |
| PUR                           |
| Black                         |
| Pair stranding (twisted pair) |
| 0.14 mm²                      |
| M12                           |
| Male                          |
| Plastic                       |
| 8 -pin                        |
| A-coded                       |
|                               |

#### **Connection 2**

| Function           | Cascade, Guest Out   |
|--------------------|----------------------|
| Type of connection | Cable with connector |
| Cable length       | 330 mm               |
| Sheathing material | PUR                  |
| Cable color        | Black                |
| Wire cross section | 0.14 mm²             |

### **Electrical connection**



#### **Connection 2**

| Type of stranding | Pair stranding (twisted pair) |
|-------------------|-------------------------------|
| Thread size       | M12                           |
| Туре              | Female                        |
| Material          | Plastic                       |
| No. of pins       | 8 -pin                        |
| Encoding          | A-coded                       |

# Suitable transmitters

| Part no. | Designation     | Article                          | Description   |
|----------|-----------------|----------------------------------|---|
| 68022209 | MLC500T20-900MG | Safety light curtain transmitter | Resolution: 20 mm Protective field height: 900 mm Operating range: 0 15 m Connection: Cable with connector, M12, Plastic, 8 -pin, 330 mm, PUR |

# 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 or gating  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   |
| е    | Host/Guest (optional) H: Host MG: Middle Guest G: Guest  |
| i    | Interface (optional)<br>/A: AS-i   |
| 000  | Option  N: high Vibration-proof  EX2: explosion protection (zones 2 + 22)  SPG: Smart Process Gating  SPG RR: Smart Process Gating – Reduced resolution  |

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#### Note



 $\ ^{\mbox{\tiny $t$}}\ \mbox{A list with all available device types can be found on the Leuze website at www.leuze.com.}$ 

### **Notes**





#### Observe intended use!



- by 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<br>Connection 2: Connector, M12, Axial, Male, A-coded, 8 -pin<br>Shielded: Yes<br>Cable length: 2,000 mm<br>Sheathing material: PUR |

# Mounting technology - Mounting brackets

|      | Part no. | Designation | Article             | Description  |
|------|----------|-------------|---------------------|--|
| 1111 | 429006   | BT-2L-HG    | Mounting device set | Mounting bracket, at device: Screw type<br>Material: Metal |

# Mounting technology - Swivel mounts

|       | Part no. | Designation | Article              | Description  |
|-------|----------|-------------|----------------------|--|
| P.Co. | 429395   | BT-2HF-G    | 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. |

### **Accessories**



| Part no. | Designation | Article          | Description  |
|----------|-------------|------------------|--|
| 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. |

| N |  |  |
|---|--|--|
|   |  |  |
|   |  |  |
|   |  |  |



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