

Technical data sheet Safety light curtain transmitter

Part no.: 68016116

MLC500T14-1650H/A



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Technical data



Basic data

| Series | MLC 500 |
|-------------|------------------------|
| Device type | Transmitter |
| Cascading | Host |
| Contains | 2x BT-NC sliding block |
| 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 | 14 mm | |
|-------------------------|----------|--|
| Protective field height | 1,650 mm | |
| Operating range | 0 6 m | |

Optical data

| Number of beams | 165 Piece(s) |
|--------------------------|---|
| Synchronization | Optical between transmitter and receive |
| Light source | LED, Infrared |
| LED light wavelength | 940 nm |
| Transmitted-signal shape | Pulsed |
| LED risk group | Exempt group (in acc. with EN 62471:2008) |

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 | 50 mA |
| circuit | |

Inputs

| Number of digital switching inputs | l Piece(s) |
|------------------------------------|-------------|
| Number of digital switching inputs | 1 1 1000(3) |

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-Interface Safety at Work |
|---|-----------------------------|
| 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) |
|-----------------------|------------|
|-----------------------|------------|

| 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 |
| Thread size | M12 |
| Material | Plastic |
| No. of pins | 8 -pin |

Cable properties

| eubic proportion | |
|--|----------------------|
| Permissible conductor cross section, typ. | 0.25 mm ² |
| 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 |
| Metal housing | Aluminum |
| Lens cover material | Plastic / PMMA |
| Material of end caps | Diecast zinc |
| Net weight | 1,875 g |
| Housing color | Yellow, RAL 1021 |
| Type of fastening | Groove mounting |
| | Mounting bracket |
| | 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 | III |
| Certifications | c CSA US |
| | c TÜV NRTL US |
| | TÜV Süd |
| Vibration resistance | 50 m/s² |
| Shock resistance | 100 m/s ² |
| US patents | US 6,418,546 B |
| Shock resistance | TÜV Süd 50 m/s² 100 m/s² |

Technical data

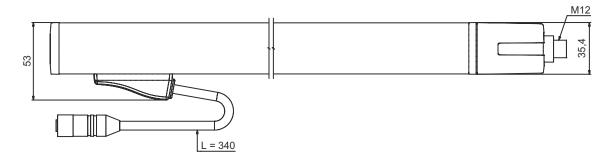


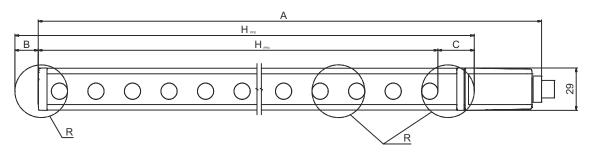
| Customs tariff number | 85365019 |
|-----------------------|----------|
| eCl@ss 5.1.4 | 27272704 |
| eCI@ss 8.0 | 27272704 |
| eCI@ss 9.0 | 27272704 |
| eCl@ss 10.0 | 27272704 |
| eCl@ss 11.0 | 27272704 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| FTIM 7.0 | EC002549 |

Dimensioned drawings

All dimensions in millimeters

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





 H_{PFE} Effective protective field height = 1662 mm

 ${\rm H}_{\rm PFN}$ Nominal protective field height = 1650 mm

A Total height = 1716 mm

B 6 mm

- C 6 mm
- R Effective protective field height H_{PFE} goes beyond the dimensions of the optics area to the outer borders of the circles labeled with R.

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Electrical connection

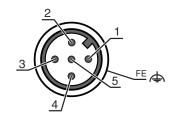
Connection 1

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

Electrical connection



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



Connection 2

| 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 |
|----------|-----------------------|----------------------------------|---|
| 68017116 | MLC510R14-1650H/ A | Safety light curtain receiver | Resolution: 14 mm Protective field height: 1,650 mm Response time: 36 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 |

Part number code



| MLC | Safety light curtain |
|------|--|
| 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 N: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating |

Note



Notes



Observe 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 |
|------|----------|-------------|----------------------|---|
| Paga | 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



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. |

Note



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