



Figure can vary




**Part no.: 426435**  
**MLD510-R3-UDC-1300-S2-P**  
**Safety sensor/receiver set**



## Contents

- . Set consists of
- . Technical data
- . Electrical connection
- . Operation and display
- . Accessories

## Set consists of

|   | Quantity | Part no. | Designation | Article                                    | Description  |
|---|----------|----------|-------------|--|--|
|  | 1        | 66533200 | MLD510-R3   | Multiple light beam safety device receiver | Number of beams: 3 Piece(s)<br>Beam spacing: 400 mm<br>Response time: 25 ms<br>Connection: Connector, M12, Metal, 5 -pin   |
|  | 1        | 426187   | PSC-1300-S2 | Protective screen                          | Material: PMMA, gray   |
|  | 1        | 549852   | UDC-1300-S2 | Device column                              | Dimensions: 160 mm x 1,360 mm x 149 mm<br>Column height without foot: 1,300 mm<br>Functions: Mounting and protection of light curtains and multiple light beam devices, Adjustable, 3 directions |

## Technical data

| <b>Basic data</b>                          |                            |
|--|----------------------------|
| Series                                     | MLD-UDC                    |
| Device type                                | Receiver                   |
| <b>Special design</b>                      |                            |
| Special design                             | Protective screen          |
| <b>Functions</b>                           |                            |
| Functions                                  | Automatic restart          |
| Reflective element for laser alignment aid | No                         |
| <b>Characteristic parameters</b>           |                            |
| Type                                       | 4 , IEC/EN 61496           |
| SIL  | 3 , IEC 61508              |
| SILCL                                      | 3 , IEC/EN 62061           |
| Performance Level (PL)                     | e , EN ISO 13849-1         |
| MTTF <sub>d</sub>                          | 204 years , EN ISO 13849-1 |
| PFH <sub>D</sub>                           | 6.6E-09 per hour           |
| Mission time T <sub>M</sub>                | 20 years , EN ISO 13849-1  |
| Category                                   | 4 , EN ISO 13849           |
| <b>Optical data</b>                        |                            |
| Number of beams                            | 3 Piece(s)                 |

Part no.: 426435 – MLD510-R3-UDC-1300-S2-P – Safety sensor/receiver set

|              |        |
|--------------|--------|
| Beam spacing | 400 mm |
|--------------|--------|

**Electrical data**

|                    |   |
|--------------------|---|
| Protective circuit | Overvoltage protection<br>Short circuit protected |
|--------------------|---|

**Performance data**

|                           |                                |
|---------------------------|--------------------------------|
| Supply voltage $U_B$      | 24 V , DC , -20 ... 20 %       |
| Current consumption, max. | 150 mA , Without external load |
| Fuse                      | External with max. 3 A         |

**Outputs**

|  |            |
|--|------------|
| Number of safety-related switching outputs (OSSDs) | 2 Piece(s) |
|--|------------|

**Safety-related switching outputs**

|                              |                                      |
|------------------------------|--------------------------------------|
| Type                         | Safety-related switching output OSSD |
| Switching voltage high, min. | 18.2 V                               |
| Switching voltage low, max.  | 2.5 V                                |
| Switching voltage, typ.      | 23 V                                 |
| Voltage type                 | DC                                   |
| Current load, max.           | 380 mA                               |
| Load inductivity             | 2,200,000 $\mu$ H                    |
| Load capacity                | 0.3 $\mu$ F                          |
| Residual current, max.       | 0.2 mA                               |
| Residual current, typ.       | 0.002 mA                             |
| Voltage drop                 | 1 V                                  |

**Safety-related switching output 1**

|                   |                     |
|-------------------|---------------------|
| Assignment        | Connection 1, pin 2 |
| Switching element | Transistor , PNP    |

**Safety-related switching output 2**

|                   |                     |
|-------------------|---------------------|
| Assignment        | Connection 1, pin 4 |
| Switching element | Transistor , PNP    |

**Timing**

|                    |        |
|--------------------|--------|
| Response time      | 25 ms  |
| Restart delay time | 100 ms |

**Connection**

|                       |            |
|-----------------------|------------|
| 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 mm <sup>2</sup> |
| Length of connection cable, max.           | 100 m                |
| Permissible cable resistance to load, max. | 200 $\Omega$         |

**Mechanical data**

|                       |                            |
|-----------------------|----------------------------|
| Dimension (W x H x L) | 160 mm x 1,360 mm x 149 mm |
| Housing material      | Metal , Aluminum           |

**Part no.: 426435 – MLD510-R3-UDC-1300-S2-P – Safety sensor/receiver set**

|                            |                                 |
|----------------------------|---------------------------------|
| Lens cover material        | Plastic / PMMA                  |
| Material of end caps       | Diecast zinc                    |
| Housing color              | Yellow, RAL 1021                |
| Type of fastening          | Groove mounting<br>Swivel mount |
| With device column         | Yes                             |
| Column height without foot | 1,300 mm                        |

**Operation and display**

|                 |            |
|-----------------|------------|
| Type of display | LED        |
| Number of LEDs  | 1 Piece(s) |

**Environmental data**

|                                    |               |
|------------------------------------|---------------|
| Ambient temperature, operation     | -30 ... 55 °C |
| Ambient temperature, storage       | -40 ... 75 °C |
| Relative humidity (non-condensing) | 0 ... 95 %    |

**Certifications**

|                      |                                      |
|----------------------|--------------------------------------|
| Degree of protection | IP 67                                |
| Protection class     | III                                  |
| Certifications       | c CSA US<br>c TÜV NRTL US<br>TÜV Süd |
| US patents           | US 6,418,546 B<br>US 7,741,595 B     |

**Classification**

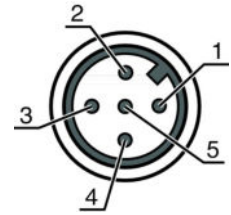
|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| eCl@ss 8.0            | 27272703 |
| eCl@ss 9.0            | 27272703 |
| ETIM 5.0              | EC001832 |
| ETIM 6.0              | EC001832 |

## Electrical connection

| Connection 1       |                   |
|--------------------|-------------------|
| Type of connection | Connector         |
| Function           | Machine interface |
| Thread size        | M12               |
| Type               | Male              |
| Material           | Metal             |
| No. of pins        | 5 -pin            |
| Encoding           | A-coded           |

Part no.: 426435 – MLD510-R3-UDC-1300-S2-P – Safety sensor/receiver set

| Pin | Pin assignment | Conductor color |
|-----|----------------|-----------------|
| 1   | +24V           | Brown           |
| 2   | OSSD1          | White           |
| 3   | 0 V            | Blue            |
| 4   | OSSD2          | Black           |
| 5   | n.c.           | Gray            |




## Operation and display

### LEDs



| LED | Display                 | Meaning  |
|-----|-------------------------|--|
| 1   | Red, continuous light   | OSSD off   |
|     | Green, continuous light | OSSD on  |
|     | Red, flashing, 1 Hz     | External error                                       |
|     | Red, flashing, 10 Hz    | Internal error                                       |
|     | Green, flashing, 1 Hz   | Weak signal, device not optimally aligned or soiled. |

## Suitable transmitters

|   | Part no. | Designation             | Article                       | Description  |
|---|----------|-------------------------|-------------------------------|--|
|  | 426354   | MLD500-T3-UDC-1300-S2-P | Safety sensor/transmitter set | Special design: Protective screen<br>Operating range: 0.5 ... 50 m<br>Beam spacing: 400 mm |

## Accessories

### Connection technology - Connection cables

|   | Part no. | Designation        | Article          | Description  |
|---|----------|--------------------|------------------|--|
|  | 50133860 | KD S-M12-5A-P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5-pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR  |
|  | 50133861 | KD S-M12-5A-P1-100 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5-pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 10,000 mm<br>Sheathing material: PUR |

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**Note**

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