

Technical data sheet Safety locking device

Part no.: 50135546

L300-M41M12B8-MLM24-PB-UCA

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- Technical data
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- Accessories



Figure can vary



Technical data

Basic data

| | |
|----------|---|
| Series | L300 |
| Contains | 1x actuator 1x safety locking device |

Functions

| | |
|-----------------------------------|--|
| Functions | Locking device with guard interlocking in acc. with EN ISO 14119 (type 4) |
| Activation mode of safety outputs | Safety outputs active if safety door is closed and locked |
| Operating principle | Open circuit current principle – Actuator locked if electromagnet is activated |

Characteristic parameters

| | |
|-----------------------------|---------------------------------------|
| SIL | 3, IEC 61508 |
| SILCL | 3, IEC/EN 62061 |
| Performance Level (PL) | Up to and including e, EN ISO 13849-1 |
| MTTF _d | 2,725 years, EN ISO 13849-1 |
| PFH _D | 1.17E-9 per hour |
| Mission time T _M | 20 years, EN ISO 13849-1 |
| Category | 4, EN ISO 13849-1 |
| DC | High |
| Encoding level | High, EN ISO 14119 |

Electrical data

| | |
|--|----------------------------|
| Type of wiring | Single connection |
| External safeguarding for supply circuit | 2A type Gg (or equivalent) |

Performance data

| | |
|-------------------------------|------------------------|
| Supply voltage U _B | 24 V, DC, -10 ... 10 % |
| Current consumption, max. | 1,200 mA |

Inputs

| | |
|------------------------------------|------------|
| Number of digital switching inputs | 2 Piece(s) |
|------------------------------------|------------|

Switching inputs

| | |
|---------------------------|-------------------------|
| Type | Digital switching input |
| Switching voltage, typ. | 24 V |
| Voltage type | DC |
| Current consumption, typ. | 5 mA |

Digital switching input 1

| | |
|----------|------------------------------------|
| Function | I4 activation input: electromagnet |
|----------|------------------------------------|

Digital switching input 2

| | |
|----------|--|
| Function | I3 programming input / control input for reset |
|----------|--|

Outputs

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

Safety-related switching outputs

| | |
|--------------|--------------------------------------|
| Type | Safety-related switching output OSSD |
| Voltage type | DC |

Safety-related switching output 1

| | |
|-------------------|-----------------|
| Switching element | Transistor, PNP |
|-------------------|-----------------|

Safety-related switching output 2

| | |
|-------------------|-----------------|
| Switching element | Transistor, PNP |
|-------------------|-----------------|

Switching outputs

| | |
|--------------|--------------------------|
| Type | Digital switching output |
| Voltage type | DC |

Switching output 1

| | |
|-------------------|--|
| Switching element | Transistor, PNP |
| Function | O3 signal output: protective-device closed |

Switching output 2

| | |
|-------------------|--|
| Switching element | Transistor, PNP |
| Function | O4 signal output: protective-device locked |

Connection

| | |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

Connection 1

| | |
|--------------------|---|
| Function | Connection with PLC Contact connection Voltage supply |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 8 -pin |
| Encoding | A-coded |

Cable properties

Mechanical data

| | |
|-------------------------------------|--|
| Housing material | Metal |
| Housing color | Gray Red |
| Type of fastening | Through-hole mounting |
| Side of cable entry | From below |
| Release device | Auxiliary release Escape release button |
| Approach speed | 0.001 ... 0.5 m/s |
| Locking force, max. | 9,750 N |
| Mechanical life time | 1,000,000 actuation cycles, IEC 60947-5-1 switching cycles |
| Actuation frequency, max. | 600 per hour, IEC 60947-5-1 |
| Extraction force, unlocked actuator | 30 N |

RFID sensor data

| | |
|--|---|
| Assured operating distance S _{ao} | 2 mm |
| Assured cut-out distance S _{ar} | 10 mm (actuator locked) 4 mm (actuator not locked) |
| Nominal switching distance S _n | 2.5 mm |
| Repeatability | ≤ 10 % S _n |
| Max. switching frequency | 1 Hz |

Operation and display

| | |
|----------------------|------------|
| Type of display | LED |
| Number of LEDs | 5 Piece(s) |
| Operational controls | Standard |

Environmental data

| | |
|--------------------------------|---------------|
| Ambient temperature, operation | -20 ... 50 °C |
| Ambient temperature, storage | -40 ... 75 °C |

Technical data

Certifications

| | |
|----------------------|---------|
| Degree of protection | IP 67 |
| | IP 69K |
| Certifications | c UL US |
| | ECOLAB |
| | TÜV Süd |

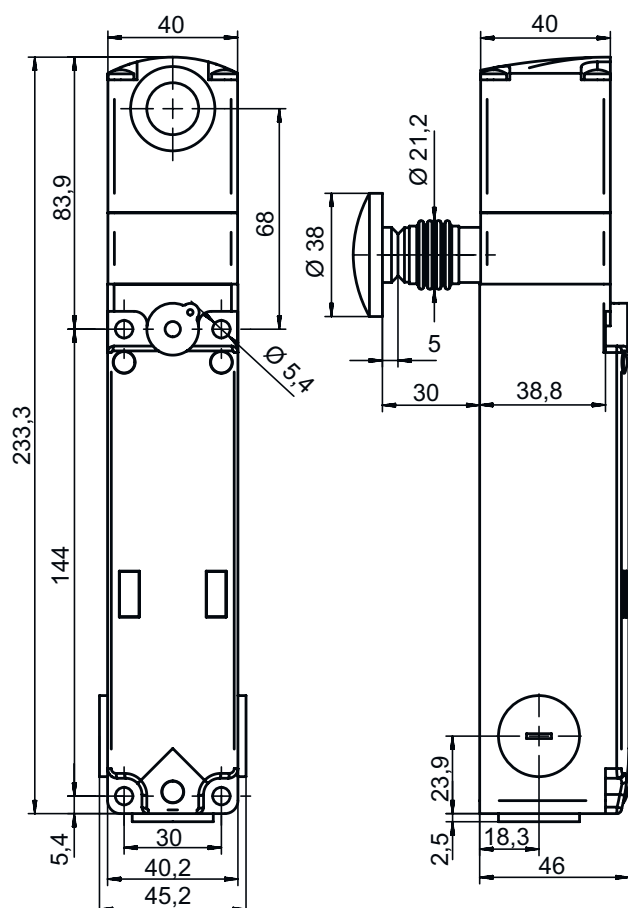
Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85369095 |
| eCl@ss 5.1.4 | 27272603 |
| eCl@ss 8.0 | 27272603 |
| eCl@ss 9.0 | 27272603 |
| eCl@ss 10.0 | 27272603 |
| eCl@ss 11.0 | 27272603 |
| ETIM 5.0 | EC002593 |
| ETIM 6.0 | EC002593 |
| ETIM 7.0 | EC002593 |

Dimensioned drawings

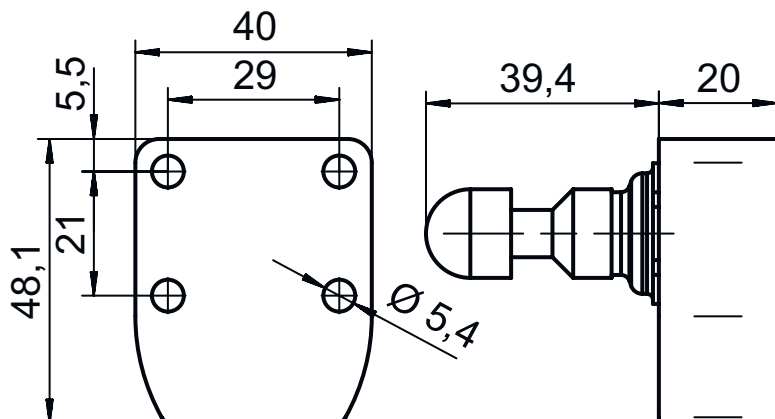
All dimensions in millimeters

Safety locking device



Dimensioned drawings

Actuator

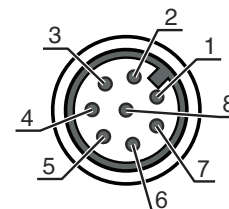


Electrical connection

Connection 1

| | |
|--------------------|---|
| Function | Connection with PLC Contact connection Voltage supply |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 8 -pin |
| Encoding | A-coded |

| Pin | Pin assignment | Conductor color |
|-----|--|-----------------|
| 1 | A1 +24 V | White |
| 2 | O3 signal output: protective-device closed | Brown |
| 3 | A2 +0 V | Green |
| 4 | OS1 safe output | Yellow |
| 5 | O4 signal output | Gray |
| 6 | I3 programming input / control input for reset | Pink |
| 7 | OS2 safe output | Blue |
| 8 | I4 activation input: electromagnet | Red |



Accessories

Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|--|----------|--------------------|------------------|--|
| | 50135128 | KD S-M12-8A-P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |

Accessories

| | Part no. | Designation | Article | Description |
|--|----------|--------------------|------------------|---|
| | 50135129 | KD S-M12-8A-P1-100 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR |
| | 50135121 | KD U-M12-8A-P1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR |
| | 50135122 | KD U-M12-8A-P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR |

Actuator

| | Part no. | Designation | Article | Description |
|--|-------------|-------------|----------|---|
| | 50132062 ** | AC-L300-UCA | Actuator | Code type: Unique code Encoding level: high, EN ISO 14119 Dimensions: 40 mm x 48.1 mm x 59.4 mm Housing color: Red Type of fastening: Through-hole mounting |

** Included in delivery contents

Note



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