

Technical data sheet Safety locking device

Part no.: 50132216

L300-M31C3-SLM24-PB-UCA



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- Technical data
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- Accessories



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 | Quiescent current principle – Actuator locked if electromagnet is deactivated |

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 | 2,968 years, EN ISO 13849-1 |
| PFH _D | 1.15E-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 | Series connection 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 safety-related switching inputs | 2 Piece(s) |
| Number of digital switching inputs | 3 Piece(s) |

Switching inputs

| | |
|---------------------------|-------------------------|
| Type | Digital switching input |
| Switching voltage, typ. | 24 V |
| Voltage type | DC |
| Current consumption, typ. | 5 mA |
| Teach input for actuator | No |

Digital switching input 1

| | |
|----------|-------------------------------------|
| Function | IE1 activation input: electromagnet |
|----------|-------------------------------------|

Digital switching input 2

| | |
|----------|-------------------------------------|
| Function | IE2 activation input: electromagnet |
|----------|-------------------------------------|

Safety-related switching inputs

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

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 cable entries | 3 Piece(s) |
|-------------------------|------------|

Connection 1

| | |
|--------------------|---|
| Function | Connection with PLC Contact connection Voltage supply |
| Type of connection | Terminal |
| Type of terminal | Spring-cage terminal |
| No. of pins | 18 -pin |

Cable properties

| | |
|---------------------------|---|
| Connection cross sections | 1 x 0.34 to 0.75 mm ² , wire with welded-on wire-end sleeve, 1 x 0.34 to 1.5 mm ² , wire with wire-end sleeve |
|---------------------------|---|

Mechanical data

| | |
|-------------------------------------|--|
| Design | Cubic |
| Housing material | Metal |
| Net weight | 1,500 g |
| Housing color | Gray Red |
| Type of fastening | Through-hole mounting |
| Type of cable entry | M20 x 1.5 |
| Side of cable entry | left, right, below |
| Release device | Auxiliary release Escape release button |
| Switch type | Interlock device with guard interlocking |
| Approach speed | 0.001 ... 0.5 m/s |
| Locking type | Spring force |
| Locking actuation | Spring |
| 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 |

Technical data

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 | $\leq 10\% S_n$ |
| 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 |

Certifications

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

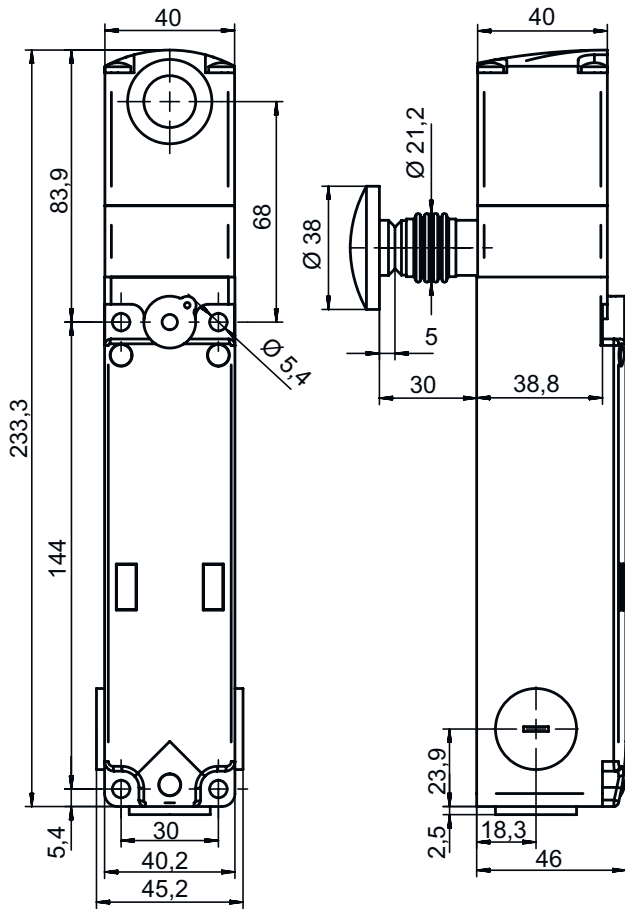
Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85369095 |
| ECLASS 5.1.4 | 27272603 |
| ECLASS 8.0 | 27272603 |
| ECLASS 9.0 | 27272603 |
| ECLASS 10.0 | 27272603 |
| ECLASS 11.0 | 27272603 |
| ECLASS 12.0 | 27272603 |
| ECLASS 13.0 | 27272603 |
| ECLASS 14.0 | 27272603 |
| ETIM 5.0 | EC002593 |
| ETIM 6.0 | EC002593 |
| ETIM 7.0 | EC002593 |
| ETIM 8.0 | EC002593 |
| ETIM 9.0 | EC002593 |

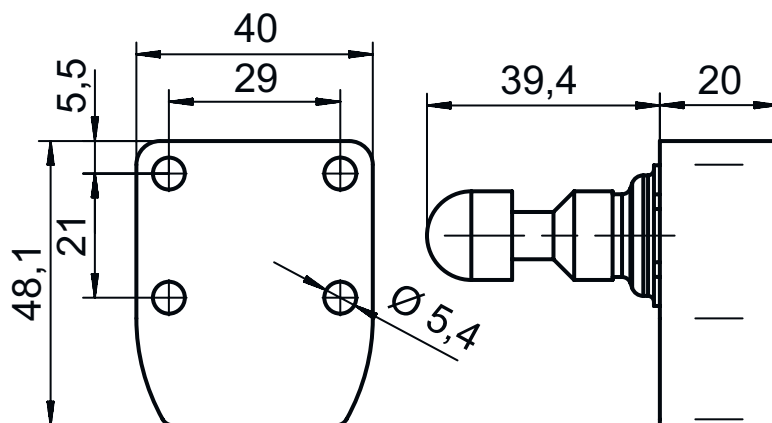
Dimensioned drawings

All dimensions in millimeters

Safety locking device



Actuator



Electrical connection

Connection 1

| | |
|--------------------|---|
| Function | Connection with PLC Contact connection Voltage supply |
| Type of connection | Terminal |
| Type of terminal | Spring-cage terminal |
| No. of pins | 18 -pin |


Terminal

Assignment

| | |
|----|--|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |



Accessories

Actuators

| | 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

General

| | Part no. | Designation | Article | Description |
|---|----------|----------------|----------------|---|
|  | 50149358 | AC-L300-LCK | Lockout device | Dimensions: 45 mm x 43 mm x 134 mm Housing color: Black, Red Material: Metal, with powder coating |
|  | 50149359 | AC-L300-LCK-A1 | Lockout device | Dimensions: 52 mm x 63 mm x 359 mm Housing color: Black, Red Material: Metal, with powder coating |

Accessories

| | Part no. | Designation | Article | Description |
|--|----------|-----------------------|---------|--------------------|
|  | 50149304 | AC-L300-SH2-G0-B000-Z | | Safety door handle |

Note



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