

## Technical data sheet Safety locking device

Part no.: 50132048

L300-M41C3-SLM24-KYPB-UCA

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For illustration purposes only



## Technical data

### Basic data

|        |      |
|--------|------|
| Series | L300 |
|--------|------|

### Functions

|                     |                                                                               |
|---------------------|-------------------------------------------------------------------------------|
| Functions           | Auxiliary release with lock                                                   |
|                     | Escape release button                                                         |
|                     | Locking device with guard interlocking in acc. with EN ISO 14119 (type 4)     |
|                     | Programming input                                                             |
| 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 <sub>d</sub>           | 1,883 years, EN ISO 13849-1           |
| PFH <sub>d</sub>            | 8.07E-10 per hour                     |
| Mission time T <sub>M</sub> | 20 years, EN ISO 13849-1              |
| Category                    | 4, EN ISO 13849                       |
| DC                          | High                                  |
| Encoding level              | High, EN ISO 14119                    |

### Electrical data

|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| Protective circuit | Overvoltage protection                                    |
|                    | Short circuit protected                                   |
| Type of wiring     | Series connection                                         |
|                    | Single connection                                         |
| Contact allocation | OSSDs                                                     |
| Operating mode     | Safety outputs active if safety door is closed and locked |

### Inputs

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

### Switching inputs

|                          |                         |
|--------------------------|-------------------------|
| Type                     | Digital switching input |
| Switching voltage, typ.  | 24 V                    |
| Voltage type             | DC                      |
| Teach input for actuator | Yes                     |

### Digital switching input 1

|          |                   |
|----------|-------------------|
| Function | Programming input |
|----------|-------------------|

### Digital switching input 2

|          |                                 |
|----------|---------------------------------|
| Function | 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 |
| Switching voltage, typ. | 24 V                     |
| Voltage type            | DC                       |

### Switching output 1

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

### Switching output 2

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

### Connection

|                         |            |
|-------------------------|------------|
| Number of connections   | 1 Piece(s) |
| 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        | 16 -pin              |

### Cable properties

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

Technical data

Mechanical data

|                                     |                                                            |
|-------------------------------------|------------------------------------------------------------|
| Design                              | Cubic                                                      |
| Dimension (W x H x L)               | 40.4 mm x 233.5 mm x 79.3 mm                               |
| Housing material                    | Metal                                                      |
| Housing color                       | Gray                                                       |
| Type of fastening                   | Through-hole mounting                                      |
| Type of cable entry                 | M20 x 1.5                                                  |
| Release device                      | Auxiliary release with lock<br>Escape release button       |
| Switch type                         | Interlock device with guard interlocking, EN ISO 13849     |
| Approach speed                      | 0.001 ... 0.5 m/s                                          |
| Locking type                        | Spring force                                               |
| Locking actuation                   | Spring                                                     |
| Locking force, max.                 | 7,500 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                                |
| External actuator                   | AC-L300-UCA, unique code                                   |
| Extraction force, unlocked actuator | 30 N                                                       |

RFID sensor data

|                                            |                                                       |
|--------------------------------------------|-------------------------------------------------------|
| Assured operating distance S <sub>ao</sub> | 2 mm                                                  |
| Assured cut-out distance S <sub>ar</sub>   | 10 mm (actuator locked)<br>4 mm (actuator not locked) |
| Nominal switching distance S <sub>n</sub>  | 2.5 mm                                                |
| Repeatability                              | ≤ 10 % S <sub>n</sub>                                 |
| Max. switching frequency                   | 1 Hz                                                  |

Operation and display

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

Environmental data

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

Certifications

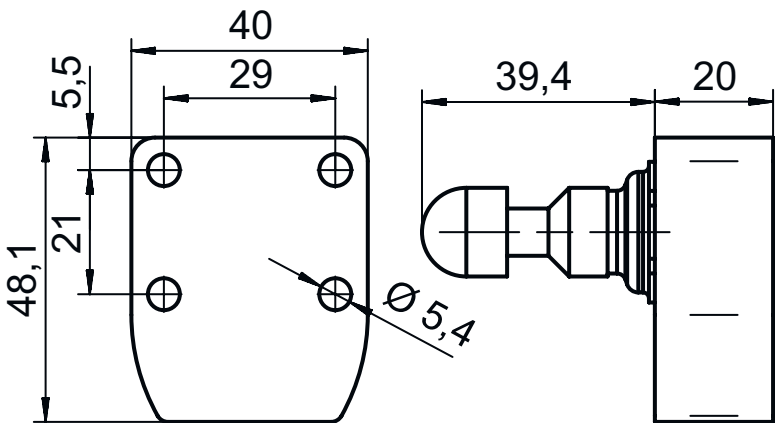
|                      |                   |
|----------------------|-------------------|
| Degree of protection | IP 67<br>IP 69K   |
| Certifications       | c UL US<br>ECOLAB |

Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85369095 |
| ECLASS 8.0            | 27272603 |
| ECLASS 9.0            | 27272603 |
| ETIM 5.0              | EC002593 |
| ETIM 6.0              | EC002593 |

Dimensioned drawings

All dimensions in millimeters



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        | 16 -pin              |

| Terminal | Assignment |
|----------|------------|
| 1        | A2         |
| 2        | B2         |
| 3        | I4         |
| 4        | O3         |
| 5        | O4         |
| 6        | I3         |
| 7        | n.c.       |
| 8        | n.c.       |
| 9        | n.c.       |
| 10       | A1         |
| 11       | B1         |
| 12       | IS1        |
| 13       | IS2        |
| 14       | I5         |
| 15       | OS1        |
| 16       | OS2        |
| 17       | n.c.       |
| 18       | n.c.       |

Accessories

Actuators

|                                                                                    | Part no.    | Designation | Article  | Description                                                                                                                                                             |
|------------------------------------------------------------------------------------|-------------|-------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50132062 ** | AC-L300-UCA | Actuator | Code type: Unique code<br>Encoding level: high, EN ISO 14119<br>Dimensions: 40 mm x 48.1 mm x 59.4 mm<br>Housing color: Red<br>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. |