



**Part no.: 50142115**  
**L300-B1-M31M23B19-SLM24-SCA**  
**Safety locking device**



Figure can vary

## Contents

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## Technical data

<b>Basic data</b>	
Series	L300-B1
<b>Functions</b>	
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
<b>Characteristic parameters</b>	
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>	2,725 years , EN ISO 13849-1
PFH <sub>D</sub>	1.17E-9 per hour
Mission time T <sub>M</sub>	20 years , EN ISO 13849-1
Category	4 , EN ISO 13849-1
DC	High
Encoding level	Low , EN ISO 14119
<b>Electrical data</b>	
Type of wiring	Series connection Single connection
External safeguarding for supply circuit	2A type Gg (or equivalent)
<b>Performance data</b>	
Supply voltage U <sub>B</sub>	24 V , DC , -10 ... 10 %
Current consumption, max.	1,200 mA
<b>Inputs</b>	
Number of safety-related switching inputs	2 Piece(s)
Number of digital switching inputs	2 Piece(s)
<b>Switching inputs</b>	
Type	Digital switching input
Switching voltage, typ.	24 V
Voltage type	DC
Current consumption, typ.	5 mA
<b>Digital switching input 1</b>	
Function	I4 activation input: electromagnet
<b>Digital switching input 2</b>	
Function	I3 control input for reset
<b>Safety-related switching inputs</b>	
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 connections 1 Piece(s)

**Connection 1**

Type of connection Connector

 Function Connection with PLC  
Contact connection  
Voltage supply

Thread size M23

Type Male

Material Metal

No. of pins 19 -pin

Encoding A-coded

**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

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

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Repeatability	≤ 10 % S <sub>n</sub>
Max. switching frequency	1 Hz

**Operation and display**

Type of display	LED
Number of LEDs	5 Piece(s)
Operational controls	2 command devices
Function of the operational control	Button illuminates with icon "Acknowledge", blue Button illuminates with icon "Request", white

**Environmental data**

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

**Certifications**

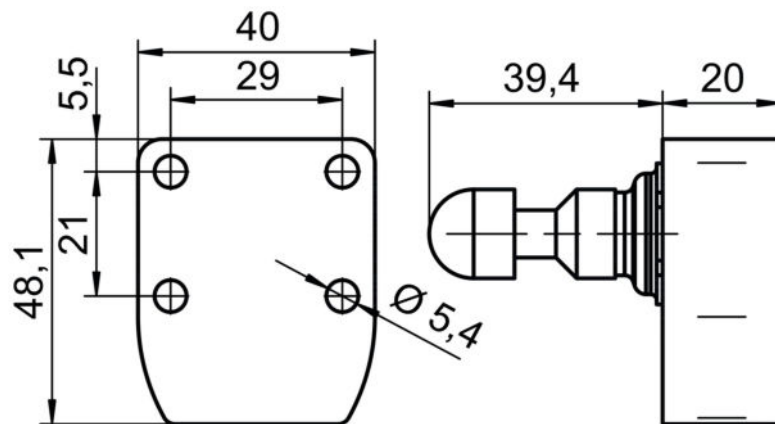
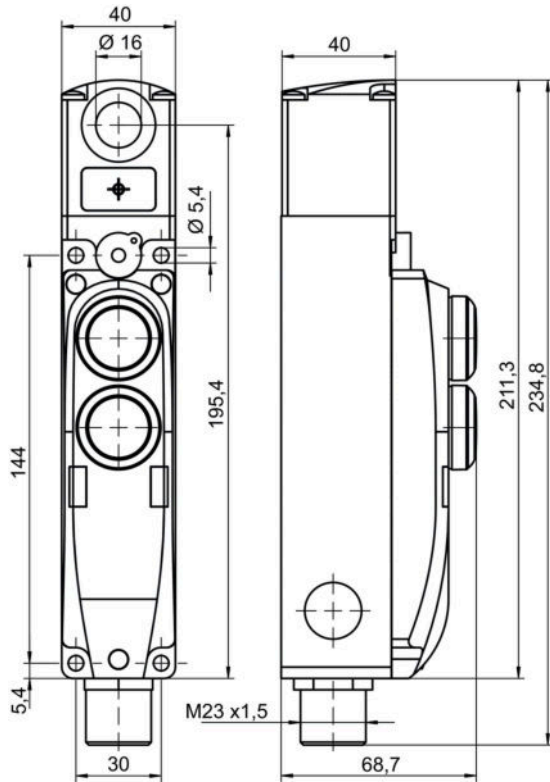
Degree of protection	IP 65
Certifications	c UL US ECOLAB TÜV Süd

**Classification**

eCl@ss 8.0	27272603
eCl@ss 9.0	27272603
ETIM 5.0	EC002593
ETIM 6.0	EC002593

## Dimensioned drawings

All dimensions in millimeters

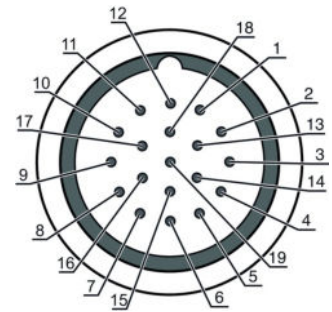


## Electrical connection

Connection 1	
Type of connection	Connector
Function	Connection with PLC Contact connection Voltage supply
Thread size	M23
Type	Male
Material	Metal
No. of pins	19 -pin
Encoding	A-coded


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Pin	Pin assignment	Conductor color
1	I4 activation input: electromagnet	Violet
2	IS1 safe input	Red
3	IS2 safe input	Gray
4	OS1 safe output	Blue Red
5	OS2 safe output	Green
6	A1 +24 V	Blue
7	I3 programming input / control input for reset	Gray Pink
8	O3 signal output: protective-device closed	Green White
9	O4 signal output: protective-device locked	White Yellow
10	Device 3, contact 1	Gray White
11	Device 3, contact 1	Black
12	n.c.	Green Yellow
13	Device 3, contact 2	Brown Yellow
14	Device 3, contact 2	Brown Green
15	Device 2, contact 1	White
16	LED2 +24 V	Yellow
17	Device 1, contact 1	Pink
18	LED1 +24 V	Brown Gray
19	A2 +0 V	Brown




## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50134971	KD U-M23-JA-P1-050	Connection cable	Connection 1: Connector, M23, Axial, Female, A-coded, 19 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR

## Actuator

	Part no.	Designation	Article	Description
	50132061 **	AC-L300-SCA	Actuator	Code type: Standard code Encoding level: low, 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 electronic website in the Download tab of the article detailed page.