



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



Figure can vary

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- Dimensioned drawings
- Electrical connection
- Accessories

Technical data

Basic data	
Series	L300-B1
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	2,725 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	Low, 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	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 Control input for Reset
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
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Safety-related switching output 2

Switching element	Transistor, PNP
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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)
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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_n
Differential travel	≤ 20 % S_n
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

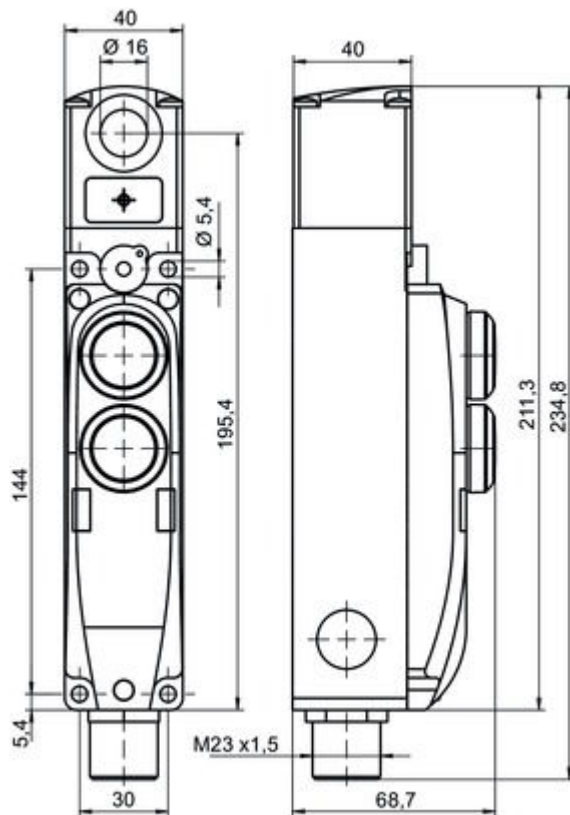
Degree of protection	IP 65
Certifications	c UL US TÜV Süd

Classification

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

Dimensioned drawings

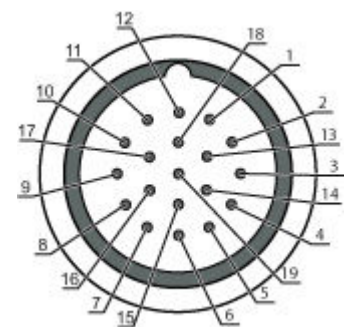
All dimensions in millimeters



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




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 / control input for Reset	Gray Pink
8	O3 signal output	Green White
9	O4 signal output	White Yellow
10	Device 3, contact 1	Gray White




Pin	Pin assignment	Conductor color
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 0V	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
	50134972	KD U-M23-JA-P1-100	Connection cable	Connection 1: Connector, M23, Axial, Female, A-coded, 19 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
	50136636	KD U-M23-JA-P1-150	Connection cable	Connection 1: Connector, M23, Axial, Female, A-coded, 19 -pin Connection 2: Open end Shielded: No Cable length: 15,000 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

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

General

	Part no.	Designation	Article	Description
	50133288	AC-L300-SH-LCK0-B3-P	Safety door handle	LOCK OUT mechanism: No Door handle material: Plastic Mounting on the door post: Short plate Mounting on the door: 3 adjustable plates
	50133287	AC-L300-SH-LCK1-A3-P	Safety door handle	LOCK OUT mechanism: Yes Door handle material: Plastic Mounting on the door post: Long plate Mounting on the door: 3 adjustable plates