Technical data sheet
Safety locking device
Part no.: 50142095
L300-B1-M31C3-SLM24-SCA



Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Accessories

Technical data

Leuze

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	3 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	IE1 activation input: electromagnet

Digital switching input 2

Function	IE1 activation input: electromagnet
	IE2 activation input: electromagnet

Digital switching input 3

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

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

Cable properties

Connection cross sections	1 x 0.34 to 0.75 mm², wire with welded-on wire-end sleeve, 1 x 0.34 to 1.5 mm², wire with wire-end sleeve

Mechanical data

Housing material	Metal
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
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

Technical data

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

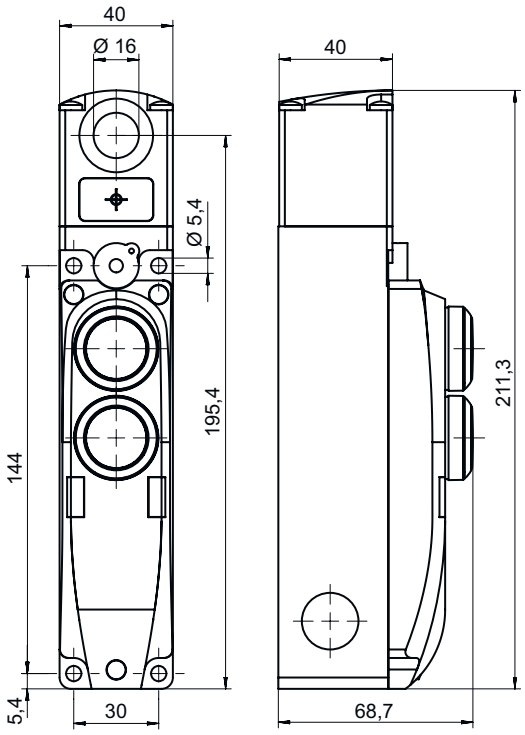
Degree of protection	IP 65
Certifications	c UL US
	ECOLAB
	TÜV Süd

Classification

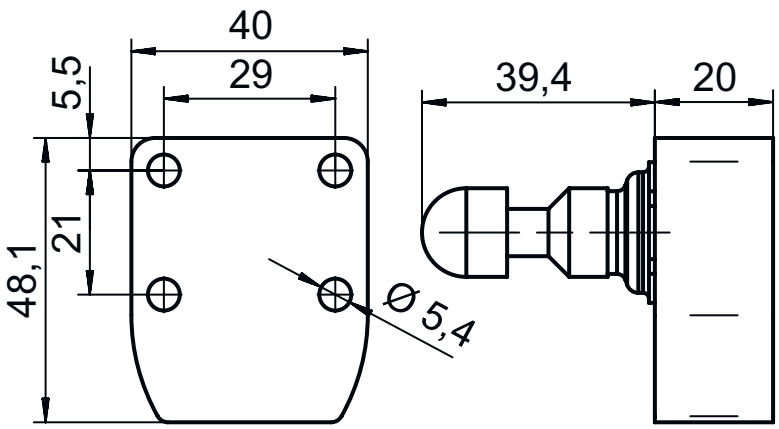
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eCl@ss 10.0	27272603
eCl@ss 11.0	27272603
ETIM 5.0	EC002593
ETIM 6.0	EC002593

Dimensioned drawings

All dimensions in millimeters



Dimensioned drawings



Electrical connection

Connection 1

Function	Connection with PLC
	Contact connection
	Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal

Pin	Conductor color
1	White
2	Brown
3	Green
4	Yellow
5	Gray
6	Pink
7	Blue
8	Red

Accessories

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

Accessories

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