

Technical data sheet Safety locking device

Part no.: 50132210

L300-M31C3-SLM24-KYPB-UCA

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- Technical data
- Dimensioned drawings
- Electrical connection



For illustration purposes only



Technical data

Basic data

Series	L300
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Functions

Functions	Auxiliary release with lock
	Escape release button
Operating principle	Locking device with guard interlocking in acc. with EN ISO 14119 (type 4)
	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	1,883 years, EN ISO 13849-1
PFH _D	8.07E-10 per hour
Mission time T _M	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	1 Piece(s)

Switching inputs

Type	Digital switching input
Switching voltage, typ.	24 V
Voltage type	DC
Teach input for actuator	No

Digital switching input 1

Function	Activation input: electromagnet
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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
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 ² , wire with welded-on wire-end sleeve
	1 x 0.34 to 1.5 mm ² , 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 40 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 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_{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)

Environmental data

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

Certifications

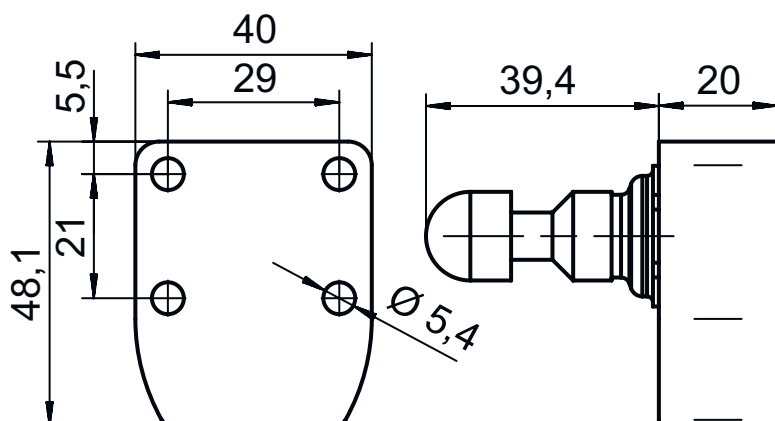
Degree of protection	IP 67 IP 69K
Certifications	c UL US ECOLAB TÜV Süd

Classification

Customs tariff number	85369095
ECLASS 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.