Technical data sheet
Safety locking device
Part no.: 50132054
L300-M31M12R8-SLM24-PB-SCA

For Illustration purposes only

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Technical data

Leuze

Basic data

Series	L300

Functions

Functions	Escape release button
	Locking device with guard interlocking in acc. with EN ISO 14119 (type 4)
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
$MTTF_d$	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	Low, EN ISO 14119

Electrical data

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

Inputs

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

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)

Connection 1

Function	Connection with PLC
	Contact connection
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Cable properties

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
Side of cable entry	On right side
Release device	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-SCA, standard code
Extraction force, unlocked actuator	30 N

Technical data

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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
Differential travel	≤ 20 % 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

Electrical connection

Connection 1

Function	Connection with PLC
	Contact connection
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Pin	Pin assignment
1	A1 +24 V
2	O3
3	A2 +0 V
4	OS1
5	O4
6	I3
7	OS2
8	I4