

SAFETY LOCKING DEVICES

L100 Safety Locking Device



Safety Locking Device on a metal processing center with stopping times

The versatile in use L100 Safety Locking Device uses its locking function to prevent protective doors of machines and systems from opening. It is used for both personnel safety and for machine protection depending on requirements, with appropriate guard interlocking types (spring-force or magnet-actuated locking). It is used for guarding machines and systems with stopping times. Due to the adjustable switch-on power reduction, it is also optimally suitable for systems with very high access options and guard interlocking applications. The contact set enables safety-related integration up to category 4 in accordance with EN ISO 13849.

Typical areas of application

- Access guarding on machines with run-on dangerous movements
- Guard interlocking of protective doors in production processes where the prevention of undefined interruptions is required
- Systems with numerous access options

Important technical data, overview

Switch type	Interlock device with guard interlocking in accordance with EN 1088	
Housing material	Fiberglass-reinforced, thermo-plastic plastic, self-extinguishing	
Interlocking force	Max. 1100 N	
Contact equipment	Magnet:	1NC ⊖ + 1NO 2NC ⊖
	Actuator:	1NC ⊖
Switching principle	Creep contact	
External actuator	AC-AHxx, series, straight, angled, resilient, alignable	
Locking type	Mechanically, electro-magnetically	
Locking actuation	Spring, magnet	
Approach actuation directions	1 x above, 4 x lateral (90°)	
Connection system	Number of cable entries	3
	Type of cable entries	M20 x 1.5
Protection rating	IP 66	

Functions

Interlock device with guard interlocking in accordance with EN 1088
Integration in control circuits up to category 4 in accordance with EN ISO 13849
Mechanical guard interlocking (spring-force)
Electro-magnetic guard interlocking (magnet-force)
Switch-on power reduction, adjustable
Auxiliary unlocking (-SLM24)

Special features

- **Universal use with 5 actuator starting directions**
- **6 different "heavy duty" actuators for the most diverse installation conditions**
- **Self-centering with funnel-shaped entry opening**
- **Switch-on power reduction, adjustable**



Features



Certification requested:



IMQ is a European Commission recognized certification center

Further information

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SAFETY LOCKING DEVICES

Ordering information

L100

Included in delivery: Application information (print document)

Functions: Interlock device with guard interlocking in accordance with EN 1088, auxiliary unlocking (-SLM24, switch-on power reduction, adjustable)

L100 Safety Locking Devices

Art. no.	Article	Description	Contact equipment
63000600	L100-P3C3-M20-SLM24	Safety Locking Device, plastic, mechanically locked, magnet 24V	M:(1NC ⊖ +1NO) A:(1NC ⊖)
63000601	L100-P3C3-M20-MLM24	Safety Locking Device, plastic, electro-magnetically locked, magnet 24V	M:(1NC ⊖ +1NO) A:(1NC ⊖)
63000602	L100-P4C3-M20-SLM24	Safety Locking Device, plastic, mechanically locked, magnet 24V	M:(2NC ⊖) A:(1NC ⊖)

Actuators must be ordered separately, see page 407.

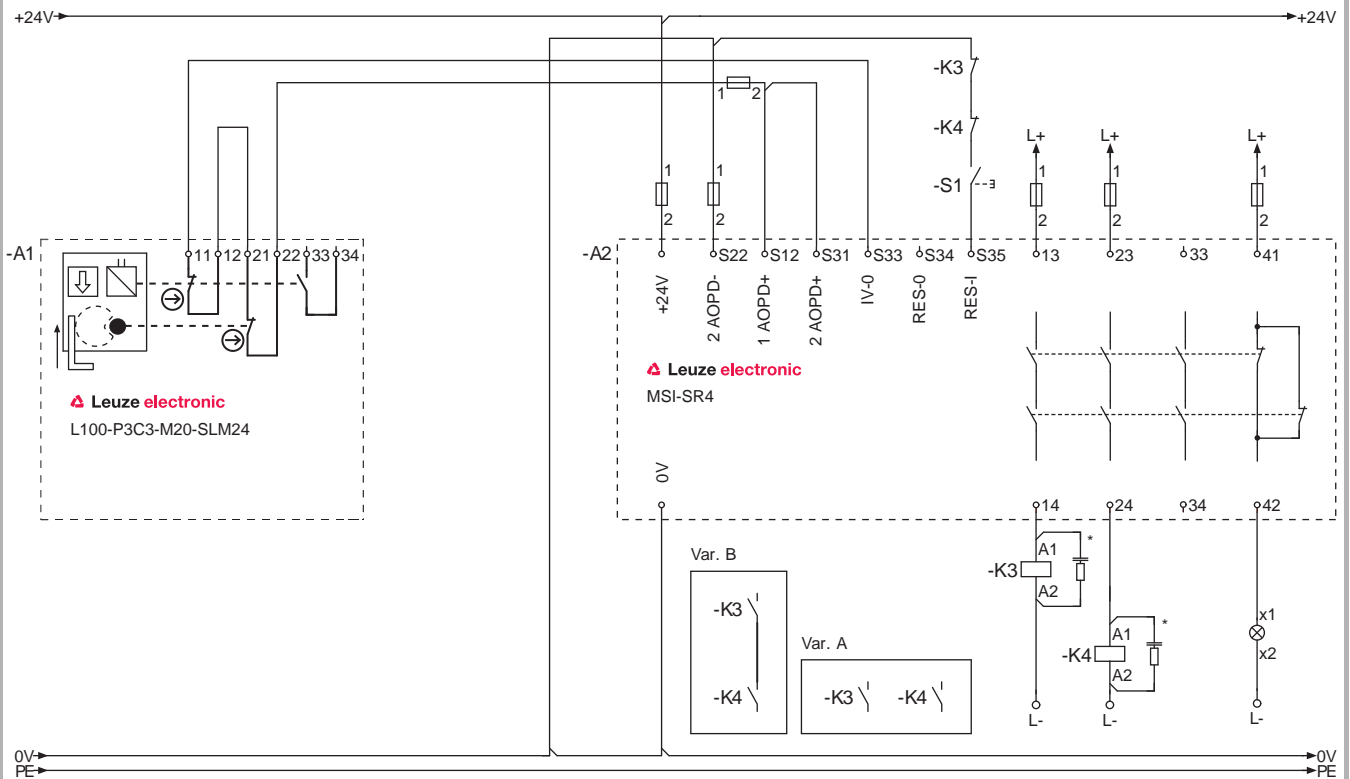
Article list for L100

Article	Description
L100	Safety Locking Device
-P	Plastic housing
3, 4	Contact set
C3	Number of cable bushings
-M20	Metric thread
-SLM24	Mechanically locked, magnet voltage, 24V
-MLM24	Electrically locked, magnet voltage, 24V

L 100

Electrical connection

L100 connection example



*) Spark extinction circuit, supply suitable spark extinction

L100 Safety Locking Device with MSI-SR4 Safety Relay

Please observe the operating instructions of the components!

SAFETY LOCKING DEVICES

Technical data

General system data			
Switch type	Interlock device with guard interlocking in accordance with EN 1088		
Service life (T_M) in accordance with EN ISO 13849-1	20 years		
Number of cycles until 10 % of the components have a failure to danger (B_{10d})	5,000,000		
Locking type	Mechanical (L100-P3C3-M20-SLM24, L100-P4C3-M20-SLM24) Electro-magnetic (L100-P3C3-M20-MLM24)		
Locking actuation	Spring (L100-P3C3-M20-SLM24, L100-P4C3-M20-SLM24) Magnet (L100-P3C3-M20-MLM24)		
Ambient temperature, operation	-25...+60°C		
Dirt levels, external, in accordance with EN 60947-1	3		
Housing material	Fiberglass-reinforced, thermo-plastic plastic, self-extinguishing		
External actuator	AC-AHxx, series, straight, angled, resilient, alignable		
Dimensions	See dimensional drawing		
Protection rating	IP 66		
Contact protection	Protective insulation O		
Approach actuation directions	1 x above, 4 x lateral (90°)		
Mechanical life time in accordance with IEC 6047-5-1	0.8x10 ⁶ actuation clearance		
Actuation frequency according to IEC 6047-5-1	Max. 600 activations an hour		
Approach speed	Max. 0.5 m/s		
Actuation force (pull-out)	30 N		
Recoil tolerance	4.5 mm		
Interlocking force	Max. 1100 N		
Contact equipment	Magnet:	1NC ⊕ + 1NO	L100-P3C3-M20-SLM24 L100-P3C3-M20-MLM24
		2NC ⊕	L100-P4C3-M20-SLM24
	Actuator:	1NC ⊕	L100-P3C3-M20-SLM24 L100-P3C3-M20-MLM24 L100-P4C3-M20-SLM24
Switching principle	Creep contact		
Contact opening	Force-fit		
Contact material	Silver alloy		
Magnet operating voltage and tolerance	24 V DC (-10 % to +25 %)		
Duty cycle	100 %		
Power consumption	Average, 20 VA		
Switch-on power limit, adjustable	4-way		
Usage category in accordance with EN 60947-5-1	AC 15: U_e / I_e : 250 V / 6 A, 400 V / 4 A, 500 V / 1 A DC 13: U_e / I_e : 24 V / 6 A, 125 V / 1.1 A, 250 V / 0.4 A		

Technical data

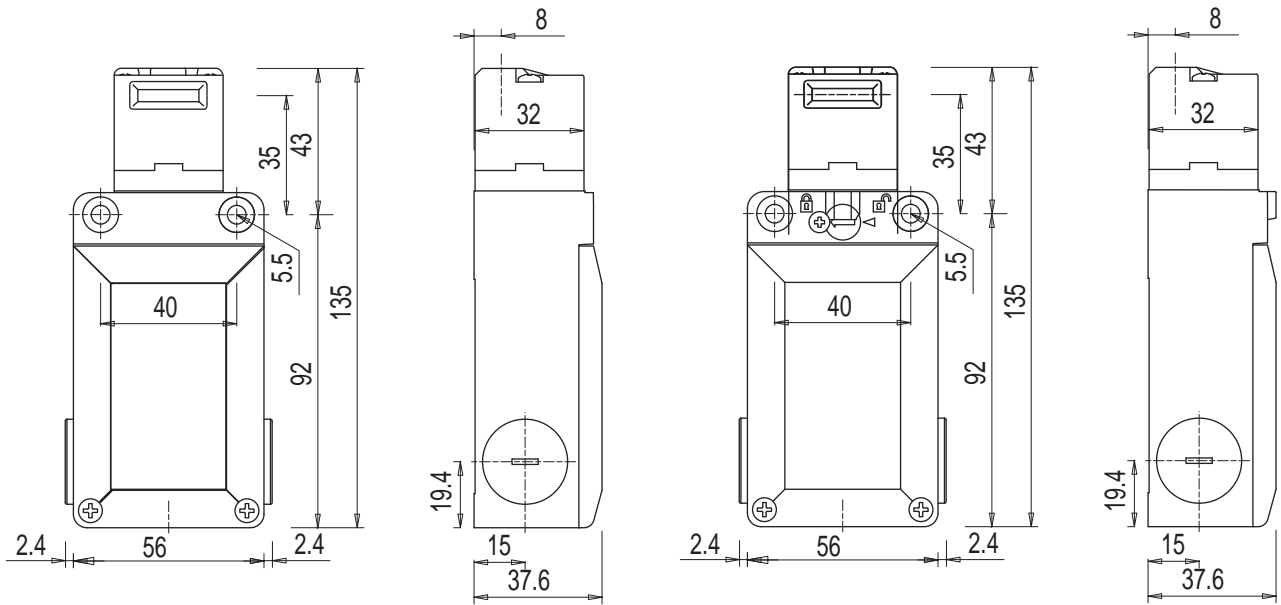
Rated insulation voltage	400 V AC	
Conventional thermal current	Max. 10 A	
Short-circuit protection in accordance with IEC60269-1	Magnet	24 V, 1.0 A, type aM
	Safety circuit	500 V, 10 A, type aM
Connection system	Number of cable entries	3
	Type of cable entries	M20 x 1.5
	Cable cross-section (wire)	1 x 0.34 mm ² to 2 x 1.5 mm ²

Please note the additional information in the connecting and operating instructions at www.leuze.com/l100.

SAFETY LOCKING DEVICES

Dimensional drawings

Safety Locking Device



Safety Locking Device L100-P3C3-M20-SLM24,
L100-P4C3-M20-SLM24

Safety Locking Device L100-P3C3-M20-MLM24

Dimensions in mm

Our 3D CAD models can be found under: www.leuze.com/3d-cad-models.

Dimensional drawings: Accessories

See accessories, S200 all actuators, page 371.

Accessories ordering information
L100 accessories

Art. no.	Article	Description	Length, design
63000720	AC-AH-S	Actuator	Straight
63000721	AC-AH-A	Actuator	Angled
63000722	AC-AH-F4	Actuator	Straight, flexible, 4 directions
63000723	AC-AH-F2J2	Actuator	Straight, flexible, 2 directions, alignable 2 directions
63000724	AC-AH-F1J2	Actuator	Straight, flexible, 1 direction, alignable 2 directions
63000725	AC-AH-F4J2-TK	Actuator	Straight, flexible, 4 directions, alignable 2 directions, rotatable head
63000843	AC-A-M20-12NPT	Adapter	M20 x 1.5 on 1/2 NPT
63000844	AC-PLP-8	Built-in plug	M12, plastic, with internal 8-pin connection cable
63000846	AC-KL-AH	KeyLock for locking the actuator introduction	

Article list for L100 accessories

Article	Description
AC	Accessories
-AHL	Actuator, Heavy Duty
-S	Straight
-A	Angled
-RM	Rubber-mounted
-F1	Flexible in 1 directions
-F2	Flexible in 2 directions
-F4	Flexible in 4 directions
J2	Alignable in 2 directions
-TK	Actuator key, turns
-PLP-8	Built-in plug, 8-pin, plastic
-KL	Locking of the actuator introduction

AC