

L10

Safety Locking Devices



© 2011

Leuze electronic GmbH + Co. KG

In der Braike 1

D-73277 Owen - Teck / Germany

Phone: +49 7021 573-0

Fax: +49 7021 573-199

<http://www.leuze.com>

info@leuze.de

1	About this document	5
1.1	Other applicable documents	5
1.2	Used symbols and signal words	6
2	Safety	7
2.1	Approved purpose and foreseeable improper operation	8
2.1.1	Proper use	8
2.1.2	Foreseeable misuse	9
2.2	Competent personnel	10
2.3	Responsibility for safety	10
2.4	Exemption of liability	11
3	Device description	12
4	Functions	17
5	Applications	18
6	Mounting	19
6.1	Adjusting the deflection head	19
6.2	Mounting the Safety Locking Device	21
6.3	Mounting the actuator	22
7	Electrical connection	24
7.1	Connecting the contact block	24
8	Setting the device into service	27
9	Testing	28
9.1	To be performed prior to the initial start-up by competent personnel	28
9.2	To be performed periodically by competent personnel	28
9.3	To be performed daily by the operating personnel	29
10	Cleaning	30
11	Disposing	31
12	Service and support	32
13	Accessories	33
13.1	Accessory dimensional drawings	34
14	Technical data	37

15 EC Declaration of Conformity 40

1 About this document

1.1 Other applicable documents

The information on the L10 Safety Locking Device is divided into two documents. Document "L10 Application information" contains only the most important safety notices.

- ✎ For the safe implementation, testing and operation, download document L10 Safe implementation and operation from <http://www.leuze.com/l10/> or request it from service.schuetzen@leuze.de or tel. +49 8141 5350-111.

Table 1.1: Documents for the L10 Safety Locking Device

Purpose and target group	Title	Source
Detailed information for all users	L10 Safe implementation and operation (this document)	On the Internet, download from: http://www.leuze.com/l10/
Basic information for technicians and operating company	L10 Application information	Print document part no. 607242 included in the delivery contents of the product

1.2 Used symbols and signal words

Table 1.2: Warning symbols and signal words

	Symbol for dangers
NOTICE	Signal word for property damage Indicates dangers that may result in property damage if the measures for danger avoidance are not followed.
CAUTION	Signal word for minor injury Indicates dangers that may result in minor injury if the measures for danger avoidance are not followed.
WARNING	Signal word for severe injury Indicates dangers that may result in severe or fatal injury if the measures for danger avoidance are not followed.
DANGER	Signal word for life-threatening danger Indicates dangers that will result in severe or fatal injury if the measures for danger avoidance are not followed.

Table 1.3: Other symbols

	Symbol for tips Text passages with this symbol provide you with further information.
	Symbols for action steps Text passages with this symbol instruct you to perform actions.
xxx	Placeholder in the product description for all variants

2 Safety

Before using the Safety Locking Device, a risk evaluation must be performed according to valid standards (e.g. EN ISO 12100-1, EN ISO 13849-1, EN ISO 14121). For mounting, operating and testing, document L10 Safe implementation and operation, application information as well as all applicable national and international standards, regulations, rules and directives must be observed. Observe and print out relevant and supplied documents and distribute to the affected personnel.

The following standards apply for the risk evaluation at the protective device prior to using the Safety Locking Device:

- EN ISO 14121, Safety of machinery, risk evaluation
- EN ISO 12100-1, Safety of machinery
- EN ISO 13849-1, Safety-related parts of control systems

The realizable category of the integration in control circuits according to EN ISO 13849-1 is dependent on the used contact block and wiring.

In particular, the following national and international legal regulations apply for the start-up, technical inspections and work with Safety Locking Devices:

- Machinery directive 2006/42/EC
- Low voltage directive 2006/95/EC
- Use of work equipment directive 89/655 EEC
- Safety regulations
- Accident-prevention regulations and safety rules
- Ordinance on Industrial Safety and Health and Labor Protection Act
- Device Safety Act



For safety-related information you may also contact the local authorities (e.g., industrial inspectorate, employer's liability insurance association, labor inspectorate, labor protection and health authority).

2.1 Approved purpose and foreseeable improper operation

2.1.1 Proper use

- The Safety Locking Device must only be used after it has been selected in accordance with the respectively applicable instructions and relevant standards, rules and regulations regarding labor protection and safety at work, and after it has been installed on the machine, connected, commissioned, and checked by a **competent person**.
- When selecting the Safety Locking Device it must be ensured that its safety-related capability meets or exceeds the required performance level PL, ascertained in the risk assessment.
- It must be in perfect condition and inspected regularly.
- The switching process must only be triggered by an actuator approved for this Safety Locking Device that is connected to the moveable guard in a non-detachable and tamperproof manner.



WARNING

A running machine can cause severe injuries!

↳ Make certain that, during all conversions, maintenance work and inspections, the system is securely shut down and protected against being restarted again.

L10 Safety Locking Devices must be connected in such a way that a dangerous state can only be activated while the protective device is closed and so that the dangerous state has ended before the protective device can be opened. They must not be used if the point of operation can be accessed during the lag time before the dangerous state has ended.

Connection conditions:

- dangerous state can be activated only with closed protective device and locked locking device
- protective device cannot be opened while locking device is locked
- manual unlocking of the locking device while the machine is running triggers a stop command; the dangerous state is ended before the protective device can be opened

Furthermore, the L10 Safety Locking Device must **not** be used under the following conditions:

- lag time of the dangerous state is greater than the minimum time delay of the manual actuator release
- high concentration of dust particles in the surrounding area
- rapidly changing ambient temperature (leads to condensation)
- in the event of strong physical shocks
- in explosive or easily flammable atmospheres
- the mounting locations are not sufficiently stable
- the safety of multiple persons is dependent on the function of this Safety Locking Device (e.g. nuclear power plants, trains, aircraft, motor vehicles, incinerators, medical devices)

Handling the Safety Locking Device:

- ↯ Observe the permissible environmental conditions for storage and operation (see chapter 14).
- ↯ Immediately replace damaged Safety Locking Devices according to these instructions.
- ↯ Use cable gland, insulation materials and connecting wires of the appropriate protection rating.
- ↯ Protect the Safety Locking Device from penetrating foreign bodies (e.g. shavings, sand and blasting agent).
- ↯ Before performing painting work, cover the actuation slot, knurled nut or lock and name plate.
- ↯ Immediately clean any contamination from the Safety Locking Device that impacts function according to these instructions.
- ↯ Make no structural changes to the Safety Locking Device.
- ↯ The Safety Locking Device must be exchanged after a maximum of 20 years.

2.1.2 Foreseeable misuse

Any use other than that defined under the "approved purpose" or which goes beyond that use of the Safety Locking Device is considered improper use!

e.g.

- Using without non-detachably mounted actuator
- looping into the safety circuit parts that are not relevant to safety
- using the locking device as a limit stop
- giving the keys to unauthorized persons

2.2 Competent personnel

Prerequisites for competent personnel:

- suitable technical training
- knows the rules and regulations for labor protection, safety at work and safety technology and can assess the safety of the machine
- knows the instructions for the Safety Locking Device and the machine
- was instructed by the responsible individuals on the mounting and operation of the machine and of the Safety Locking Device

2.3 Responsibility for safety

Manufacturer and operating company must ensure that the machine and implemented Safety Locking Device function properly and that all affected persons are adequately informed and trained.

The type and content of all imparted information must not lead to unsafe actions by users.

If Safety Locking Devices feature key operation, the keys may only be given to authorized persons who have been instructed on the interplay of system/machine and the Safety Locking Device.

The manufacturer of the machine is responsible for:

- safe machine construction
- safe implementation of the Safety Locking Device
- imparting all relevant information to the operating company
- adhering to all regulations and directives for the safe starting-up of the machine

The operating company is responsible for:

- instructing the operating personnel
- maintaining the safe operation of the machine
- adhering to all regulations and directives for labor protection and safety at work
- regular testing by competent personnel

2.4 Exemption of liability

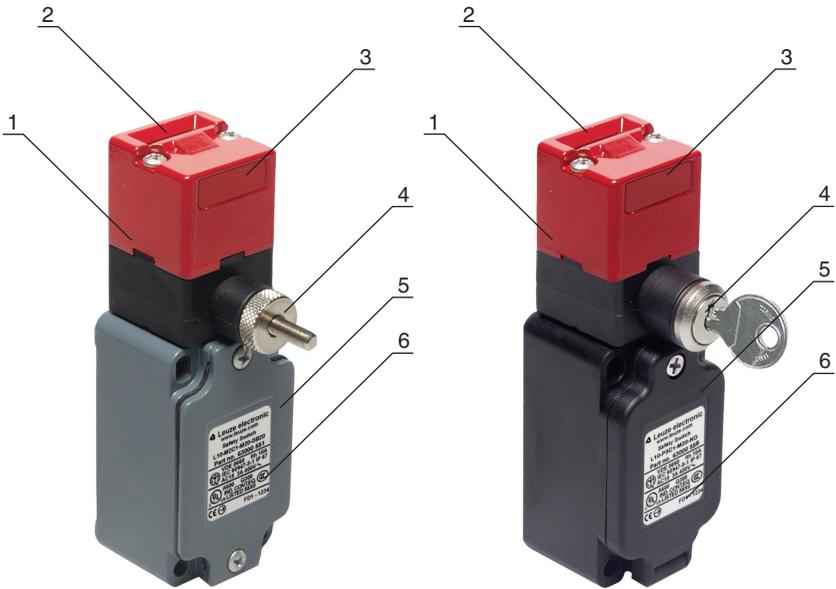
Leuze electronic GmbH + Co. KG is not liable in the following cases:

- Safety Locking Device is not used as intended
- safety notices are not adhered to
- mounting and electrical connection are not properly performed
- the manual delay time is not allowed to elapse (e.g. due to improper operation, use of auxiliary equipment or tampering)
- reasonably foreseeable misuse is not taken into account

3 Device description

The Safety Locking Device of the L10 series is an electro-mechanical switching device in a housing made of metal or glass-fiber-reinforced and non-combustible plastic; the device satisfies protection rating IP 67. By means of the funnel-shaped insertion opening, the actuator self-centers, even if the door is slightly misadjusted. The locking/unlocking delay is manually adjusted by means of either a knurled nut or a key (2 pieces included with delivery). A possible time delay must be taken into account separately in this case.

Various mechanical and temporal requirements can be realized inexpensively with the available models.



- 1 Deflection head
- 2 Insertion opening for actuator
- 3 Dust cover
- 4 Knurled nut or key for locking/unlocking, delay (see chapter 14)
- 5 Housing cover
- 6 Name plate (connection data, production code and year of manufacture)

Table 3.1: L10 Safety Locking Devices

Article	Part No.	Description
L10-P2C1-M20-SB20	63000550	Normal duty, plastic, slow action contacts (2NC), manual time delay up to 20 s, operational distance approx. 10 mm
L10-P3C1-M20-SB20	63000552	Normal duty, plastic, slow action contacts (2NC+1NO), manual time delay up to 20 s, operational distance approx. 10 mm
L10-M2C1-M20-SB20	63000551	Heavy duty, metal, slow action contacts (2NC), manual time delay up to 20 s, operational distance approx. 10 mm
L10-M3C1-M20-SB20	63000553	Heavy duty, metal, slow action contacts (2NC+1NO), manual time delay up to 20 s, operational distance approx. 10 mm
L10-P3C1-M20-LB10	63000554	Normal duty, plastic, slow action contacts (2NC+1NO), manual time delay up to 10 s, operational distance approx. 24 mm
L10-P3C1-M20-LB20	63000555	Normal duty, plastic, slow action contacts (2NC+1NO), manual time delay up to 20 s, operational distance approx. 24 mm
L10-P3C1-M20-KO	63000558	Normal duty, plastic, slow action contacts (2NC+1NO), manual time delay via key operation, operational distance approx. 12 mm
L10-M3C1-M20-KO	63000559	Heavy duty, metal, slow action contacts (2NC+1NO), manual time delay via key operation, operational distance approx. 12 mm

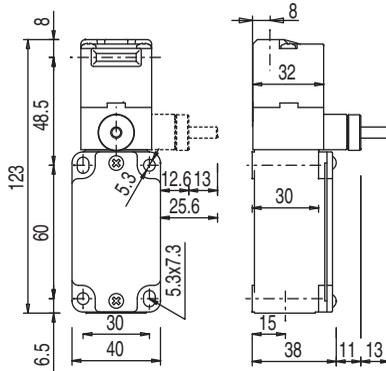


Figure 3.1: Dimensions of L10-P2C1-M20-SB20 and L10-P3C1-M20-SB20 in mm

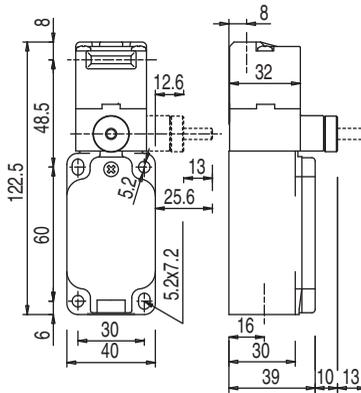


Figure 3.2: Dimensions of L10-M2C1-M20-SB20 and L10-M3C1-M20-SB20 in mm

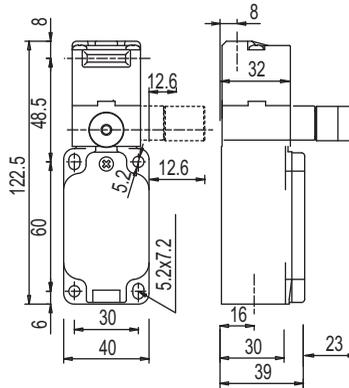


Figure 3.3: Dimensions of L10-P3C1-M20-LB10 and L10-P3C1-M20-LB20 in mm

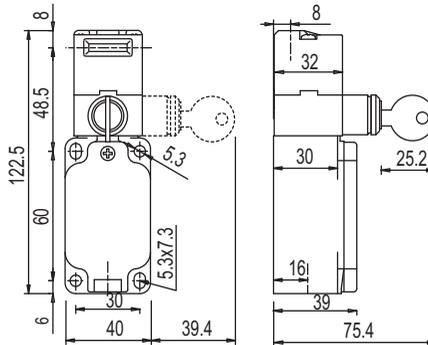


Figure 3.4: Dimensions of L10-P3C1-M20-KO in mm

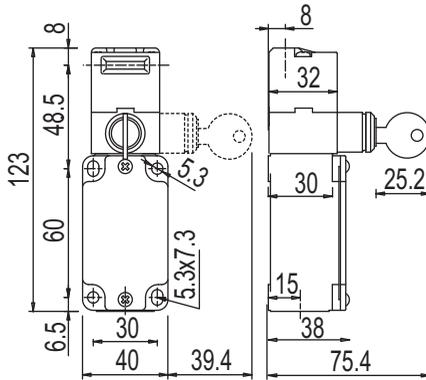


Figure 3.5: Dimensions of L10-M3C1-M20-KO in mm

The actuation directions of the deflection head and knurled nut or lock can be adjusted in 90° increments. By means of 5 possible approach directions and a selection of different actuators, the Safety Locking Device can be mounted in any position.

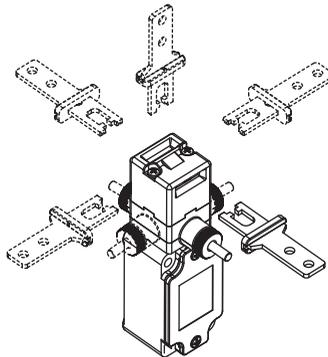


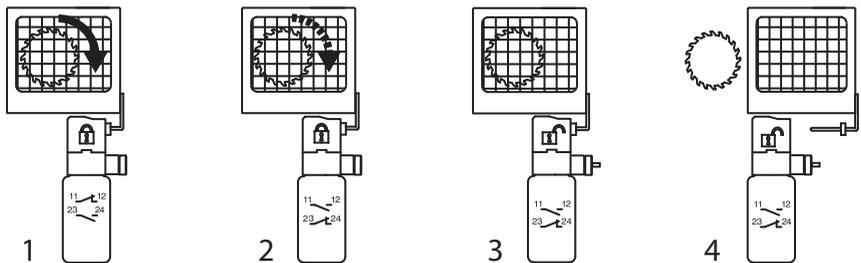
Figure 3.6: Approach directions

4 Functions

The positive-opening contacts close if:

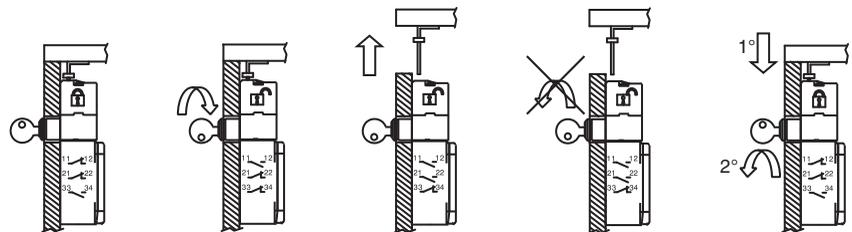
- the actuator is moved in
- the locking device is locked

The dangerous state can only be activated via the safety switching device while the safety contacts are closed. During the first clockwise turns of the knurled nut or by turning the key by 180°, the contacts are opened and a stop signal is transmitted to the downstream safety switching device. The actuator is not released until the knurled nut has been turned to the right limit stop and the locking device has unlocked. During this manual time delay (see chapter 14), the dangerous state must be stopped in order for the protective device to be opened safely. The Safety Locking Device can only be locked if the actuator is moved in.



- 1 Machine is running, locking device is locked
- 2 Machine coasts as the knurled nut is turned
- 3 Machine has stopped, locking device is unlocked
- 4 Protective device can be opened

Figure 4.1: Example for the manual delay by turning the knurled nut



- 1 Machine is running, locking device is locked
- 2 The machine stopped after the key was turned by 180°, locking device is unlocked
- 3 Protective device can be opened

Figure 4.2: Example for the manual delay by turning the key by 180°

When using locking devices with key operation, it is essential to comply with the necessary delay times.

5 Applications



The manual locking/unlocking function makes the L10 Safety Locking Device suitable for systems with protective devices that are used only occasionally or that are located relatively far away on which no magnet activation is provided.

The Safety Locking Device is suitable for e.g. the following protective devices:

- turning or swiveling moveable guards
- laterally moveable protective gratings or sliding gates
- seldom used maintenance doors or covers

6 Mounting

⚠ WARNING

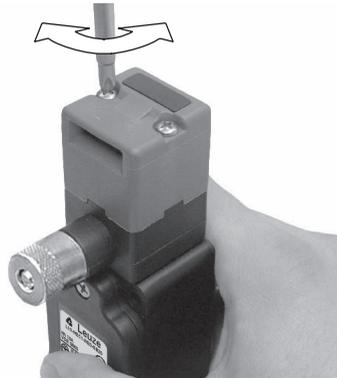
Severe accidents may result if the Safety Locking Device is not mounted properly!

The protective function of the Safety Locking Device is only ensured if used in the intended area of application and if it is mounted professionally.

- ↪ Mounting may only be performed by competent personnel.
- ↪ Observe standards, regulations and these instructions.
- ↪ Protect the housing and deflection head from materials penetrating the enclosure (environmental conditions (see chapter 14)).
- ↪ Test to ensure proper function.

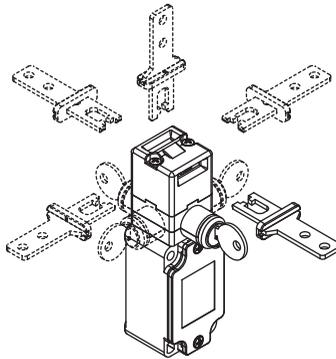
6.1 Adjusting the deflection head

- ↪ Loosen the 2 screws on the deflection head.



- ↪ If necessary, loosen the 4 screws on the locking/unlocking unit.

- ↪ Turn the deflection head and the locking/unlocking unit in the desired directions.



- ↪ If necessary, retighten the 4 screws on the locking/unlocking unit with 0.8–1.2Nm.
- ↪ Replace the 2 screws on the deflection head with the supplied safety screws and tighten with 0.8–1.2Nm.
- ↪ Close unused opening with the dust cover.

6.2 Mounting the Safety Locking Device

Prerequisites for mounting:

- deflection head has been set
 - fully assembled
 - the 2 screws on the deflection head have been replaced with the supplied safety screws
- ↪ Select the mounting location so that the following conditions are satisfied:
- Safety Locking Device and actuator can be well matched to one another and permanently mounted
 - Knurled nut or lock is easily accessible to the operating personnel
- ↪ Position washers and screw down Safety Locking Device with 2–3Nm.



6.3 Mounting the actuator

NOTICE

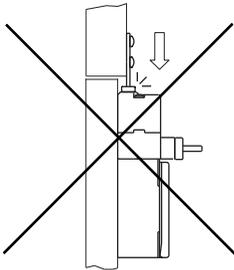
The Safety Locking Device may be damaged if mounted improperly!

- ↪ Use separate mechanical limit stop for the moving part of the protective device.
- ↪ Align actuator so that it does not hit or rub against the edges of the insertion opening.

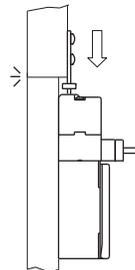
Prerequisites for proper function:

- actuator is not deformed or damaged
 - actuator is appropriate for the Safety Locking Device
- Proper function is ensured only with original accessories (see chapter 13).

Wrong

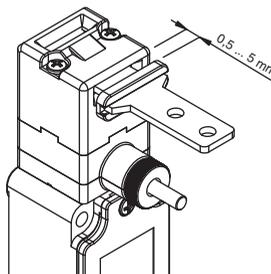


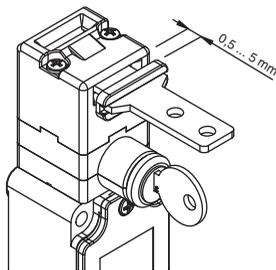
Correct



- ↪ Align actuator.

Play for the actuator in the closed state: 0.5–5 mm.





- ↗ Secure actuator with rivets or tamperproof screws so that it cannot be detached.



7 Electrical connection

 **WARNING**

Serious accidents may result if the electrical connection is faulty!

⚡ Electrical connection may only be performed by competent personnel.

7.1 Connecting the contact block

Prerequisites:

- temperature stability of the cable insulation material must be greater than the maximum temperature of the housing (see chapter 14)
- cable gland with appropriate protection rating
- maximum current load is observed (see chapter 14)

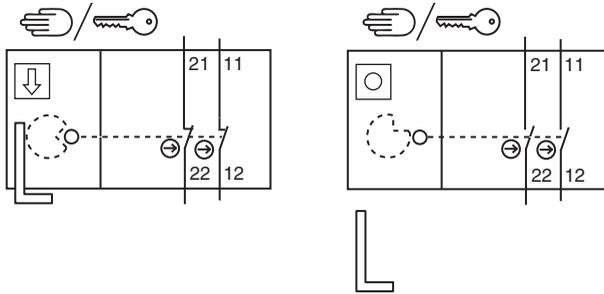


Figure 7.1: Contact block 2NC (L10-P2C1-M20-SB20, L10-M2C1-M20-SB20)

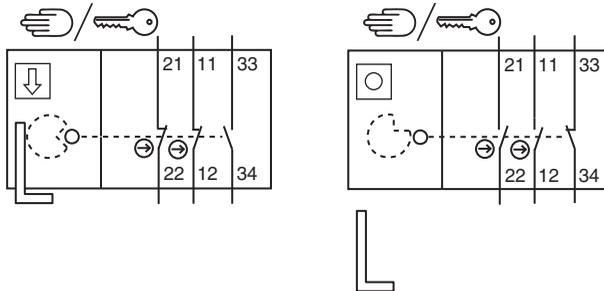


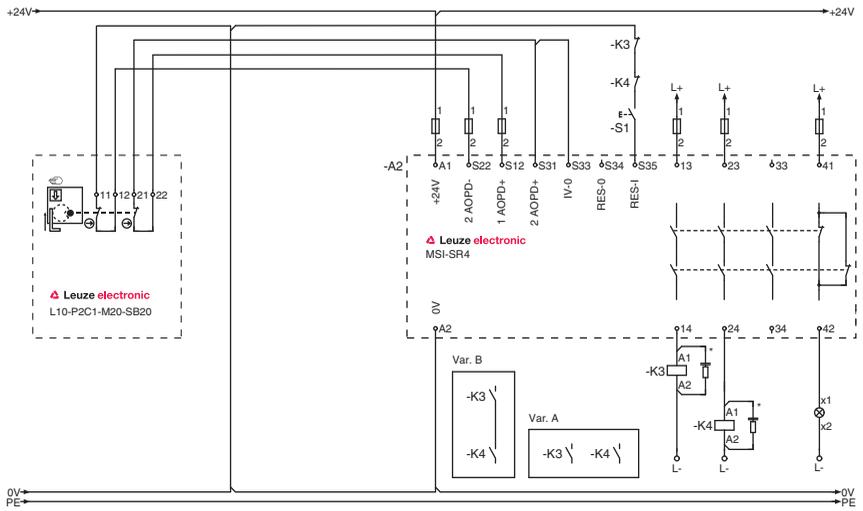
Figure 7.2: Contact block 2NC + 1NO (L10-P3xxx, L10-M3xxx)

⚠ DANGER

Risk of death by electric shock!

↪ Interrupt the voltage supply to the Safety Locking Device.

- ↪ Unscrew the housing cover.
- ↪ Connect the contact block according to the application-specific circuit diagram.



* Spark extinction circuit, suitable spark extinction provided

Figure 7.3: Connection example L10-P2C1-M20-SB20

↪ Tighten cable terminal screws with 0.6–0.8Nm.



↪ Tighten the housing cover with 0.7–0.9Nm.



8 Setting the device into service



WARNING

Severe accidents may result if the Safety Locking Device is not used properly!

↳ Before unlocking the Safety Locking Device and opening the protective device, wait until the dangerous state has ended.

Prerequisites:

- Safety Locking Device is mounted and connected according to these instructions
 - operating personnel have been trained in the correct use
- ↳ Test the function of the Safety Locking Device (see chapter 9).

The Safety Locking Device is then ready for use.

9 Testing

L10 Safety Locking Devices are maintenance free. Nevertheless, they must be replaced after maximum 500,000 switching cycles.

- ↺ Always replace the entire Safety Locking Device including actuator.
- ↺ For the testing intervals, observe nationally applicable regulations.
- ↺ Document all tests in a comprehensible manner.

9.1 To be performed prior to the initial start-up by competent personnel

- ↺ Check whether the Safety Locking Device is operated according to its specified environmental conditions (see chapter 14).
- ↺ Test to ensure proper mechanical and electrical function (see chapter 9.2).

9.2 To be performed periodically by competent personnel

Mechanical function

- ↺ Stop the dangerous state and open the protective device.
- ↺ Check that the components are securely fastened.
- ↺ Test the cable entry for leaks.
- ↺ Check the Safety Locking Device, knurled nut and actuator for damage, deposits, deformation and wear.
- ↺ Test the locking/unlocking function after actuating the knurled nut or the lock.
- ↺ Test several times whether the actuator can be easily moved into the Safety Locking Device.

Electrical function



WARNING

Severe accidents may result if tests are not performed properly!

- ↺ Make certain that there are no persons in the danger zone.
- ↺ Stop the dangerous state and open the protective device.
- ↺ Make certain that the machine cannot be started while the protective device is open.
- ↺ Close the protective device, turn the knurled nut to the left limit stop or turn the key by 180° and start the machine.
- ↺ Make certain that the protective device cannot be opened.

- ↺ Test whether the machine stops as soon as the knurled nut or the lock is turned clockwise by 180°.
- ↺ Make certain that the protective device does not open until the knurled nut or the lock has been turned to the right limit stop by 180°.
- ↺ Make certain that the dangerous state ends before the protective device can be opened.

9.3 To be performed daily by the operating personnel

**WARNING**

Severe accidents may result if tests are not performed properly!

- ↺ Make certain that there are no persons in the danger zone.
- ↺ Stop the dangerous state and open the protective device.
- ↺ Check the Safety Locking Device and actuator for damage or tampering.
- ↺ Make certain that the machine cannot be started while the protective device is open.
- ↺ Close the protective device and start the machine.
- ↺ Test whether the dangerous state ends before the protective device can be opened.

10 Cleaning

There must be no soiling (e.g. shavings and dust) present, especially in the deflection head of the Safety Locking Device.

Prerequisites for cleaning:

- protective device is opened and machine is switched off
 - voltage supply for the Safety Locking Device is interrupted
- ↪ Periodically clean the Safety Locking Device while the protective device is opened (e.g. with vacuum cleaner).

11 Disposing

- ↳ The nationally valid regulations for electro-mechanical components are to be observed when disposing.

12 Service and support

Telephone number for 24-hour standby service:
+49 (0) 7021/ 573-0

Service hotline:
+49 (0) 8141/ 5350-111
Monday to Thursday, 8.00 a.m. to 5.00 p.m. (UTC+1)
Friday, 8.00 a.m. to 16.00 p.m. (UTC +1)

E-mail:
service.protect@leuze.de Return address for repairs: Service Center
Leuze electronic GmbH + Co. KG
In der Braike 1
D-73277 Owen - Teck / Germany



Leuze electronic offers a regular safety inspection by a competent person.

13 Accessories

Table 13.1: Actuators of the AC-AH series for the L10 Safety Locking Device

Article	Part No.	Description
AC-AH-S	63000720	Straight
AC-AH-A	63000721	Angled
AC-AH-F4	63000722	Straight, flexible, 4 directions
AC-AH-F2J2	63000723	Straight, flexible, 2 directions, alignable 2 directions
AC-AH-F1J2	63000724	Straight, flexible, 1 direction, alignable 2 directions
AC-AH-F4J2-TK	63000725	Straight, flexible, 4 directions, alignable 2 directions, rotatable head

Table 13.2: Accessories for the L10 Safety Locking Device

Article	Part No.	Description
AC-A-M20-12NPT	63000843	Adapter, M20 x 1.5 on 1/2 NPT
AC-PLP-8	63000844	Built-in plug, M12, plastic, with internal 8-pin connection cable
AC-PLM-8	63000845	Built-in plug, M12, metal, with internal 8-pin connection cable
AC-KL-AH	63000846	Actuator interlock, for locking the actuator introduction
AC-Key-SLO	63000848	Keys, alternatively, 2 pieces
CB-M12-5000E-5GF	678055	PUR, 5-pin, 5 m, shielded, M12 coupling, straight, prefabricated on one end
CB-M12-10000E-5GF	678056	PUR, 5-pin, 10 m, shielded, M12 coupling, straight, prefabricated on one end
CB-M12-15000E-5GF	678057	PUR, 5-pin, 15 m, shielded, M12 coupling, straight, prefabricated on one end
CB-M12-25000E-5GF	678058	PUR, 5-pin, 25 m, shielded, M12 coupling, straight, prefabricated on one end
CB-M12-5000E-8GF	678060	PUR, 8-pin, 5 m, shielded, M12 coupling, straight, prefabricated on one end

Article	Part No.	Description
CB-M12-10000E-8GF	678061	PUR, 8-pin, 10 m, shielded, M12 coupling, straight, prefabricated on one end
CB-M12-15000E-8GF	678062	PUR, 8-pin, 15 m, shielded, M12 coupling, straight, prefabricated on one end
CB-M12-25000E-8GF	678063	PUR, 8-pin, 25 m, shielded, M12 coupling, straight, prefabricated on one end

13.1 Accessory dimensional drawings

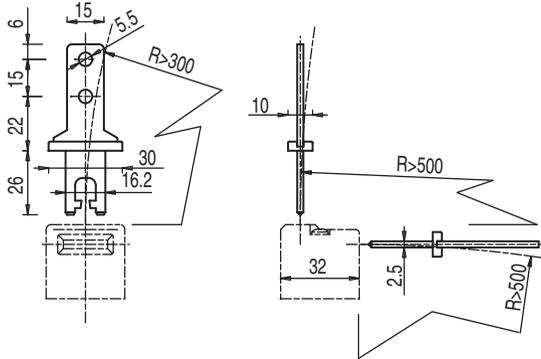


Figure 13.1: AC-AH-S actuator

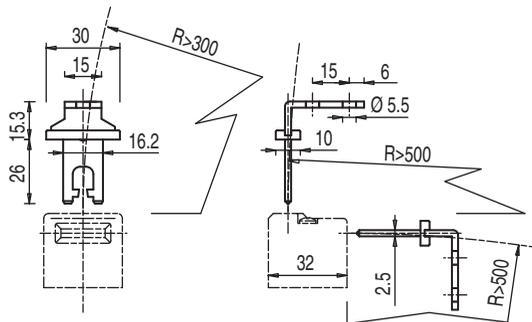


Figure 13.2: AC-AH-A actuator

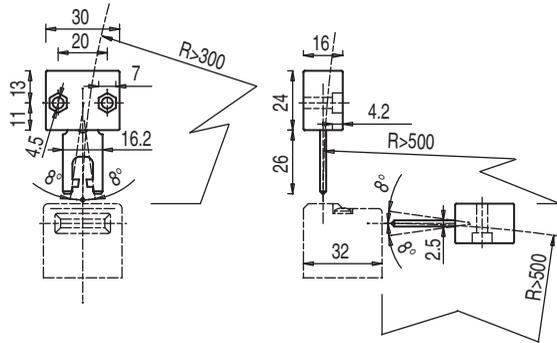


Figure 13.3: AC-AH-F4 actuator

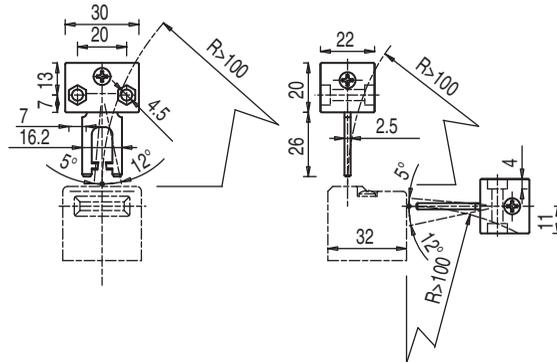


Figure 13.4: AC-AH-F2J2 actuator

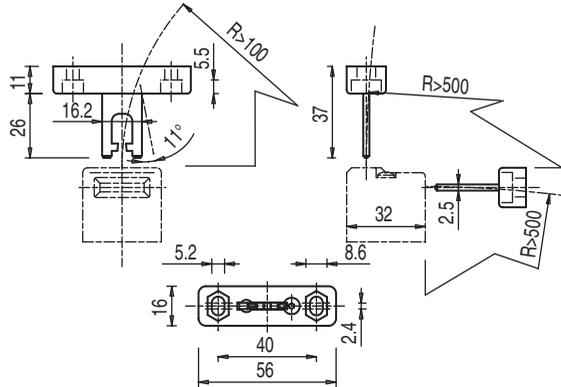


Figure 13.5: AC-AH-F1J2 actuator

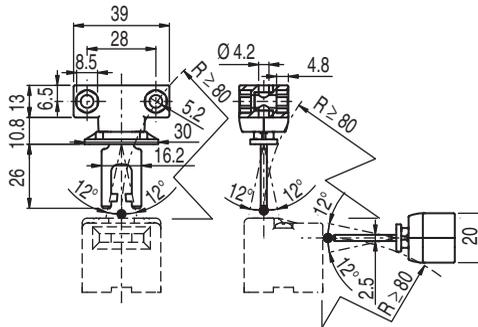


Figure 13.6: AC-AH-F4J2-TK actuator

14 Technical data

Table 14.1: General

Switch type	Interlock device with locking according to EN 1088
Actuator, external	AC-AHxx series: straight, angled, resilient, alignable
Lock type	mechanical
Lock actuation	mechanical, manual unlocking of the knurled nut or key
Approach actuation directions	1 x above, 4 x side (90°)
Approach speed	min. 1 mm/s, max. 0.5m/s
Actuation force (pull-out)	L10-xxx-SB20, L10-xxx-LB10, L10-xxx-LB20: 10N L10-xxx-KO: 30N
Actuation path, min. with forced separation	L10-P2C1-M20-SB20: 10 turns L10-M2C1-M20-SB20: 10 turns L10-P3C1-M20-SB20: 7 turns L10-M3C1-M20-SB20: 7 turns L10-P3C1-M20-LB20: 7 turns L10-P3C1-M20-LB10: 3.5 turns L10-xxx-KO: 95°
Mechanical life time in accordance with IEC 60947-5-1	0.5 x 10 ⁶ switching cycles
Actuation frequency according to IEC 60947-5-1	max. 360 per hour
Service life (T _M) in accordance with EN ISO 13849-1	20 years

Number of cycles until the dangerous failure (B10d) in accordance with EN 61810-2	2,000,000
Usage category according to EN 60947-5-1	AC 15 (Ue / Ie): 250 V / 6A 400 V / 4A 500 V / 1A DC 13 (Ue / Ie): 24 V / 6A 125 V / 1.1 A 250 V / 0.4A
Maximum load when using 5-pin cables: Maximum load when using 8-pin cables:	24 V / 4 A(see chapter 13) 24 V / 2 A(see chapter 13)
Dimensions (dimensional drawings)	see chapter 3

Table 14.2: Safety

Protection rating	IP 67
Contact protection	L10-Pxxx: protective insulation O L10-Mxxx: grounding
Recoil tolerance	4.5mm
Interlocking force	max. 1000N
Manual delayed actuator release	approx. 20 seconds
Contact allocation	L10-P2xxx: 2NC L10-M2xxx: 2NC L10-P3xxx: 2NC + 1NO L10-M3xxx: 2NC + 1NO
Contact material	silver alloy
Switching principle	slow-action contact
Opening of contact	positive-forced

Rated insulation voltage	500VAC, 600VDC
Conventional thermal current	max. 10A
Short-circuit protection according to IEC 60269-1	10A, 500V, type aM

Table 14.3: Housing

Housing material	L10-Pxxx: fiberglass-reinforced, thermoplastic plastic, self-extinguishing L10-Mxxx: metal
------------------	---

Table 14.4: Connection

Number of cable entries	1
Type of cable entry	M20 x 1.5
Conductor cross-section (stranded)	1 x 0.5mm ² to 2 x 2.5mm ²

Table 14.5: Environment

Temperature range, operation	-25 ... +80°C
Degree of contamination, external, according to EN 60947-1	3



These tables do not apply in combination with additional M12 plug or connecting cable except where these components are explicitly mentioned.

15 EC Declaration of Conformity

the sensor people

EG-KONFORMITÄTS-ERKLÄRUNG	EC DECLARATION OF CONFORMITY	DECLARATION CE DE CONFORMITE
Der Hersteller	The Manufacturer	Le constructeur
<p>Leuze electronic GmbH + Co. KG In der Braike 1, PO Box 1111 73277 Owen, Germany</p>		
<p>erklärt, dass die nachfolgend aufgeführten Produkte den einschlägigen Anforderungen der genannten EG-Richtlinien und Normen entsprechen.</p>	<p>declares that the following listed products fulfil the relevant provisions of the mentioned EC Directives and standards.</p>	<p>déclare que les produits identifiés suivants sont conformes aux directives CE et normes mentionnées.</p>
<p>Produktbeschreibung:</p> <p>Sicherheits-Schalter S20, S200, S300, S400 Sicherheits-Zuhaltung L10, L100, L200 NOT-HALT-Befehlsgerät ERS200 Seriennummer siehe Typschild</p>	<p>Description of product:</p> <p>Safety Switch S20, S200, S300, S400 Safety Locking Device L10, L100, L200 E-STOP command device ERS200 Part No. see name plates</p>	<p>Description de produit:</p> <p>Interrupteur de sécurité S20, S200, S300, S400 Interverrouillage de sécurité L10, L100, L200 Appareil de commande d'ARRÊT D'URGENCE ERS200 Art. n° voir plaques signalétiques</p>
<p>Angewandte EG-Richtlinie(n):</p> <p>2006/42/EG 2004/108/EG 2006/95/EG</p>	<p>Applied EC Directive(s):</p> <p>2006/42/EC 2004/108/EC 2006/95/EC</p>	<p>Directive(s) CE appliquées:</p> <p>2006/42/CE 2004/108/CE 2006/95/CE</p>
<p>Angewandte Normen:</p>	<p>Applied standards:</p> <p>EN 60947-5-1; IEC 60947-5-1</p>	<p>Normes appliquées:</p>
<p>Benannte Stelle / Baumusterprüfbescheinigung:</p> <p>IMQ S.p.A. Istituto Italiano Del Marchio Di Qualità Via Quintiliano 43 I-20138 Milano</p>	<p>Notified Body / Certificate of Type Examination:</p> <p>CAO2.03747 (S20); CAO2.04212 (L200); CAO2.03756 (S400); CAO2.03750 (L10-P)</p>	<p>Organisme notifié / Attestation d'examen CE de type:</p> <p>CAO2.03748 (L100); CAO2.03749 (S200, S300); CAO2.03749 (ERS200, L10-M);</p>
<p>Bevollmächtigter für die Zusammenstellung der technischen Unterlagen:</p> <p>Robert Sammer; Leuze electronic GmbH + Co. KG, business unit safety systems Leibigstr. 4; 82256 Fuerstfeldbruck; Germany</p>	<p>Authorized person to compile the technical file:</p>	<p>Personne autorisée à constituer le dossier technique:</p>

Owen, *06.05.10* Datum / Date / Date  Dr. Harald Grubel, Geschäftsführer / Director / Directeur

Leuze electronic GmbH + Co. KG
 In der Braike 1
 D-73277 Owen
 Telefon +49 (0) 7021 973-0
 Telefax +49 (0) 7021 973-199
 info@leuze.de
 www.leuze.com
 LEO-Z0M-149-01-F0

Leuze electronic GmbH + Co. KG, KG, Sitz: Owen, Registergericht Stuttgart, HRA 250712
 Periodisch haltende Gesellschaft/Leuze electronic Geschäftsministerium GmbH,
 Sitz: Owen, Registergericht Stuttgart, HRB 230550
 Geschäftsführer: Dr. Harald Grubel (Vorstandler), Karsten Just
 USt-IdNr. DE 146912021 | Lizenznummer: 2004202
 Es gelten ausschließlich unsere aktuellen Verkaufs- und Lieferbedingungen
 Only our current Terms and Conditions of Sale and Delivery shall apply

Nr. 609340-201005

You can download this EC Declaration of Conformity as a PDF from:
<http://www.leuze.com/110/>