

EUT: LSW400

FCC ID: Q3ILSW FCC Title 47 CFR Part 15

Date of issue: 2017-03-29

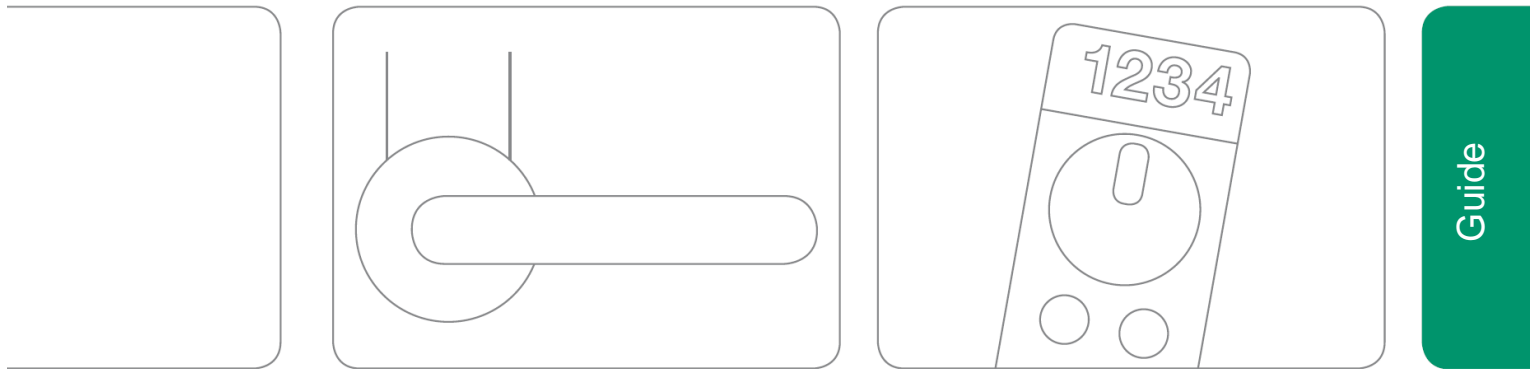
**Annex acc. to FCC Title 47 CFR Part 15
relating to
Schulte-Schlagbaum AG
LSW400**

Annex no. 5 User Manual Functional Description

**Title 47 - Telecommunication
Part 15 - Radio Frequency Devices
Subpart C – Intentional Radiators
ANSI C63.4-2014
ANSI C63.10-2013**



Deutsche
Akkreditierungsstelle
D-PL-12053-01-00



SAFE-O-TRONIC® access

Door and Furniture Locking Systems

Furniture Locking Systems
SAFE-O-TRONIC® access **LSW 200, 300, 400**
Guide

Information about this guide

© Copyright 2017 by Schulte-Schlagbaum AG
Nevigeser Straße 100-110
42553 Velbert, Germany
Phone : +49 (0)2051 2086-0
<http://www.sag-schlagbaum.com>

Edition: 20170602
Version: 1.3
Document number: **LSW_6-703-2 33S1 3**

This edition renders invalid all previous editions.
Information in this document can be changed without prior announcement.

Dissemination and duplication of this document, and use and disclosure of its contents, are prohibited unless expressly permitted. Violations will incur compensation for damage. All rights created by patent grant or registration of a utility model or design are reserved.

The information in this document has been compiled in good faith and to the best of our knowledge. Schulte-Schlagbaum AG extends no guarantee for the correctness or completeness of information in this document. In particular, Schulte-Schlagbaum AG cannot be held liable for consequential damage due to erroneous or incomplete information. Mistakes can never be prevented entirely despite all the effort taken, and so we appreciate when mistakes are pointed out to us.

SAFE-O-TRONIC® is a registered trademark of Schulte-Schlagbaum AG.

Safety instructions and warnings

- This guide describes commissioning and operation of a SAFE-O-TRONIC® access LSW200, LSW300 and LSW400.
- The device may only be used for the purpose intended by the manufacturer.
- This guide must be kept in an easily accessible location.
- Unauthorised modifications and the use of spare parts and auxiliary devices that are not sold or recommended by the manufacturer may result in fire, electric shock and injury. Actions such as these result in exclusion of liability, and no warranty claims will be accepted by the manufacturer.
- Repairs may only be carried out by the manufacturer.
- The warranty provisions of the manufacturer as amended on the date of purchase apply to the device. Liability will not be assumed for inappropriate manual and automatic creation of parameters for a device or inappropriate use of a device.
- The operating company is responsible for setting up and connecting the device according to recognised technical regulations in the country of installation and other valid provisions.

Contents

Controls	5
General information	6
Capacitive keypad	6
Tamperproof protection during keypad input	6
Operator guidance	6
Programming	6
Commissioning	7
Test Key	7
Test Code for LSW200 and LSW400	7
Test Key for LSW200, LSW300 and LSW400	8
Programming Master Code 2 for the LSW200 and LSW400	9
Master Code for LSW200 and LSW400	9
Master Code 1	9
Unlocking using Master Code 1	9
Release using Master Code 2	10
Master Code 2	10
Locking and unlocking using Master Code 2	10
Locking and unlocking LSW200/400 with a User Code	11
Code overview	11
Master Key I und Master Key II	12
LSW200 operating modes	13
Free cabinet choice	13
Fixed cabinet assignment	13
LSW300 operating modes	14
Free cabinet choice	14
Fixed cabinet assignment	14
LSW400 operating modes	15
System Key Set	16
LSW programming set	16
Information	17
LED display	17
Status messages	17
Troubleshooting / Incorrect operation	18
Battery replacement	18
Battery monitoring / Battery alarm	18
Identification plate replacement	19
Maintenance and care	19

Installation 20

 Installation of outer housing.....20

 Installation of inner housing.....21

 Sensing slide.....22

 Installation instructions23

Dimensions..... 24

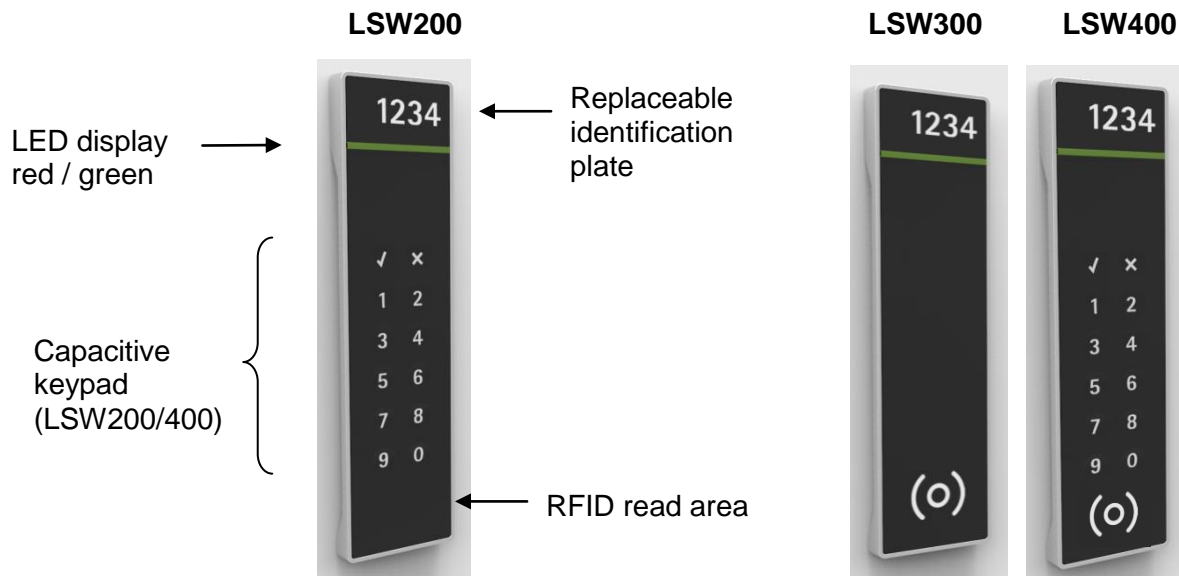
Overview of LSW data 25

Approval..... 26

Attachment: Information on batteries 27

Controls

Furniture locks in the LSW range are available in three different models. This section describes the various controls on the outer housing.



The capacitive keypad is available in the LSW200 and LSW400 models.

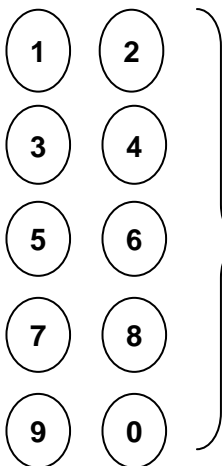
Overview of key assignment



OK key: Completion of a PIN Code input



Abort key: Activation of the abort key cancels PIN entries or programming operations



Keys 1, 2, 3, 4, 5, 6, 7, 8, 9, 0: Number keys for PIN entry

General information

Capacitive keypad

The SAFE-O-TRONIC® access LSW200 and LSW400 use a capacitive keypad for entering PIN codes.

 **This capacitive keypad cannot be operated with gloves.**

Tamperproof protection during keypad input

In the event of a pause of more than five seconds between pressing of individual keys, the entire entry is cancelled and an error message appears.

You have four attempts to enter the correct code. After the fourth incorrect entry, every further entry is blocked for one minute to ensure tampering protection.

If the incorrect PIN Code is entered 50 times (in succession), the LSW is blocked from any further entries by the user. This blocking can only be released again using Master Code 2 or Master Key II.

Operator guidance

Operation is supported by the red / green LED display as well as an acoustic signal by means of a beeper.

Programming

Programming for commissioning of the SAFE-O-TRONIC® access LSW can be carried out using the System Key Set or Lock Manager 6 software.

The Communicator provides the most convenient programming option for furniture locks in the LSW300 and LSW400 ranges.

Programming operations are explained in separate guides.

Commissioning

All SAFE-O-TRONIC® access LSW furniture locks are supplied with the same factory settings. With these factory settings, the Test Key for the LSW300, and the Test Key and Test Code for the LSW200 and LSW400 are active for locking and unlocking.

Test Key

Once installed, test the function of the SAFE-O-TRONIC® access LSW using the Test Key (Test Code).

In particular, ensure ease of movement of the bolt during locking and unlocking of the door. Installation of the lock under tension can result in malfunction.

Once all installation activities are complete and SAFE-O-TRONIC® access has been tested, the furniture locks in the LSW range can be programmed.

- ⚠ **Note: The Test Key remains the same until commissioning (programming).**
- ⚠ **To read RFID data media, the LSW200 must first be activated by pressing the “OK” and “Abort” keys simultaneously.**

Test Code for LSW200 and LSW400

You can use the Test Code to perform a simple function check of the SAFE-O-TRONIC® access LSW.

Locking and unlocking using the Test Code

- ▶ Press the **0** key



- ▶ Then press the “OK” key



- ▶ The motorised bolt is activated



- ⚠ **Note: The Test Code remains the same until commissioning (programming).**
Always perform the first function check when the cabinet door is open.
Door detection by the sensing slide only becomes active after programming.

Test Key for LSW200, LSW300 and LSW400

You can use the Test Key to perform a simple function check of the SAFE-O-TRONIC® access LSW.

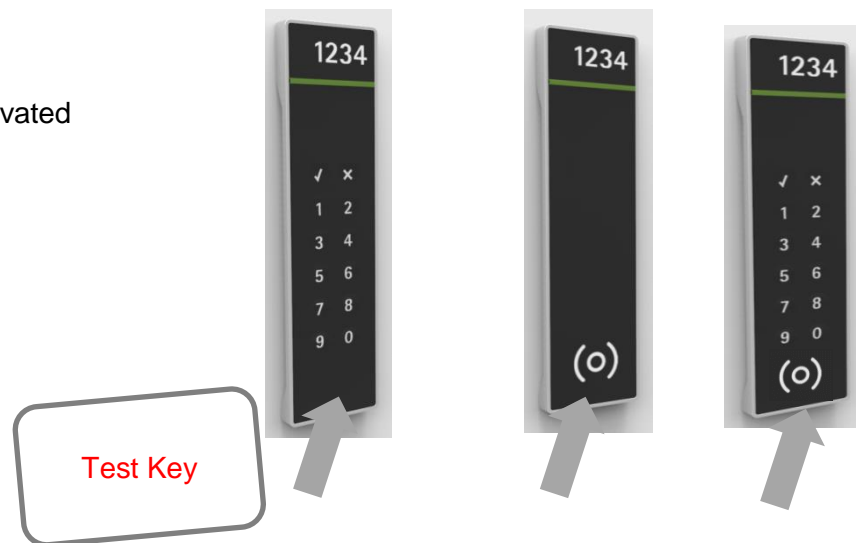
Locking and unlocking using the Test Key

- ▶ (LSW200 only) Press the **X** and **OK** keys simultaneously



- ▶ Hold the Test Key in front of the read area

- ▶ The motorised bolt is activated



⚠ Note: The Test Key remains the same until commissioning (programming). Always perform the first function check when the cabinet door is open. Door detection by the sensing slide only becomes active after programming.

Programming Master Code 2 for the LSW200 and LSW400

Every SAFE-O-TRONIC® access LSW200/400 can be programmed for commissioning using Master Code 2. Master Code 2 can be freely selected and contain 5 to 10 digits.

- ⚠ **Note:** Please ensure that unauthorised persons do not obtain the programmed Master Code 2!
- ⚠ **Note:** Master Code 2 cannot be programmed using a leading 0!
- ⚠ **Note:** Master Code 2 can only be programmed in conjunction with Lock Manager 6 software.

Master Code for LSW200 and LSW400

Master Code 1

Master Code 1 is only used by the system operator/personnel to unlock the LSW200/400. It is intended for personnel with restricted locking permissions.

After being unlocked, the LSW200/400 is blocked from use of a new User Key.

This block first needs to be reset with Master Code 2. Master Code 1 can be freely selected and contain 5 to 10 digits.

- ⚠ **Note:** Master Code 1 cannot be programmed using a leading 0!

Unlocking using Master Code 1

If Master Code 1 has been programmed using Lock Manager 6 software, the system operator can unlock the LSW200/400 at any time by means of this code.

After being unlocked, the LSW200/400 is blocked from use of a new User Key.

- Enter Master Code 1



- ⚠ **Note:** 9, 0, 6, 0, 9 is only a sample code!

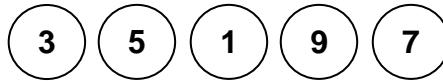
- Then press the OK key



Release using Master Code 2

If a SAFE-O-TRONIC® access LSW200/400 was unlocked using Master Code 1, the LSW200/400 is blocked from use of a new User Key. The LSW200/400 must then be released using Master Code 2.

- ▶ Enter Master Code 2



⚠ Note: 3, 5, 1, 9, 7 is only a sample code!

- ▶ Press the OK key



The blocked LSW200/400 is then released again for further operation with the User Key.

Master Code 2

The system operator can use Master Code 2 at any time to unlock and lock or release the LSW200/400.

Locking and unlocking using Master Code 2

If Master Code 2 has been programmed using Lock Manager 6 software, the system operator can unlock the LSW200/400 at any time by means of this code.

- ▶ Enter Master Code 2



⚠ Note: 3, 5, 1, 9, 7 is only a sample code!

- ▶ Then press the OK key



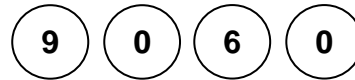
- ▶ The motorised bolt is activated



Locking and unlocking LSW200/400 with a User Code

To lock or unlock the LSW200/400, the user enters a 4-digit User Code in the case of free cabinet choice or a 4-6 digit User Code in the case of fixed cabinet assignment.

- Enter the User Code



⚠ **Note:** 9, 0, 6, 0 is only a sample code!

- Then press the OK key



- The motorised bolt is activated



Code overview

The following table contains an overview of the different PIN Codes.

	4-digit ^(*) 4-6 digit ^(*)	5-10 digit	Unlock	Lock
User Code	x	-	x	x
Master Code 1	-	x	x ^(*)	-
Master Code 2	-	x	x	x

⚠ **(*) Note:** 4-digit User Code in the case of free cabinet choice.

⚠ **(*) Note:** 4-6 digit User Code in the case of fixed cabinet assignment.

⚠ **(*) Note:** After using Master Code 1 to unlock the LSW200/400, Master Code 2 must be entered to release the LSW200/400.

Master Key I und Master Key II

Master Key I

Master Key I is only used by the system operator to unlock the LSW. It is intended for personnel with restricted locking permissions. Master Key I can only be used for unlocking the LSW if it was locked with a User Key.

After being unlocked with Master Key I, the LSW is blocked from use of a User Key or User Code.

This block first needs to be reset with Master Key II.

Master Key II

Master Key II can be used at any time to unlock or lock the LSW or to release an LSW that has been blocked using Master Key I.

Programming prior to use of Master Keys


The Master Keys can be programmed in conjunction with Lock Manager 6 software prior to use. The following parameters can be set for the Master Keys:

- Lock number or lock number range
- Valid from, valid to

These configuration options allow enabling of the Master Keys for a specific lock or lock range only as well as for a certain period.

The last ten uses of the Master Key at the LSW are stored on the Master Key. This information can be read using Lock Manager 6 software. In this way, use of the Master Key can also be indicated without having to read a lock log.

 **Note: Programming of the Master Keys is only possible in conjunction with Lock Manager 6 software.**

 **Note: Each time the Master Key is used, this is also recorded in the lock log of the LSW.**

 **Please refer to the Lock Manager 6 guide for more information on programming Master Keys.**

LSW200 operating modes

The User Code is used by the user to lock or unlock the LSW200. To this end, the LSW200 can be programmed for five different modes of operation.

1. Free cabinet choice
2. Fixed cabinet assignment "All-Open"
3. Fixed cabinet assignment "One-Open"
4. Fixed cabinet assignment "Auto-List"
5. TGC, time-controlled PIN

Free cabinet choice

An LSW200 in "Free cabinet choice" mode can be locked by entering a 4-digit User Code that can be freely selected. Subsequent unlocking is only possible with this User Code.

Fixed cabinet assignment

With fixed cabinet assignment, the LSW200 must be programmed with the authorised User Codes. Here it is possible to choose between the following three modes.

All-Open

In this mode, 4-6 digit User Codes must be programmed into the LSW200. Every programmed User Code can then lock and unlock the LSW200.

One-Open

In this mode, 4-6 digit User Codes must be programmed into the LSW200. Every programmed User Code can then lock the LSW200. In contrast to the "All-Open" mode, only the User Code used for locking the LSW200 can unlock it again.

Auto-List

In this mode, Lock Manager 6 can be used to create a User Code list for the LSW200. This list contains up to 99 User Codes per lock. The most recently used User Code is deactivated when the next User Code is entered. This User Code can be entered irrespective of whether the LSW200 is unlocked or locked.

TGC

In this mode, Lock Manager 6 can be used to create a time-controlled PIN Code which allows time-controlled access to the LSW200. It is not necessary to programme the lock with a new PIN Code in this mode.

LSW300 operating modes

The User Code is used by the user to lock or unlock the LSW300. To this end, the LSW300 can be programmed for three different modes of operation.

1. Free cabinet choice
2. Fixed cabinet assignment "All-Open"
3. Fixed cabinet assignment "One-Open"

Free cabinet choice

An LSW300 in "Free cabinet choice" mode can be locked by any User Key that has been programmed for this system. Subsequent unlocking is only possible with this User Key.

Fixed cabinet assignment

With fixed cabinet assignment, the LSW300 must be programmed with the authorised User Keys. Here it is possible to choose between the following two modes.

All-Open

In this mode, the User Keys must be programmed into the LSW300. Every programmed User Key can then lock and unlock the LSW300.

One-Open

In this mode, the User Keys must be programmed into the LSW300. Every programmed User Key can then lock the LSW300. In contrast to the "All-Open" mode, only the User Key used for locking the LSW300 can unlock it again.

ID number operation, serial number operation, locking groups, time zones etc.

The furniture locks in the LSW range support different operating modes and data media. Configuration of these modes is described in the programming software guide.

LSW400 operating modes

The user uses the User Key and User Code to lock or unlock the LSW400. To this end, the LSW400 can be programmed for three different modes of operation.

1. Free cabinet choice
2. Fixed cabinet assignment "All-Open"
3. Fixed cabinet assignment "One-Open"
4. Fixed cabinet assignment "Auto-List"
5. TGC, time-controlled PIN

The special feature in the LSW400 is that a User Key and/or User Code can optionally be used. They can be used individually or in combination. This allows for a large number of combination options, which are described in the Lock Manager 6 guide.

The basic functions are identical to those of the LSW200 and LSW300.

System Key Set

The System Key Set is used together with Lock Manager 6 software to programme the SAFE-O-TRONIC® access LSW and to read data from the LSW. The System Key Set comprises seven data media with red printing.

Designations and functions:

SysDataKey	Configuring the LSW
DataKey	Programming the User Code or User Key into the LSW
MasterKey I	Unlocking only (LSW is subsequently blocked)
Master Key II	Unlocking and locking
ServiceKey	Various service functions, reading the log
ResetKey	Resetting the LSW to the factory settings. The lock log remains unchanged.
TestKey	Function test of the LSW with factory settings

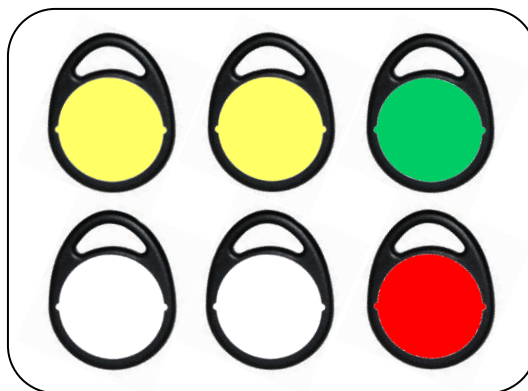
Further information on how to use the individual System Keys can be found in a separate guide.

LSW programming set

The LSW programming set for SAFE-O-TRONIC® access allows the LSW furniture locking system to be operated with predefined functions, without Lock Manager 6 software.

Time-related functions such as automatic blocking or unlocking, validity start/end dates and logging are dispensed with in this programming set. Full functionality can, however, be achieved at any time through subsequent use of the System Key Set and Lock Manager 6 software.

Further information on how to use the individual keys can be found in a separate guide on programming sets.



Information

LED display

All important actions and operating modes are indicated by the LED display, the aim being to provide assistance in finding faults and operating errors. An explanation of the individual signals is provided in the table below.



Status messages

Green	Red	Green	Red	Display	Action
				Rapid flashing	Programming mode
				Every 3 seconds	Blocking time (one minute) is active. An incorrect code was entered four times
				1 second	Key input
				1 second	Abort key ("X") was pressed
				LEDs flash alternately three times	Handling error, the bolt could not be activated within the release time
				1 second	LSW was locked / programming successful
				2 seconds	LSW was unlocked
				½ second	Code was accepted
				3 seconds	Internal function fault / LSW must be replaced where necessary
				Red LEDs flash first, followed by green LEDs (½ second in each case)	Blocking activated by Master Code 1 / Master Key I was lifted by means of Master Code 2 / Master Key II
				LEDs all flash together rapidly three times	Code input rejected because blocking by Master Code 1 / Master Key I is active
				LEDs flash together three times	Warning: Battery should be replaced soon
				LEDs flash alternately five times	Battery must be replaced immediately, LSW can no longer be locked
				LEDs flash three times	Reset performed
				LED flashes briefly. 1x per second	Status message: Cabinet locked

Troubleshooting / Incorrect operation

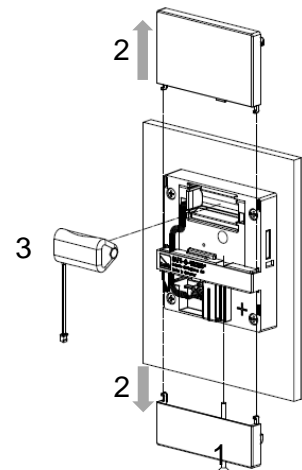
The status messages in the LED display allow you to recognise faults and operating errors, and eliminate these accordingly.

Should other, non-defined states occur and the LSW not function properly despite replaced battery, a reset via ResetKey and reprogramming, please contact SAG Support.

Battery replacement

1. Loosen the bottom screw in the cover with a TX20 screwdriver.
2. Open the top and bottom covers and remove the battery pack. Disconnect the two-pin connector of the battery pack.
3. Connect the new battery pack to the connector and insert into the LSW inner housing.
4. Close the covers and fasten the screw again.

⚠ Please take note of the information on batteries in the appendix.



Battery monitoring / Battery alarm

Automatic battery monitoring of SAFE-O-TRONIC® access LSW ensures that locking can no longer take place if the battery voltage is too low.

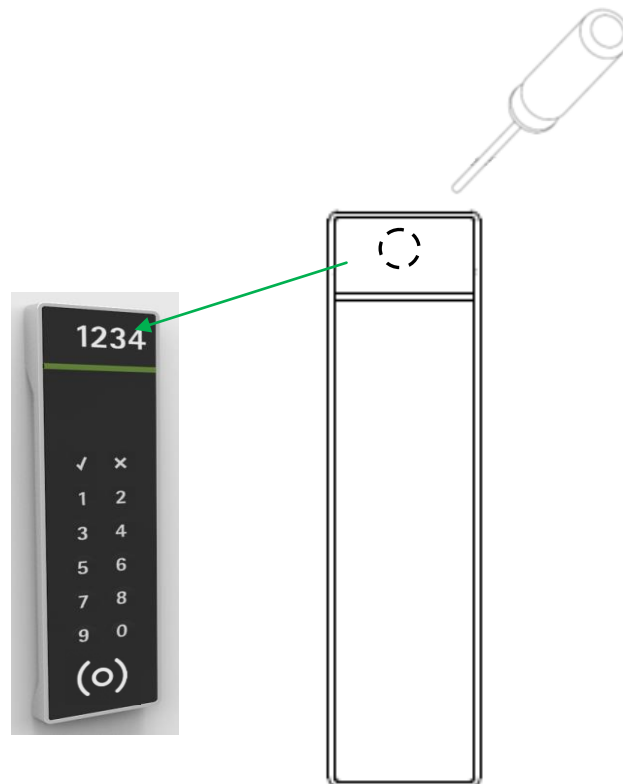
This is indicated by an advance warning in the form of three simultaneous flashes of all LEDs. In this case, quick replacement of the battery is recommended.

If the battery is not replaced, a battery alarm is activated after a certain time. This is indicated by three alternative flashes of the red and green LEDs. The battery must now be replaced. In this state, the LSW can only be unlocked, and no longer locked.

Identification plate replacement

The old identification plate can be removed from the LSW by inserting a small screwdriver into the centre of the plate and levering it out. A new identification plate can then be clipped back into the LSW.

⚠ Note: Replacing an old identification plate results in damage to the plate, and it can no longer be used.



Maintenance and care

The SAFE-O-TRONIC® access LSW furniture locking system is maintenance-free. LSW locks may under no circumstances be oiled or greased with lubricants containing mineral oils.

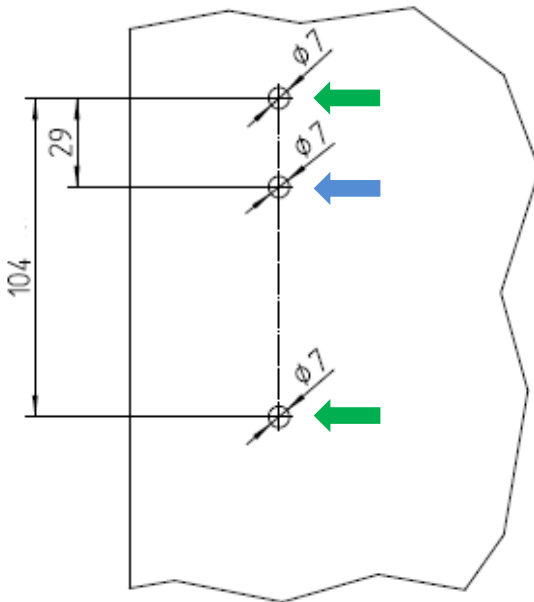
Cleaning may only be performed using non-adhesive, residue-free cleaning agents and disinfectants. Abrasive cleaning agents, acids or alkaline solutions may not be used when carrying out maintenance. Likewise, pressure cleaners may not be used.

Hosing down of the LSW is only permitted for the outer housing. Hosing down of the inner housing may result in destruction and exclusion of liability.

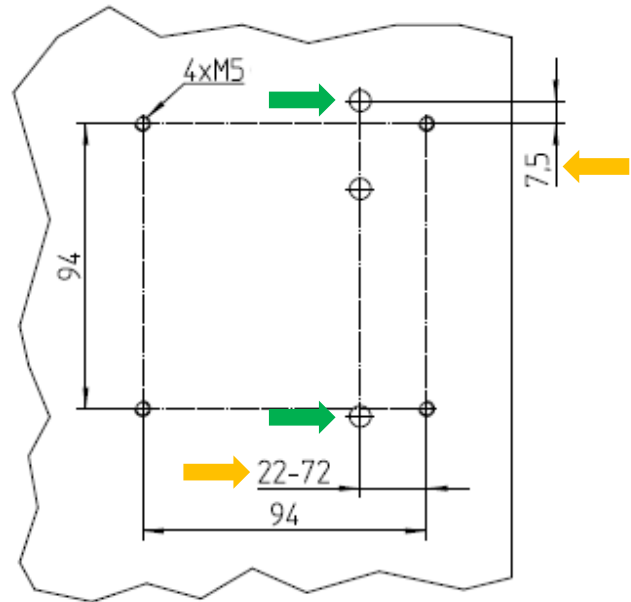
Installation

Installation of outer housing

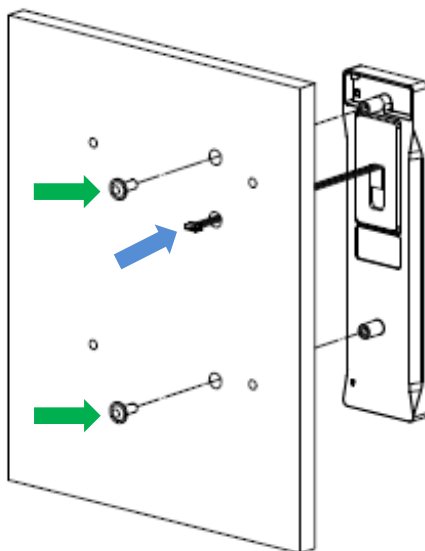
Installation of the outer housing requires two holes for the fastening screws and one hole for the cable bushing.



Installation of the outer housing requires three holes with a diameter of 7 mm.



Since the screw heads on the inside of the door are covered by the inner housing, the holes for installation of the outer housing must be drilled at the height of the mounting holes of the inner housing. The lateral position of the outer housing must be in the range of 22-72 mm. (see diagram)



The length of the M4 fastening screws must be selected according to the thickness of the existing door.

The following standard lengths are available:

Door thickness 10-15 mm	2 x M4x10
Door thickness 16-21 mm	2 x M4x16

Special lengths:

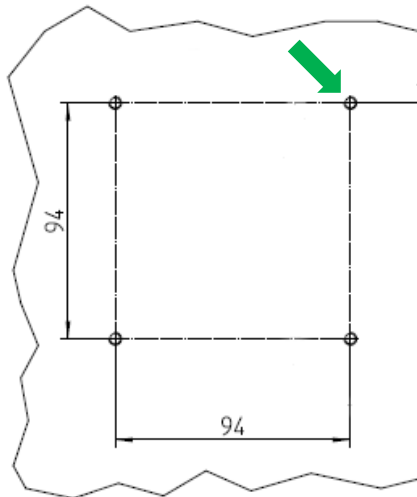
Door thickness 22-25 mm	2 x M4x20
Door thickness 26-30 mm	2 x M4x25

Note:

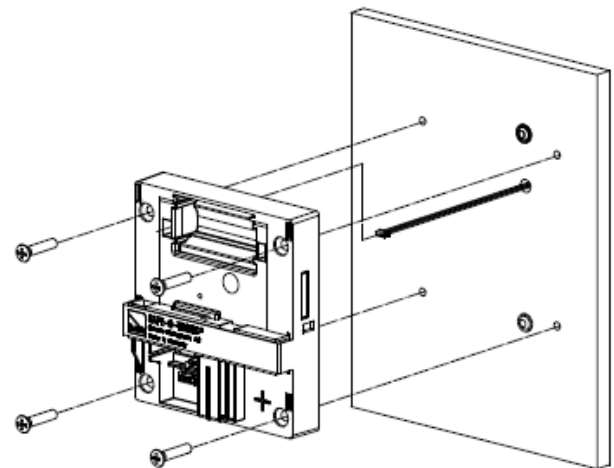
Incorrect screw lengths can cause damage of the outer housing.

Installation of inner housing

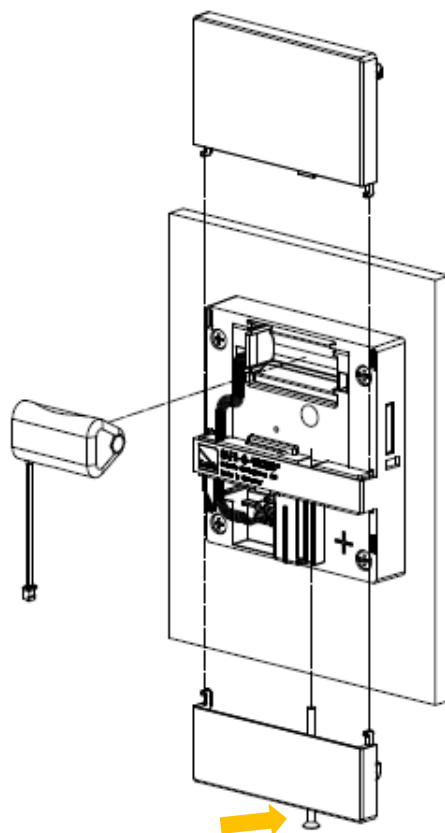
Installation of the inner housing requires four fastening screws. The type of fastening screw depends on the existing door material. As standard, M5x25 screws are used for fastening the inner housing. Fastening of the inner housing requires four M5 screw threads (threaded sleeves) in the door.



Installation of the inner housing requires four M5 screw threads.



After installation of the outer housing, the 6-pin connecting cable must be pushed through the opening of the inner housing. The inner housing is then tightened using four screws.



After fastening of the inner housing, the 6-pin connecting cable must be plugged onto the 6-pin connector on the board.

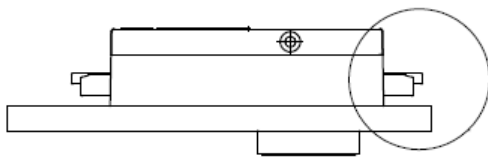
Finally, the battery pack is mounted in the upper part of the inner housing and the 2-pin battery cable plugged onto the 2-pin connector on the board.

The upper and lower covers can then be attached and fastened with the battery screw (TX20).

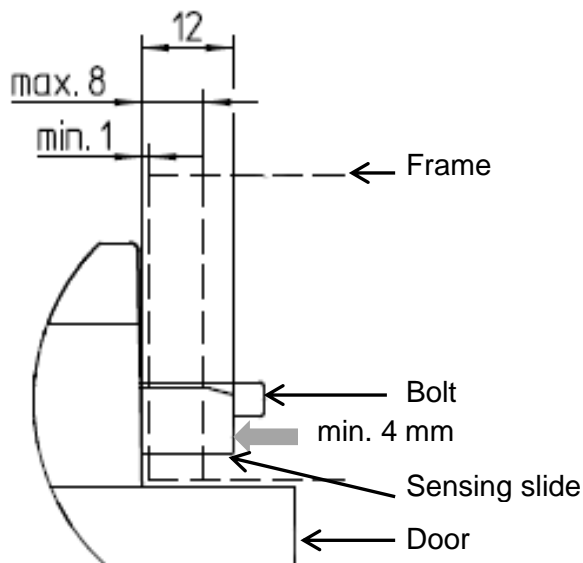
Sensing slide

The furniture locks in the LSW range are equipped with a sensing slide for door control. This spring-loaded sensing slide is extended on both sides of the inner lock by the bolts. To ensure reliable recognition of a locked door, the sensing slide must be pushed in a minimum of 4 mm from the frame (or strike plate).

For a locked door, the sensing slide must be extended a minimum of 1 mm and a maximum 8 mm on the side of the active bolt.



View from below:
LSW with engaged bolt and sensing slide



For a locked door, the sensing slide may be extended a minimum of 1 mm and a maximum of 8 mm on the side of the active bolt.

Information on the sensing slide:

The sensing slide indicates the status of the door irrespective of the bolt position. This status is required for door monitoring and alarm messages, amongst other things.

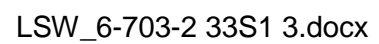
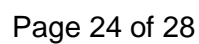
The functionality of the sensing slide can be configured. Please refer to the programming software guide for information on configuration options.

Installation instructions

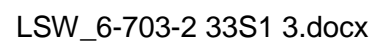
This section provides a brief summary for installation of the SAFE-O-TRONIC access LSW furniture locking system, together with a few tips.

- A drilling template is optionally available for positioning the fastening holes.
- All furniture locks are supplied with factory settings (not programmed). Locking functions for testing the lock and checking ease of operation of the bolt can be carried out with the Test Key.
- The first function test should be performed when the door is open. The sensing slide is not active in the factory pre-set state. A locking operation can consequently be carried out with the Test Key even when the door is open.
- The bolt is motor-driven. To be able to ensure proper functioning, the bolt must move smoothly when the door is closed. Should this not be the case, the door must be aligned.
- The door must be flush with the cabinet body. It may not automatically open in the “not locked” state, e.g. as a result of tension between the door and cabinet body.
- The outer and inner housing are connected by means of a cable. This connector cable may not be pinched during installation.
- The battery connector may only be attached once the outer and inner housings have been connected.

Schulte-Schlagbaum AG



LSW outer housing



Overview of LSW data

Display elements:	2 x green LEDs 2 x red LEDs
Acoustic signal:	Beeper
Battery:	Battery pack: 3 x Alkaline cells (AA)
Battery life:*	approx. 3 years or approx. 30,000 activations
Temperature ranges	
Function:	0 to +60°C
Storage:	-15°C to +70°C
Relative humidity:	10 – 90% non-condensing
Enclosure protection according to DIN EN 60529:	Inner housing: IP 43 Outer housing: IP 65
Weight:	approx. 300 g
Housing dimensions:	Outer housing: 156.5 x 41.4 Inner housing: 120 mm x 110 mm x 31.5 mm
Housing frame colour:	similar to RAL 9006 (white aluminium)
Control panel colour:	black or white
Inner housing colour:	black
Door thickness:	10 to 30 mm (from 22 mm, special fastening material)

*** Note:**

Please see the information on battery life in the appendix

Approval

Caution to Users

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Europe (CE)

The radio installation - when used in accordance with its intended use - complies with the basic requirements of Article 3 and other relevant provisions of Directive 1999/5/EC dated March 1999.



Device class according to ETSI EN 300 330: Class 2

FCC IDENTIFIER: Q3ILSW

Compliance Statements FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada: IC 22566-LSW

Compliance Statements IC

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Attachment: Information on batteries

Technical data and information
on battery packs and batteries for SAFE-O-TRONIC® access locking systems

Overview of SAFE-O-TRONIC® access locking systems:

Furniture locking system: **LS100, LS200, LS300, LS400**
LSW200, LSW300, LSW400
Door locking system: **DS200, DS300, DS400**
Cylinder locking system: **CS300**

The following battery packs are used in these locking systems:

Range: LS and DS

Standard battery pack: Alkaline manganese 3xLR03 (AAA) **Article number: # 38400200**
*Battery life** *approx. 3 years or approx. 30,000 activations*

Special battery pack: Lithium 3xLR03 (AAA) **Article number: # 38400200L**
*Battery life** *approx. 5 years or approx. 50,000 activations*

Range: LSW

Standard battery pack: Alkaline manganese 3xLR06 (AAA) **Article number: # 38450901**
Battery life offline* *approx. 4 years or approx. 55,000 activations*
Battery life online (mobile)* *approx. 3 years or approx. 30,000 activations*

Battery holder: for 3xLR06 (AA) **Article number: # 38450902**
Batteries for the battery holder must be provided on site. Claims concerning the battery life can therefore not be made. Battery recommendation: Alkaline manganese, Panasonic Powerline

Range: CS

Standard battery: 2x lithium manganese dioxide CR-2L (3V) **Article number: # 50203EK-B**
*Battery life:** *approx. 3 years or approx. 30,000 activations*

The following temperature ranges must be observed:

Function with alkaline batteries: 0 to +60°C
Function with lithium batteries: -15°C to +65°C
Storage: -15°C to +70°C

Temperatures below 0°C lead to a limited life of the batteries.

* Information on the battery life:

The battery life was determined under practice-oriented laboratory conditions. Positive or negative deviations from these indications are consequently highly likely in practice. The following list includes a number of characteristics and measures that can impact on the battery life indicated.

Locking system variants

The individual locking systems in the SAFE-O-TRONIC® access range vary in their functionality and features. The locking systems come with PIN functionality (100 and 200), with RFID functionality (300) or with a combination of PIN and RFID functionality (400). The energy requirement of these locking systems varies and also influences the battery life. For example, the energy requirement of a 400 model is approx. 1.4 x higher than of a 300 model. The battery life indicated refers to an average value that was determined using the 300 model.

Transponders

The energy requirement of the locking systems depends on the transponder type used. The DesFire transponder in the Mifare transponder range requires most energy for read and write access.

Configuration and user behaviour

The configuration (release time, status display etc.) and the user behaviour impact on the battery life of the locking system. Refer to the relevant sections in the guides for details on this topic.

Battery management

The electronic locking systems in the SAFE-O-TRONIC® access range are fitted with integrated battery management with an optical low-battery signal to indicate that the battery requires replacement. Refer to the relevant guides for details on this topic.

Information on battery replacement

- The point at which the SAFE-O-TRONIC® access battery pack must be replaced depends on how often the locking system was activated, or how long the battery pack has been installed, and on the ambient temperature in which the locking system is operated.
- Due to slight, yet unavoidable, self-discharge of the batteries it may be necessary to replace the battery pack before the number of activations indicated has been reached.
- There is a risk of injury through improper handling of the batteries.
- Only replace batteries with the door open. A function check after replacing a battery should always be performed with the door open.
- Installation and battery replacement must only be performed by trained specialists in accordance with these operating and installation instructions.
- Check the time after every battery replacement and reprogram the current time where necessary.
- Only use battery packs sold by Schulte-Schlagbaum.
- Do not allow the battery to reach temperatures in excess of the recommended storage temperature.
- Battery replacement CS300: Avoid damage to the seal ring through improper handling. Do not use sharp objects and do not stretch the seal ring more than necessary when sliding it on.
- Ensure that the polarities are correct when inserting the batteries.
- Always replace discharged batteries with new batteries.
- Battery packs may not be charged.

Disposal

Recycle defective or used battery packs according to European Directive 2006/66/EG. Observe local regulations concerning the disposal of batteries.

