

USER GUIDE

RFID LOCKER LOCK

(Model:SL100WR/FX300WR)



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1. Understanding SL100WR/FX300WR Locker Lock

1.1 What is SL100WR/FX300WR Locker Locks?

- SL100WR/FX300WR locker locks are the locker lock operated by 13,56 MHz RF key card.
- SL100WR/FX300WR can work as both offline (standalone) or online mode.
- To set SL100WR/FX300WR as online system, additional peripherals such as Access point, Server and client software are necessary.

NOTE Refer Esmart Ultra client user manual for online lock system setup.

1.2 Operating cards

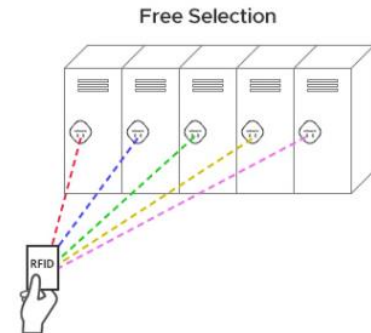
Card Name	Description	Card type
Key card	• Security Key value to be loaded to locks at scanning. • Then, the locks will accept only the RFID cards which have the same security key value.	Mifare 1KB
Setup card	• Lock will be programmed with various options at scanning. • Setup card can be set from Lock Installation Software (LIS).	
Master I card	• All locks will be open at scanning. • User card registration in the lock will be deleted and the lock will be ready to accept new user card.	
Master II card	• Locks will be open or close without User card registration deletion. • Useful when user needs to open lock temporarily.	
Owner card	• Master cards registration to be deleted at scanning this card on locks. • After Owner card scanning on lock, scan new master cards to register to the lock.	
Maintenance card	• Lock to be programmed with various options at scanning as you set. • Time, Master cards registration, etc can be updated without changing lock ID.	
Audit trail card	• Latest 150 event history to be collected at scanning. • Card number, event type (open & close), time of event, user name, etc to be collected.	Mifare 4KB
Lock info card	• Various information of lock can be collected into this card. • One Lock info card can collect information from up to 100 locks. • Lock ID, Operation mode, Battery status, software version, time, auto opening and more to be collected.	

2. Types of Lock Operating Scenario

SL100WR/FX300WR locker locks are designed to work for the various operation requirements by simple set up process. Following operation modes can be programmed before or after lock installation.

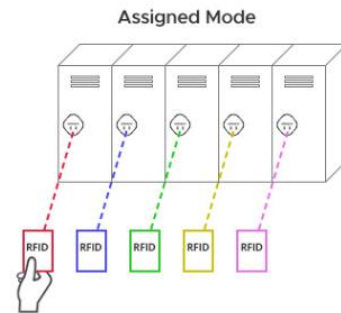
2.1 Free Selection (Shared Use)

- User card is not assigned to any certain lock but User is free to select any empty locker to occupy.
- Programmable to make LED lamp blinked to represent locker is in use. (In-use lamp)
- Programmable to use multiple lockers (up to 5) with one User card. (Multi-lock)
- Programmable for Time based operation.



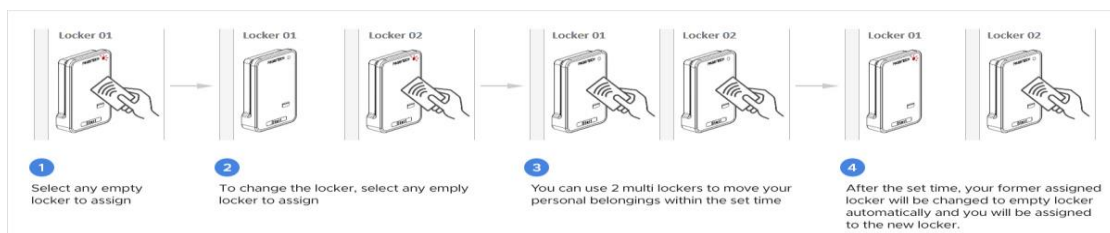
2.2 Assigned Mode (Permanent Use)

- Each locker is assigned to each User card in advance.
- Programmable to use multiple lockers (up to 5) with one User card. (Multi-lock)
- Also, programmable for multiple user cards (up to 8) to one locker. (Multi-user)



2.3 Smart Assign mode (Shared or permanent use)

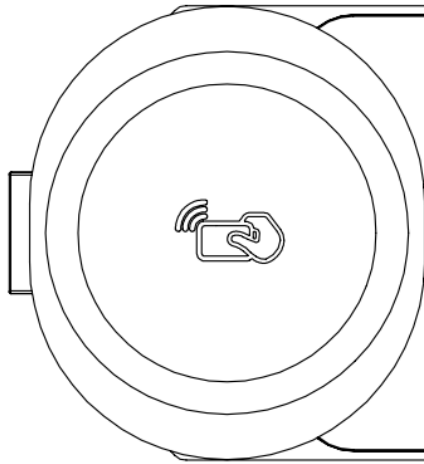
- User can select any empty locker and the user is assigned to the chosen locker.
- Without the help of administrator, user can freely change the assigned locker to any empty locker.
- Programmable to make LED lamp blinked to represent locker in use.
- Programmable to set specific time to release the assigned locker to empty locker after the changing the locker.



3. Lock Operation

3.1 RF card use

RF card only mode accepts only RF card.



SL100WR



FX300WR

3.2 Assigned Mode

3.2.1 Open & Close by RF card key

- ① When the Master Card I is used, lock is available for a new user registration on the locks. (This will remove previous user on locks) Then use user card to use.
- ② Touch the lock + Put User card on the lock. (Open)

3.2.2 Open & Close by smartphone

(1) How it works

- Visitor receives RFID user card at the front desk and goes to the locker assigned to this card.
- Then he downloads Passtech Mobile App from Google play store and install it into his smartphone and then wakes up the lock with the user card and registers himself directly into the mobile App.

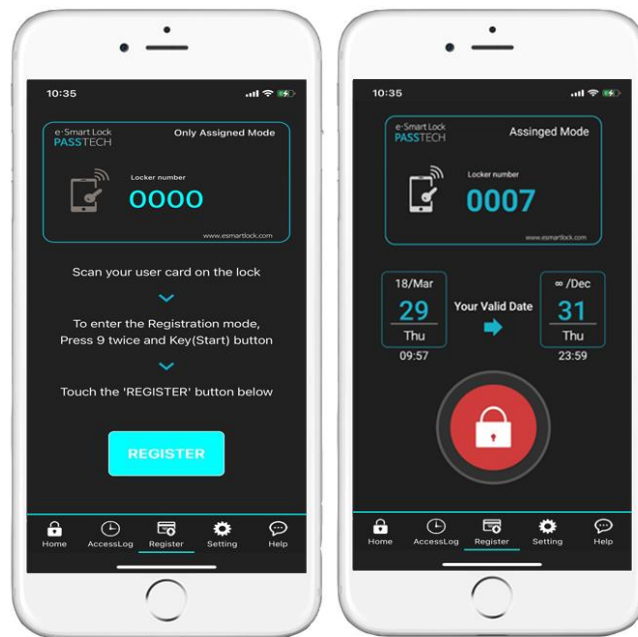
- From that time on, the lock can be operated through a smartphone.
- Mobile access key expires as soon as the user card is no more valid.
- Thus, the smartphone is fully synchronized with RF user card.

(2) Setting up the lock and user card issue

Since BLE mobile access key is fully synchronized with RF user card, the first step is to set up the locker lock with set up card in Assigned mode and issue the user card and assign it to the locker. To do so, please refer to the Lock Management System User Guide Ver. 5.0.

(3) Registration via Mobile App

Run the mobile App. If you are not registered yet, the registration page will show up right after you start the mobile application. Otherwise, press the “REGISTER” button from the Menu bar at the bottom for a new registration.



To register via the Mobile App, follow the instructions that will appear on your mobile device screen. The instructions are like following:

- Scan your user card on the lock.

- To enter registration mode, put number [99+key(start)] on the lock (the registration mode's on when the lock's LED is blinking)
- Touch the "Register" button below.

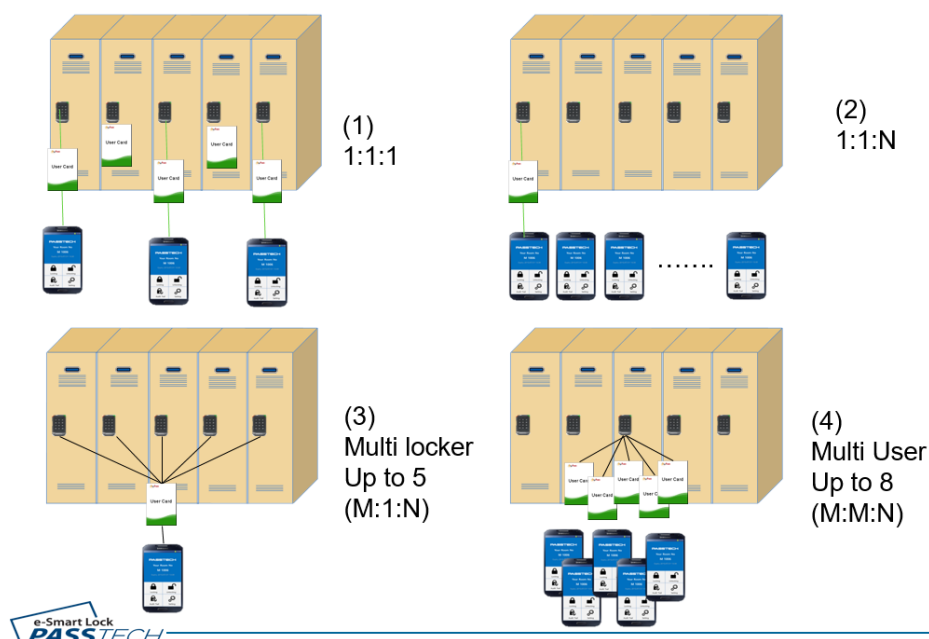
Now, when registration is done, your mobile key in your smartphone is fully synchronised with the user card and ready to operate the lock. It means that the information from the user card corresponds with that of the mobile key, including the validity period. Thus, the information about the valid date will automatically appear on the mobile device screen.

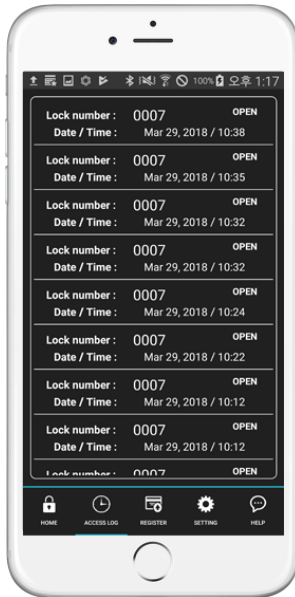
The registration is a one-time process, so you don't need to do it more than once for one locker.

To open the locker, press the "Touch to Open" button on your mobile device monitor.

(4) Multi-user and multi-locker

There are four operation scenarios for BLE mobile access locking solution. An unlimited number of mobile devices can be assigned to one locker by syncing up with a card, but one mobile device can have only one card assigned, whereas one phone can operate up to 5 locker locks at the same time if its RF card have 5 locks assigned.





(5) Access Log

To check the history of the mobile access key, visit the “Access Log” panel in the Menu window.

3.3 Free Selection Mode

3.3.1 Open & Close by RF card key

- ① Touch the lock + Put User card on the lock.



3.3.2 Open & Close by Smartphone

(4) How it works



- ① Download Passtech Mobile App from Google play store and install it into his smartphone
- ② After running the App, choose 'Free mode' on the setting tab.
- ③ Then, you can freely choose any available lock to operate.

NOTE

To access your mobile device, please set your lock for CSN Free mode and change the usage mode to Free mode from the Passtech APP from your mobile device.

3.4 Open in Emergency

- ① In case User forgets his(her) password or lost card, Operator can open the lock by Master Card I.
- ② Once Master card I is used to open the lock, the lock reverts to default position
(i.e. lock will stay open for Free Selection)
- ③ User Card ID will be erased from the lock if Master Card I has the function to delete the User ID.
- ④ When the lock stops working due to low battery, lock can be opened by external emergency battery pack.



3.5 Low Battery warning and battery change

The RFID lock uses 4 pieces of 1.5V AA alkaline batteries (6V).

(1) When battery reaches to low voltage ;

- ① Beep sounds five times.
- ② Red LED lights
- ③ Low battery is recorded in the memory of the User Card (Operator can know the low battery of the lock when the card is read at operator's Program).

(2) Changing battery

- ① Open the battery case at main case.
- ② Replace with new batteries.
- ③ When you replace batteries, do not mix the brands of them and use only brand new batteries.
- ④ When you pull out the battery, and if you do not insert the batteries in 3 minute, the clock of the lock returns to default time.(1st. Jan, 2010)
- ⑤ Please use Maintenance card to set the time of the lock.
(For setting of Maintenance card, please refer to LOS (Locker Operation System) User Manual or Esmart ultra client user manual.

CAUTION

**RISK OF EXPLOSION IF BATTERY IS REPLACED
BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING
TO THE INSTRUCTIONS**

4. Card Operation

4.1 Owner Card

The role of the Owner card is to delete the Master card registration. Therefore, Owner card will be used to delete current master card registration in the lock, and make the lock to be ready to register new Master Card.

It is simple to delete the Master card registration and to register new master card in the lock :

- ① Put the Owner card to the lock until lock sounds beep (one time) and red lamp lights.
- ② Now, all Master card registration is deleted from the lock.
- ③ After *Owner card scanned*, *put new master cards to register to the lock*

4.2 Master Card

4.2.1 Functions of the Master Card I & II

- ① There are two types of Master cards.
 - ◆ Master card I : Alarm Off, Locker open and User card deletion.
Useful card at user card lost.
After Master card I scanned on a lock, the lock is ready to accept new user card.
 - ◆ Master Card II : Alarm Off and Locker open and close.
Useful card for temporary lock open or close.
Previous user card is still assigned to the lock.
- ② Maximum five Master cards can be registered in a lock.

4.2.2 Replacing old Master cards with New Master cards

There are two ways to delete the lost Master card and register new Master card in the lock.

(1) Using Maintenance Card

- ① Read the master cards (all Master cards to be used in a lock) to register in each lock at Maintenance menu in LOS program (or online client program).
- ② Put the Maintenance card to the reader, and download the master card chip numbers to the Card.
- ③ Put the Maintenance card to the locks, then, new Master cards will be registered to the lock, and lost master card will be blocked.

(2) Using Owner Card

- ① Delete the old master card registrations in the lock (refer to the 4.1) with Owner Card.
- ② Put new master cards to each lock so as to register new master cards. Then, old master card you lost will not be used.

 All existing Master cards needs to be registered again together with new Master card because all master card registrations were deleted if Owner card is used.

4.3 User Card

4.3.1 Free Selection (Shared Use)

The initial status of the lock in Free Selection mode is open (Latch is inside).

(1) Initial Use

- ① Select the empty locker.
- ② Put your belongings in the locker.
- ③ Press “Start” button on the front body of the lock to wake up the lock, and place your card (or any form of user key) to the front body of the lock.
- ④ Wait until the Green LED lights and Beep sounds once.
- ⑤ Bolt will move out, and lock is closed.
- ⑥ Close the door, and the lock will be remained at locking state.

(2) Open the lock

- ① Press “Start” button on the front body of the lock.
- ② Put close your card to the front body of the lock.
- ③ Lock will check the lock ID and key of the user card (or any form of user key).
- ④ Lock will emit Green LED and beep sound once it is right user card .
- ⑤ Bolt will be moved and locker will open.
- ⑥ User information will be erased from the lock so that new user can use the empty lock.

⚠ In free selection mode, lock and card needs to read and write the each other's information. So please do not sway the card until the latch is moved.

4.3.2 Assigned Mode (Permanent Use)

The initial status of the lock in Assigned Mode is closed status (bolt out)

- ① Press “Start” button on the front body of the lock.
- ② Put the User Card to the front body of the assigned lock.
- ③ Lock checks the card, and green LED lights and beep sound once. Then, lock will be opened, and closed again in 5 seconds.
- ④ To close the locker, just close the door. Lock will remains the closed status.

4.3.3 Replacing old User card with New User card

(1) Free Selection

- ① Issue new user card by LOS (Locker Operation System) program.
- ② In case the locker is closed, put Master Card to the lock to open the lock.
- ③ Put new User card to the lock, then lock will accept new User card, and missing card will not be accepted.
- ④ In case the locker is opened, just put the new user card to the lock, and the lock will register this locker number. Old User key will not be accepted.

(2) Assigned Mode

- ① Issue new User card (with assigned locker Number) for Assigned mode.
- ② Put Master Card to the lock to delete the old user card, and put the new User card to the lock.
- ③ Lock will accept the new user card only, and old user card registration will be deleted.
- ④ In case the lock is set for multiple users, lock revision should be updated when new user card is issued by LOS program. Then, Lock updates it's revision number when new user card is scanned. The other user cards which are assigned to this locker also needs to be reissued with updated lock revision by LOS program.

4.4 Maintenance card

- ① Program Maintenance card as you want from LOS (or online client software)
- ② Put Maintenance card to each lock, lock will be set as you programmed in step ①
- ③ Time of the lock, Master cards change, Wireless online channel, Auto status update time can be updated with Maintenance card.

4.5 Audit Trail card

- ① Put Audit Trail Card to the lock.
- ② The latest event data (up to 18 events) will be downloaded from lock to the Card. Wait until melody is on.
- ③ Read the Card at LOS program, and 18 event data will be saved to the PC.

4.6 Lock Info card

- ① Put Lock info Card to the lock.
- ② Various lock information data will be downloaded from locks to the Card. One card can collect up to 120 locks.
- ③ Read the Card at LOS program, and all data will be saved to the PC.
- ④ Lock ID, operation mode, Battery status, time, auto opening setting status, RF channel and more will be indicated.

NOTE

For further information about all system cards and how to issue, refer to LMS / LOS or Esmart ultra client manual.

5. Indication Instruction

- 1) Open/Close : **GREEN** LED on for 0.2 second, one beep sound for 0.2 second.
- 2) Successful programming : **Melody**
- 3) Indicate for mistake : **RED** LED flashes 3 times, 3 beep sounds
- 4) Low voltage : **RED** LED blinks 5 times, and beep sounds 5 times.
- 5) When the input is incomplete, after 5 seconds, see #5, power off.
You need to touch it again to wake up the lock.

6. Specification

Item	Spec
Material	Stainless Steel
Communication	2.4Ghz Wireless(Wireless Communication) BLE(Mobile Key)
Security	AES128
Door open	Mobile Key, RFID CARD, Wireless Control
Power Supply	AA*4 6VDC(Alkaline) Battery DC 12V
RFID	Mifare Classic & Desfire at default, ISO14443 Type A
Indicator	Buzzer, Red/Green LED
Dimension	53.5mm * 68.6mm
Operation TEMP	0 °C ~ 50 °C
Battery life	1.5year(Online) 2years(Offline)
Certification	CE, FCC, KC

ANNEX A Beep & LED Table

Beep	LED	Description
1 x short beep	1 x Green(2sec)	OK
2 x short beep	1 x Red(2sec)	Operation Error
3 x short beep	1 x Red & Green in turn(2sec)	Time over
Do-Re-Mi Melody	1 x Red & Green in turn(2sec)	Successful Set up / mode change / Time setting
5 x short beep	5 x Red & Green	Low battery
Do-Re-Mi Melody	2 x Red & Green	Successful connection between front and back bodies.
1 x short beep	1 x Green	Off the Alarm by Control card
Melody	1 x Green	Successful registration of Owner Card/ Master Card
Melody	1xGreen	Read Clear Card and delete the information of M/U in the memory of the lock.
No Beep	Both Green and Red LED blinks	1) Owner Card is not registered. 2) In case of Shift or Week-day operation mode, Alarm for shift or Time due.
No Beep	Red on/off	Owner card is registered, but Master card is not registered.
No Beep	Green on/off	Owner & Master card are registered, but User card is not registered in Assigned Mode.

ANNEX B Trouble Shooting

Master card registration in the lock was failed.	1) Master card registration should be followed after deleting old Master card in the lock by Owner card. 2) Put Master card on the lock before waiting time is out after Owner card.
Cannot open the lock with Master card	Master card is not registered in the lock. Please Register the Master card in the lock.
Cannot open or close the lock by User card	1. Check the Setting of User card by LOS. (1) Free Selection Mode ● Validity / Operation mode / Lock ID / Number of locks this user card can be used. (2) Assigned Mode ● Validity / Operation Mode / Lock ID / Number of locks this user card can be used. 2. Reset the time of the Lock with Time/Control card change. 3. Old User card may be still in the memory of the lock. Erase the card information from the lock by Clear card, then register again the Owner card and Control Card, then use User card.
When "Start" button is pressed, five beep sounds with Red lamp.	Low battery sign. Please replace the batteries.
Latch does not move, while Card and lock operates in normal.	Too many goods may press the lock body or door. Push the locker door to make the space for the latch movement.

FCC Statement

FCC Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

a. Rule Part 15.19(a)(3): 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.

b. Rule Part 15.21: The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

7 Regulatory Statement

FCC Part 15.105 statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
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- Consult the dealer or an experienced radio/TV technician for help.

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Responsible Party –

Cardcom

Address: 1301 S. Beach Blvd. Ste-P La Habra, CA 90631

Tel.: 562-943-6300

E-mail: passtech@esmartlock.com

Thank you for selecting SL100WR/FX300WR RFID locks.

Should you have any questions, please contact your local distributor or our technical support.