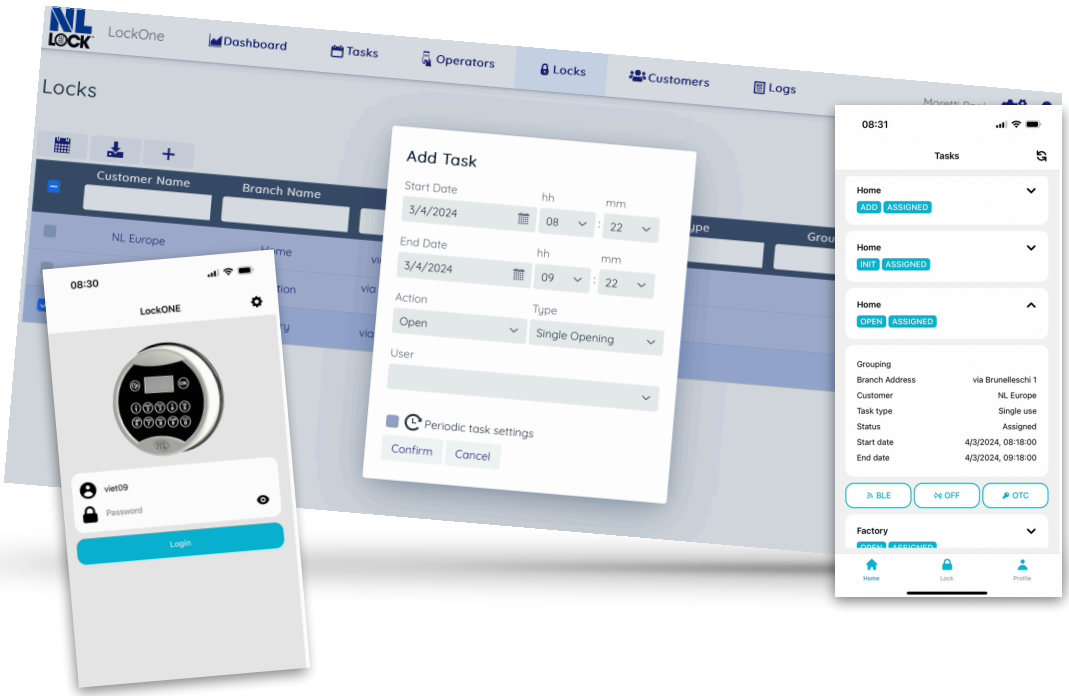
LockONE (TE20-xxD) - One-Time-Code Operations

Bluetooth 4.0 Low Energy

Features

- LockOne features integrated rolling codes and encryption algorithms to allow one time valid opening codes to be generated and managed through a Web-based control software
- One-Time-Code operations can be executed directly on the lock keypad or via Bluetooth enabled smartphone with dedicated App (available for iOS and Android)

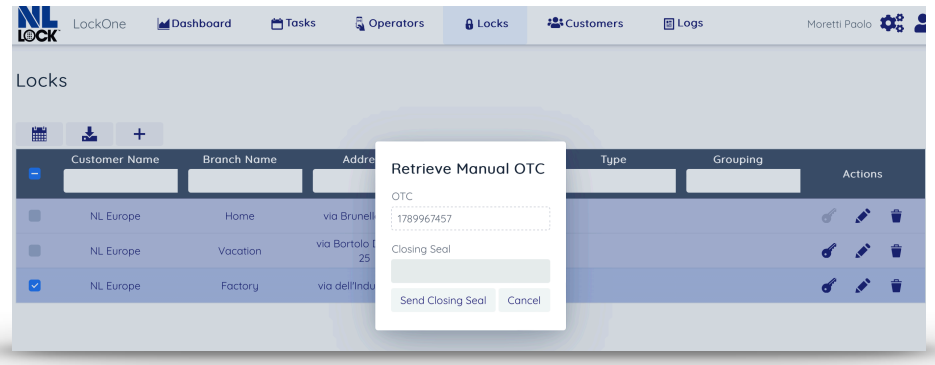


System Description and Operations

- Each lock is identified by a unique 8-bytes serial number SN.
- Each user is identified by a 4-digits personal identification number (PIN)
- One time valid opening codes (OTC's) are generated by a remote computer where LockONE web software with locks and users information database is installed as a virtual machine.
- System supervisors access the web server LockOne software from any web browser using their login name and password. They define which user can open what locks at what time and assign a consequent "opening" task to the desired user.
- Users will retrieve currently assigned tasks by logging to the web server from their smartphone APP identifying themselves with login name and password
- All operations are automatically managed by the system that keeps track of open tasks without the need for the supervisor to monitor operations in real time.
- Locks generated closing seal securely finalize each opening task once the lock is closed after a valid opening process
- A fully detailed log of all operations is stored in the web server with all required information which can be retrieved at any time for investigating purposes
- LockOne Web software provides for a fully detailed and customizable "dashboard" where system current status is displayed: number of tasks currently open, number and type of locks currently managed, number of users with currently assigned tasks, medium time between operations and so on.

To open - Through lock keypad with manually generated one-time-code

User receive manually generated OTC for a selected lock



Press and hold key #4 till double beep. Display shows "PIN" message

Enter 4-digit user personal identification number. Display shows "OTC" message

Enter 10-digit received OTC. Check entered number and press "OK" to confirm

If valid OTC code for entered user PIN, double beep, display shows "OPEN LOCK", lock can be opened

Once lock is closed back, display shows the closing seal. Closing seal has to be forwarded to the system supervisor to close the opening procedure. Last generated closing seal can be displayed at any time on the keypad: press and hold "OK" key till double beep

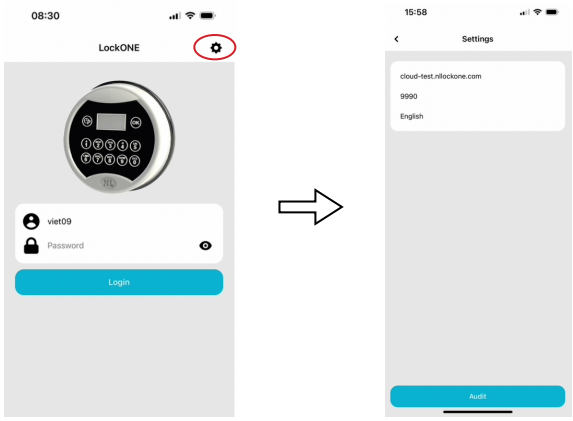
Note: if lock is not physically opened within 3-seconds since valid OTC is entered, the same OTC can be used to try again.

Note: if alarm box connected enter user PIN with +1 on last digit to trigger duress alarm

LockONE APP

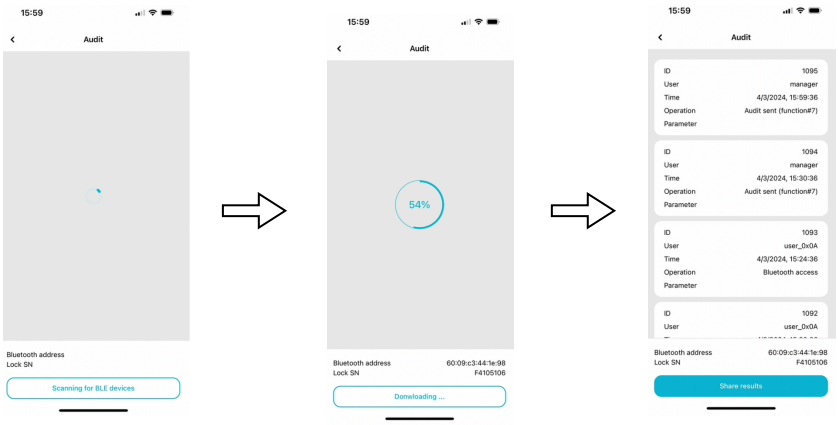
LockONE APP is available for both IOS and for Android.

Once APP is downloaded from the store it is necessary to specify to which web server to login. Click on the configuration button and enter required information (see example below)



Through LockONE APP it is possible to download lock audit to the phone via Bluetooth.

Click on the "Audit" button in the Settings page, APP will start searching for BLE devices. Enter the 6-digit Bluetooth valid code on LockONE keypad. As soon as connection is established, audit file will be downloaded to the smartphone and displayed in the APP



Audit file can be shared from the APP as a .hex file by clicking on the "Share results" button. Dedicated software is required to read/display exported data

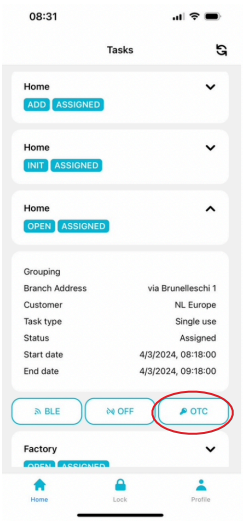
To open - through task assignments procedure

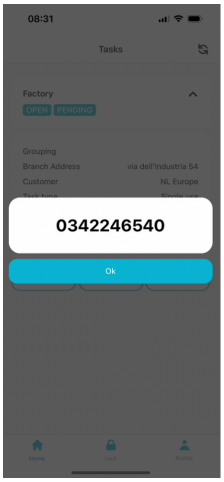
Supervisor selects what locks a certain user has to open and assign one or more "tasks" to the user

User access LockOne app by entering his login name and password

User display list of currently assigned tasks on LockOne app by clicking the refresh button

Opening with lock keypad





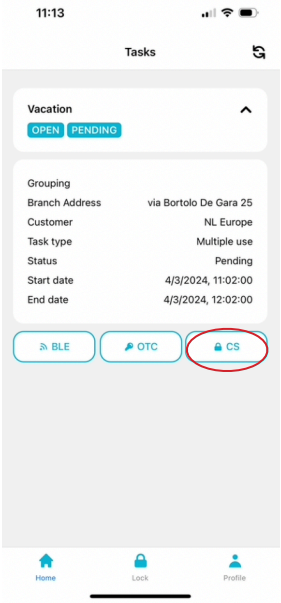
User retrieves generated OTC for each task by clicking on "OTC" button of the selected task

Once in front of the safe, user press and hold key #4 till double beep. Display shows "PIN" message

Enter 4-digit user personal identification number. Display shows "OTC" message. Note: if alarm box connected enter user PIN with +1 on last digit to trigger duress alarm

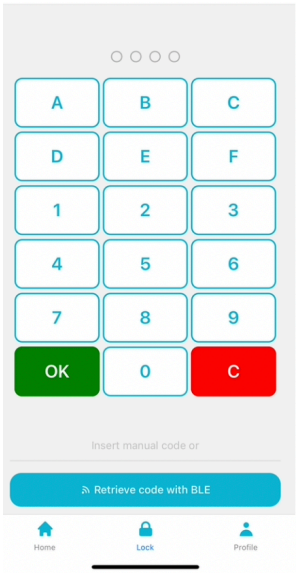
Enter 10-digit received OTC. Check entered number and press "OK" to confirm

If valid OTC code for entered user PIN, double beep, display shows "OPEN LOCK", lock can be opened



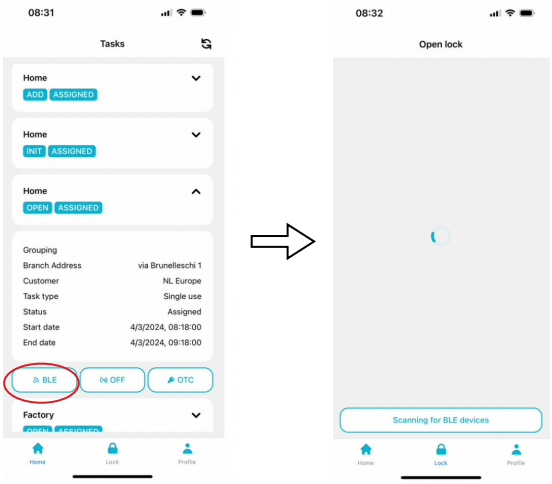
Once lock is closed back, lock keypad display shows the closing seal. Click on "Close Seal" button on the pending task in the smartphone APP and enter displayed close seal to close opening procedure at the web server.

Note: last generated close seal can be displayed at any time on the keypad: press and hold "OK" key till double beep



Note: if lock is not physically opened within 3-seconds since valid OTC is entered, the same OTC can be used to try again.

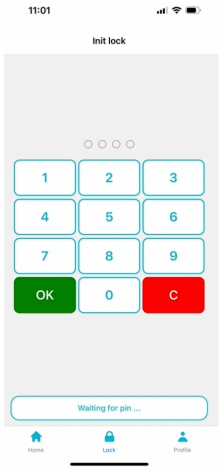
Opening with Bluetooth enabled smartphone (fully on-line process)



Once in front of the safe, user starts Bluetooth mode on the lock keypad by entering a valid 6-digit code and then clicks on selected task Bluetooth button on his smartphone app.

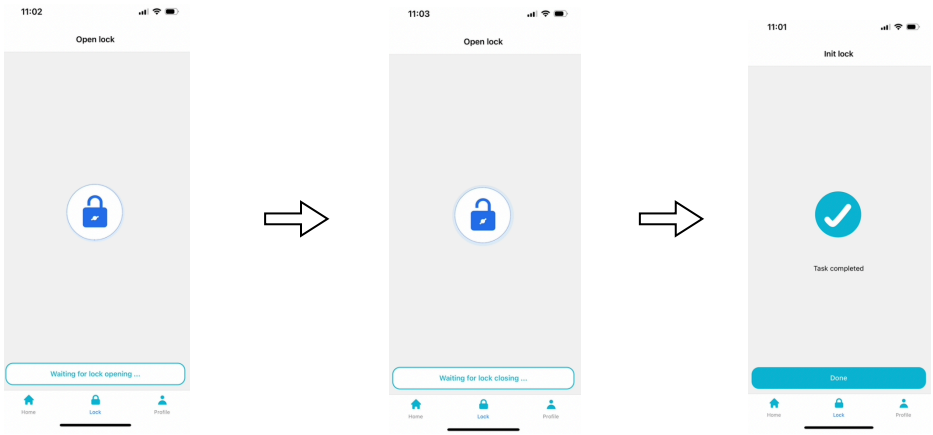
Note: if alarm box connected enter 6-digit valid code with +1 on last digit to trigger duress alarm

Click on the selected task "BLE" button in the APP



Once communication between smartphone and lock is established and authorization to open is confirmed, user will be asked to enter is personal identification number (PIN) into the LockOne app

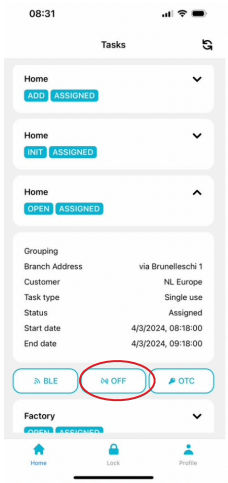
If valid OTC code for entered user PIN, double beep, smartphone app will wait for lock to be actually opened and then it will keep monitoring the lock status waiting for closing



Once lock is closed back, smartphone app automatically forward received close seal to the central server to close opening procedure

Note: if lock is not physically opened within 3-seconds since "Waiting for lock opening..." message is displayed on the app, the process can be repeated

OFF-line opening with Bluetooth enabled smartphone (when on-line coverage not available in front of the safe)

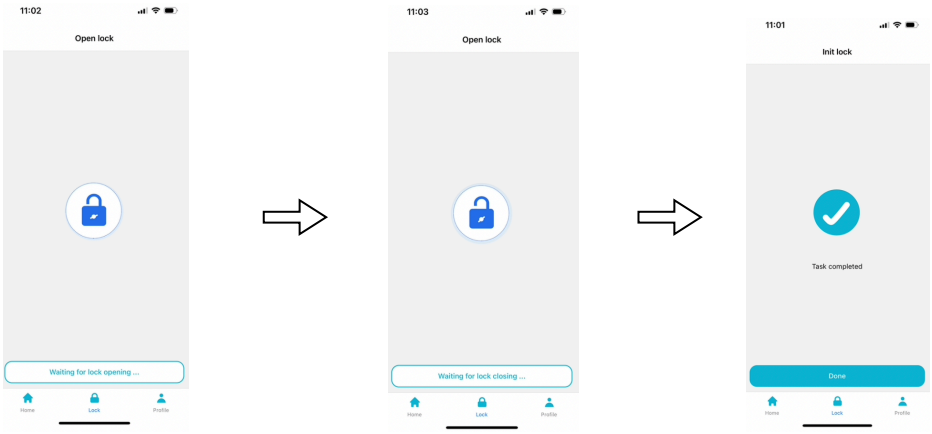


Before to reach the safe, user download OTC data with his smartphone app from the web server. Data can be downloaded for a single task within the assigned ones or for all assigned tasks. Click on "OFF" button to download each selected task

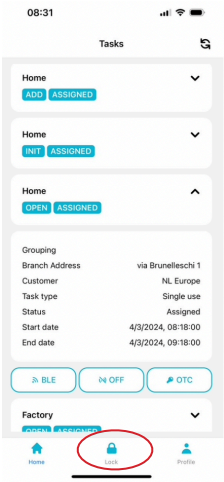
Once in front of the safe, user starts Bluetooth mode on the lock keypad by entering a valid 6-digit code and then clicks on selected task Bluetooth button on his smartphone app. Once communication between smartphone and lock is established and authorization to open is confirmed, user will be asked to enter is personal identification number (PIN) into the LockOne app

If valid OTC code for entered user PIN, double beep, smartphone app shows "Waiting for lock opening…", lock can be opened

Note: if lock is not physically opened within 3-seconds since "OPEN LOCK" message is displayed on the app, the process can be repeated

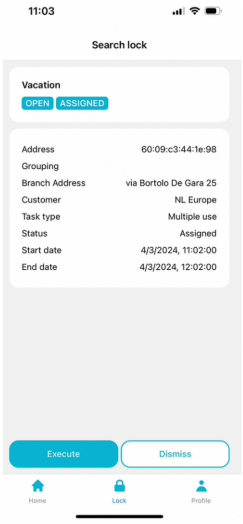


Once lock is closed back, smartphone app will store operation data (including the close seal) into the phone memory waiting to be back on-line and forward the saved datas to the central server to close opening procedure. If operations at one lock are not completed with closing the lock and receiving a valid close seal, smartphone app will prevent the user to continue with any other task



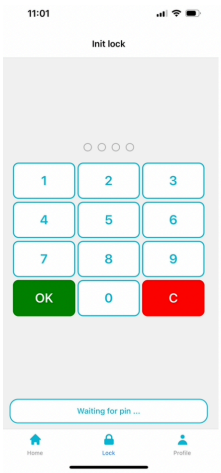
Once in front of the safe, click on the "Lock" button in the smartphone app. App will start searching for LockONE within the reading range. Start Bluetooth mode on the lock keypad you want to open by entering a valid 6-digit code.

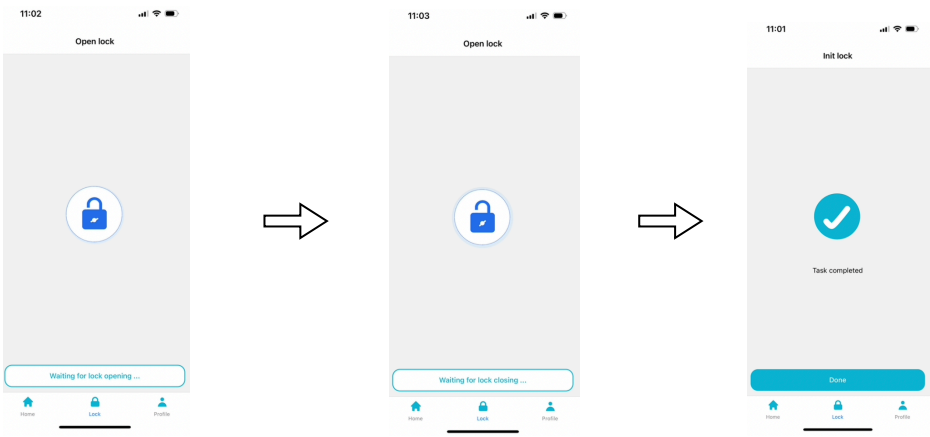
Note: if alarm box connected enter 6-digit valid code with +1 on last digit to trigger duress alarm



Once connection is established App will verify if connected lock is included within one of the user assigned tasks. In this case a message will prompt the user for the following step.

Click on "Execute" button to confirm to open the lock



User will be asked to enter is personal identification number (PIN) into the LockOne app

If valid OTC code for entered user PIN, double beep, smartphone app will wait for lock to be actually opened and then it will keep monitoring the lock status waiting for closing