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Product manual
ABB-Welcome IP

H8303 Guard unit

H8303-02 Guard unit

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1 Notes on the instruction manual

Please read through this manual carefully and observe the information it contains. This will assist you in preventing injuries and damage to property, and ensure both reliable operation and a long service life for the device.

Please keep this manual in a safe place. If you pass the device on, also pass on this manual along with it. ABB accepts no liability for any failure to observe the instructions in this manual.

2 Safety

Warning

Electric voltage!

Dangerous currents flow through the body when coming into direct or indirect contact with live components.

This can result in electric shock, burns or even death.

– Disconnect the mains power supply prior to installation and/or disassembly!
– Permit work on the 100-240 V supply system to be performed only by specialist staff!

3 Intended use

As a part of the Busch-Welcome IP system, this device can only be used with accessories from the system.

4 Environment

Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with household waste.

– The device contains valuable raw materials that can be recycled. Therefore, dispose of the device at the appropriate collecting facility.

4.1 ABB devices

All packaging materials and devices from ABB bear the markings and test seals for proper disposal. Always dispose of the packing materials and electric devices and their components via an authorized collection facility or disposal company.

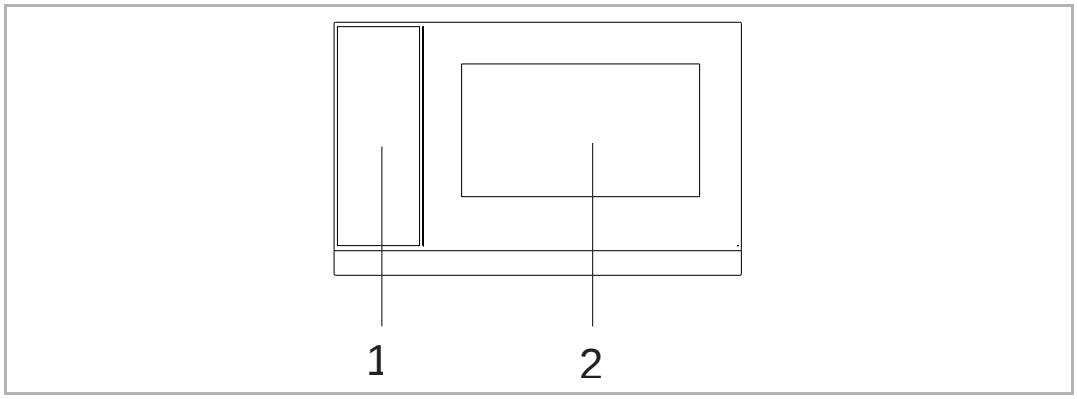
ABB products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU-Directive 2012/19/EU WEEE and 2011/65/EU RoHS)

(EU-REACH ordinance and law for the implementation of the ordinance (EG) No.1907/2006)

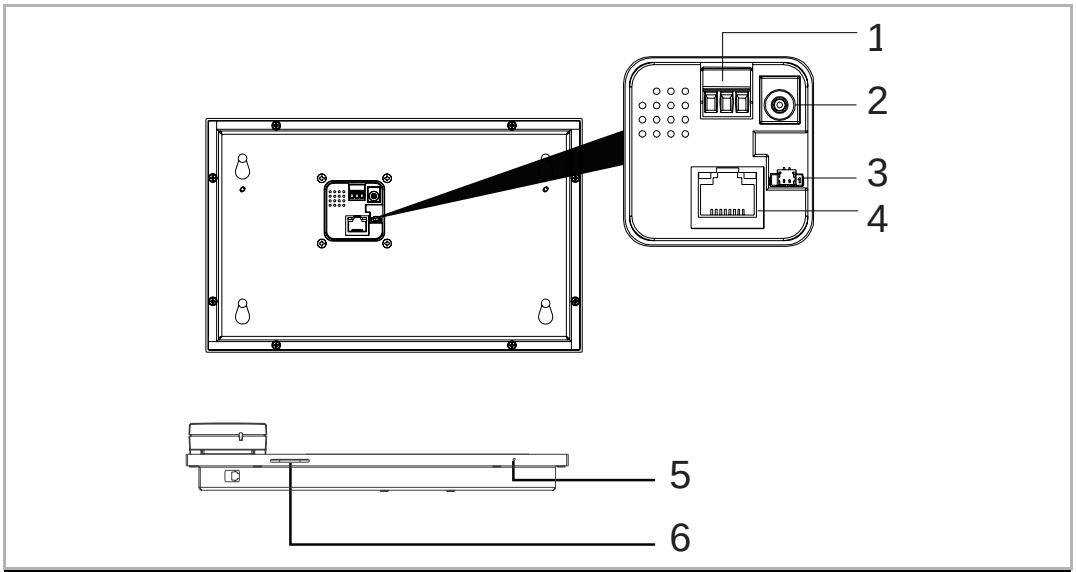
5 Product description

5.1 Control elements



No.	Function
1	Handset
2	Touch screen

5.2 Terminal description



No	Function
1	Power input connector
2	Power input connector (DC-JACK input)
3	Fire control input (release all the locks in case of emergency)
4	LAN (PoE)
5	Microphone
6	Speaker

6 Technical data

Designation	Value
Rating voltage	24 V DC
Operating voltage range	20-27 V DC
Rating current	27 V DC, 230 mA 24 V DC, 260 mA
Display size	7"
Resolution	1024 x 600 pixel
Product dimensions	265 mm × 165 mm × 115 mm
Operating temperature	-10 °C…+55 °C
PoE standard	IEEE802.3 af
Network connection standard	IEEE 802.3, 10Base-T/100Base-TX, auto MDI/MDI-X

7 Mounting/Installation

Warning

Electric voltage!

Dangerous currents flow through the body when coming into direct or indirect contact with live components.

This can result in electric shock, burns or even death.

– Disconnect the mains power supply prior to installation and/or disassembly!
– Permit work on the 100-240 V supply system to be performed only by specialist staff!

7.1 Requirement for the electrician

Warning

Electric voltage!

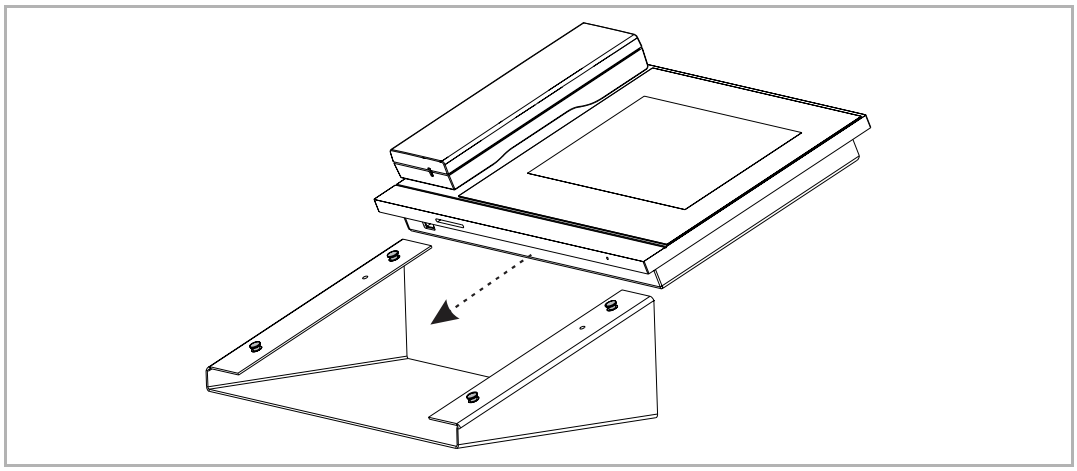
Install the device only if you have the necessary electrical engineering knowledge and experience.

– Incorrect installation endangers your life and that of the user of the electrical system.
– Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

– Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect
  2. Secure against being re-connected
  3. Ensure there is no voltage
  4. Connect to earth and short-circuit
  5. Cover or barricade adjacent live parts.
– Use suitable personal protective clothing.
– Use only suitable tools and measuring devices.
– Check the type of supply network (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective grounding, necessary additional measures, etc.).

7.2 Mounting

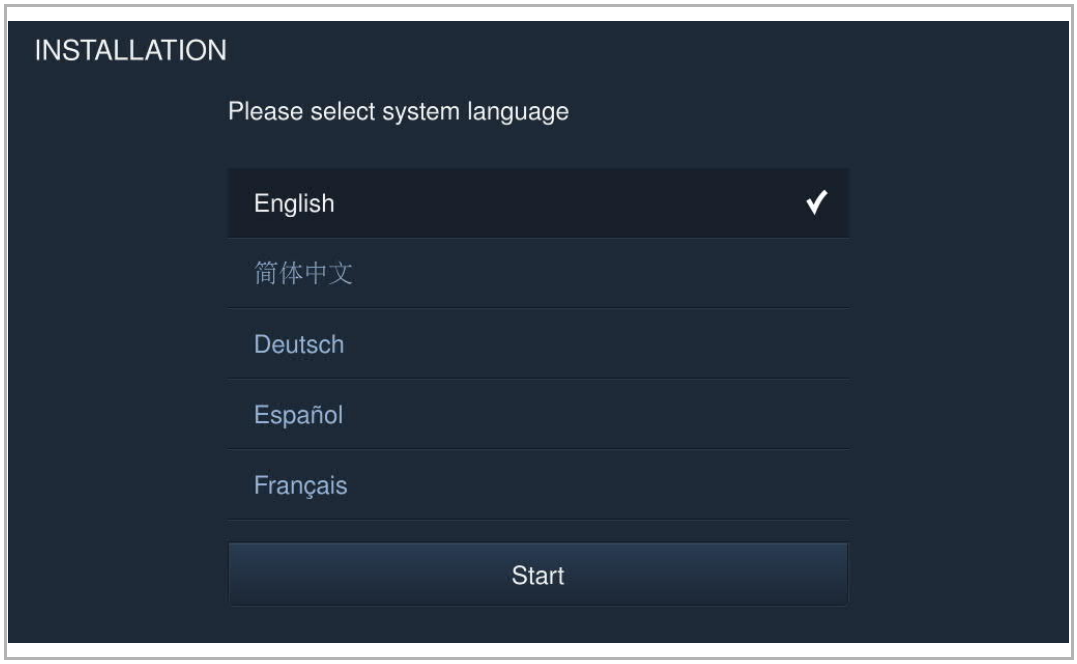


8 Commissioning

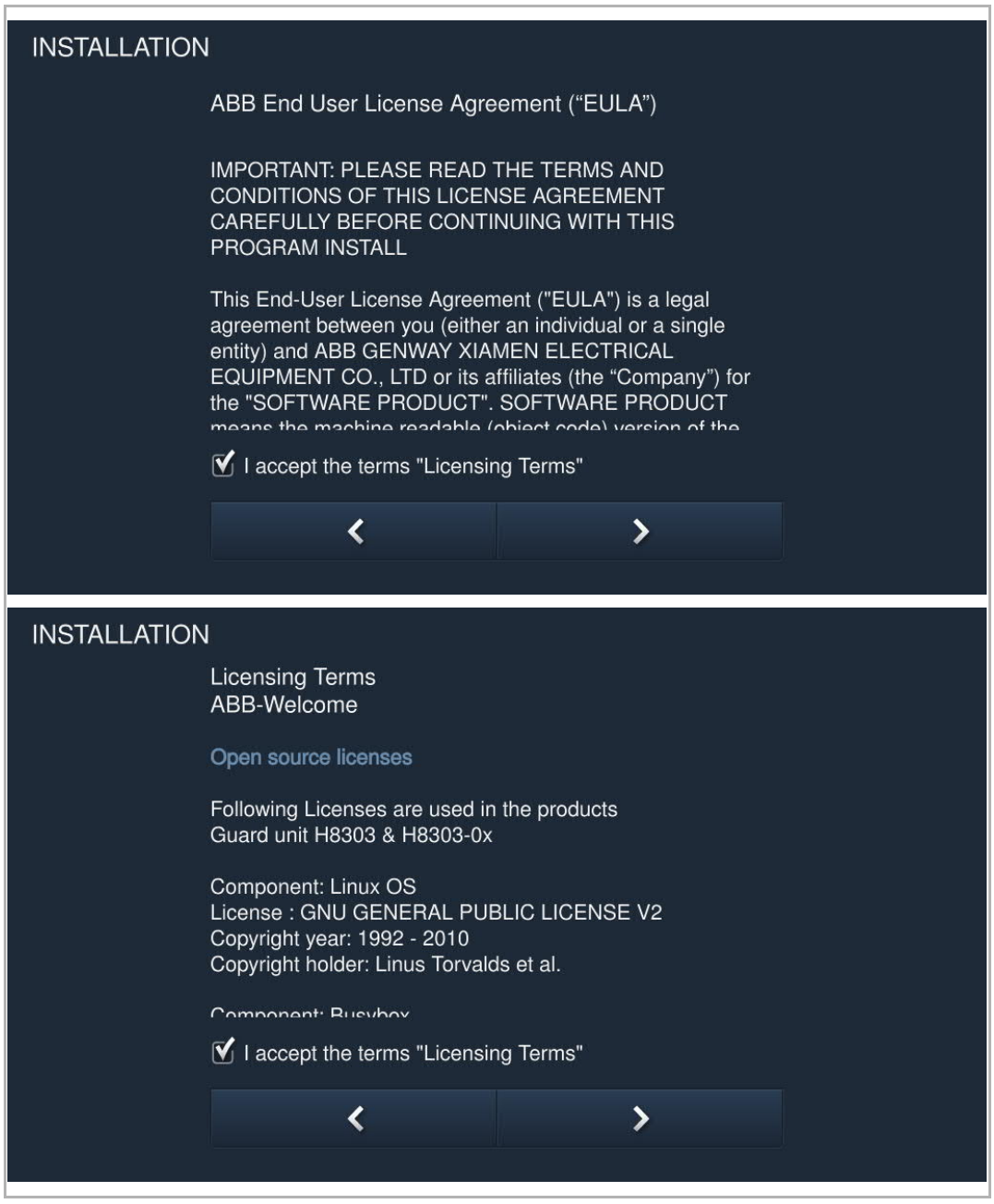
8.1 Initial setup

The guard unit enters initial setup automatically when powered on the first time or when "Clear all data" is carried out on the "Engineering settings" screen. Please see the "Local settings" chapter for more details.

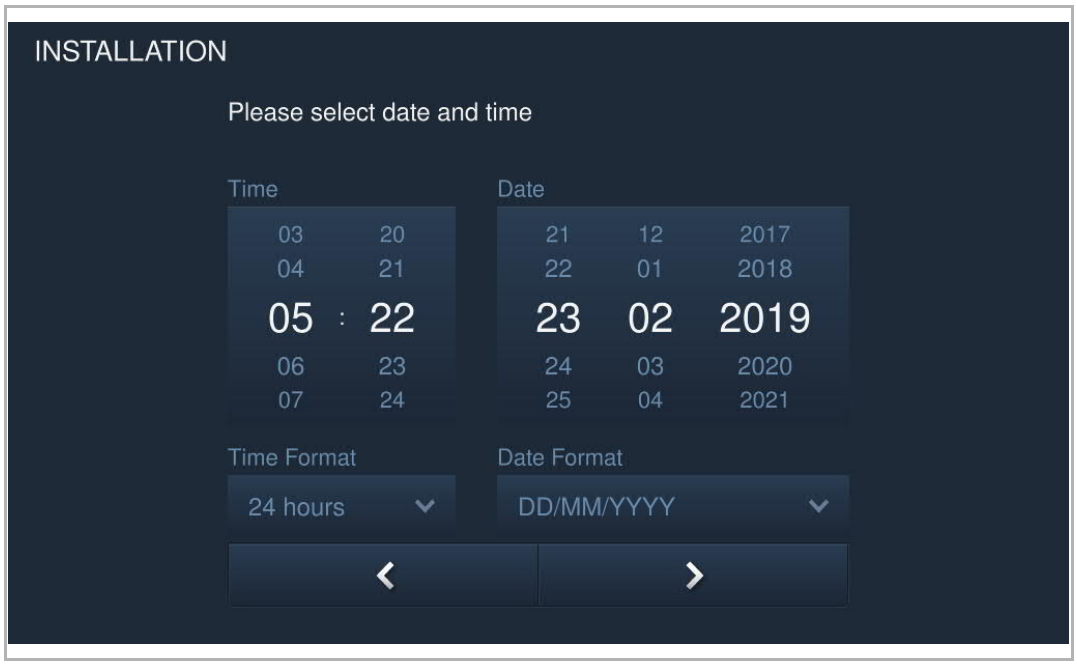
1. Select system language



2. Accept licensing terms

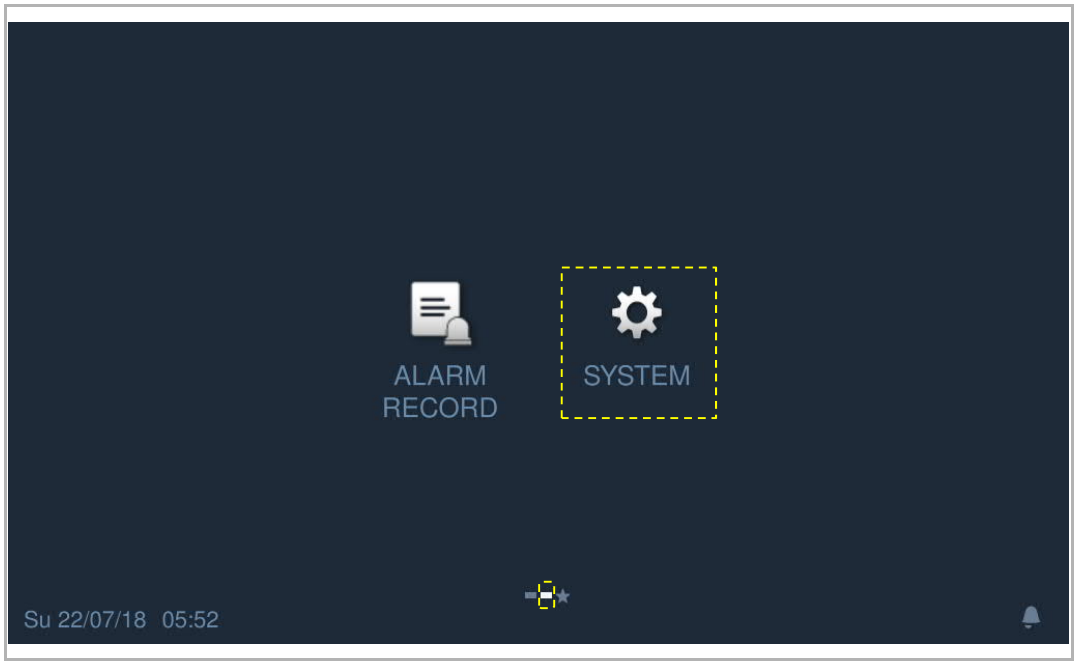


3. Set date and time



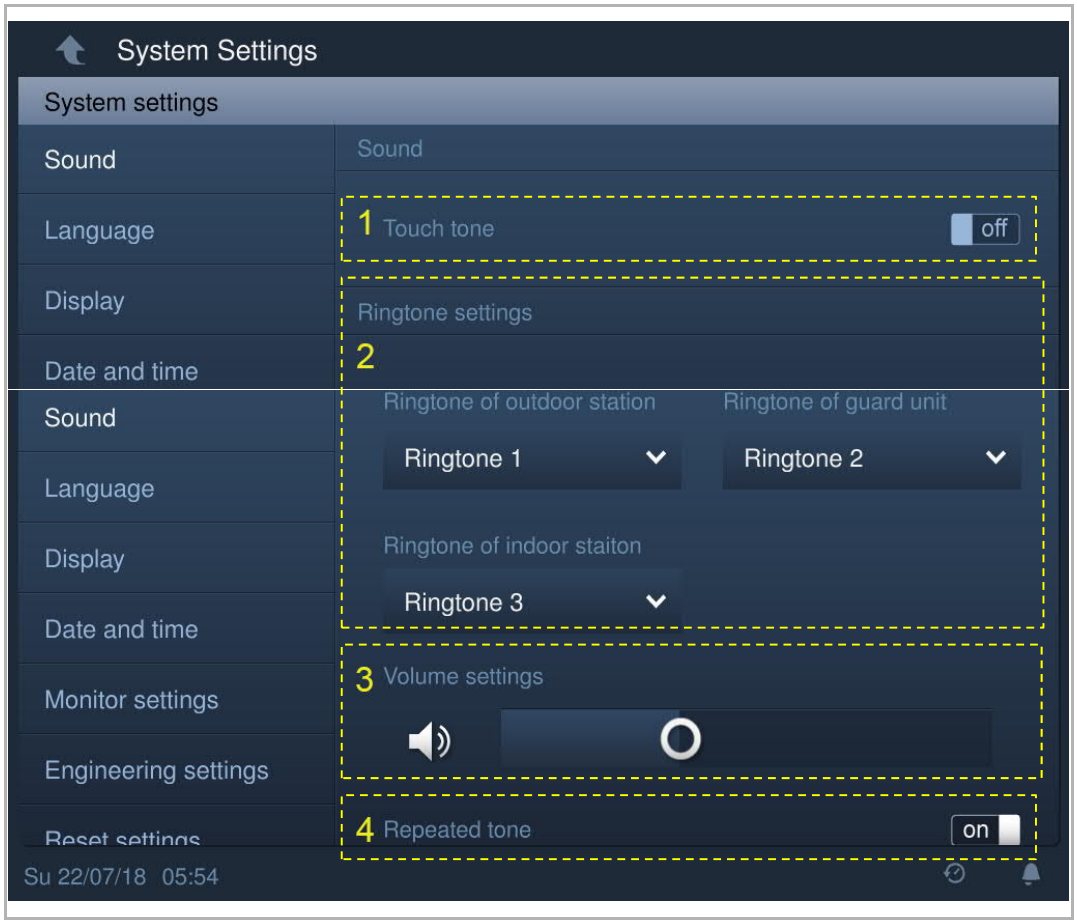
8.2 Enter System settings

On the extra screen, click "System" to access the corresponding screen.



8.3 Sound settings

On the "System settings" screen, click "Sound" to access the settings.



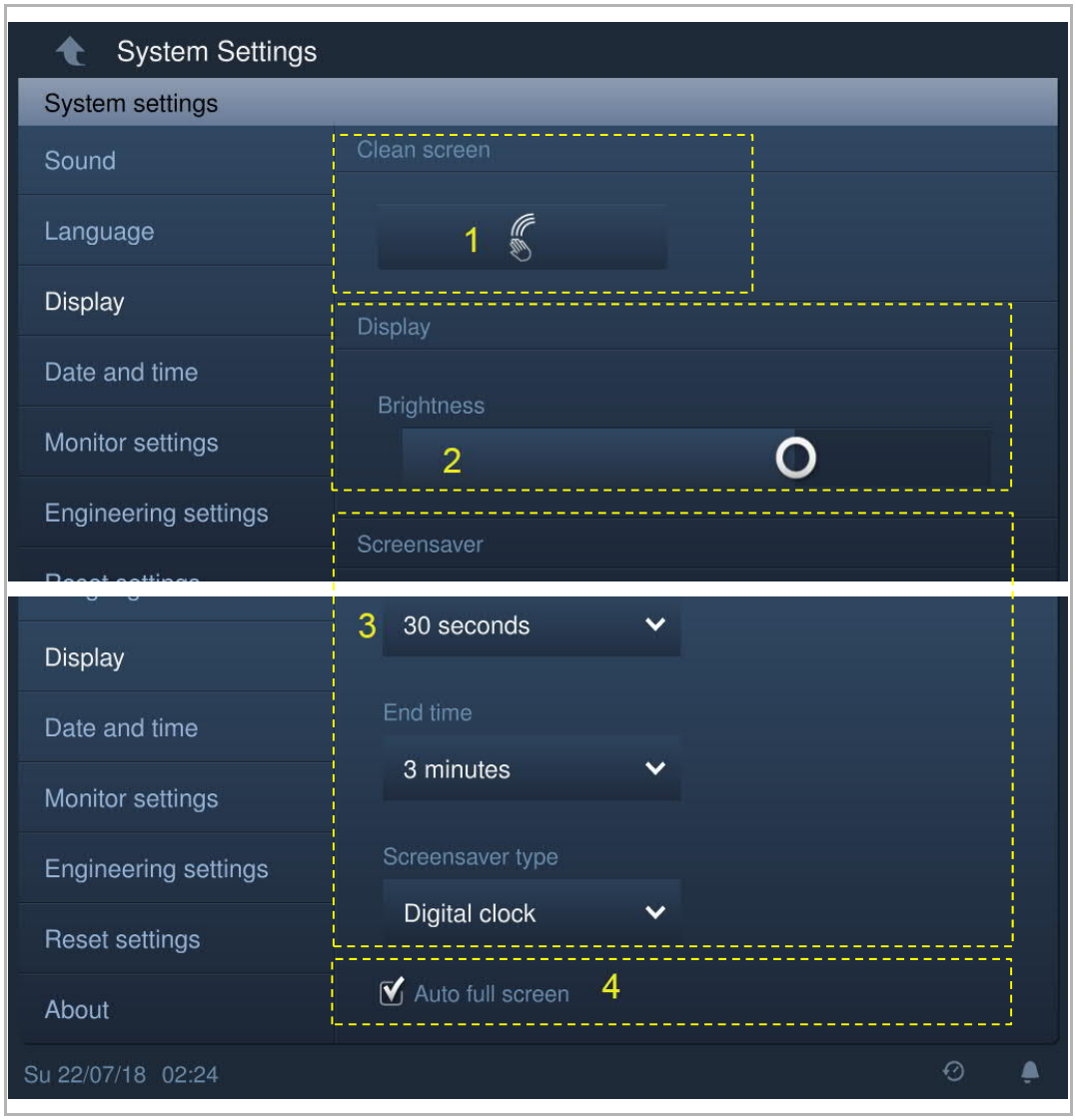
No.	Function
1	**Touch sound setting**
2	**Ringtone setting** Click the drop-down list to select the ringtones for outdoor stations, indoor stations, guard unit (4 bulit-in ringtones).
3	**Volume settings** Adjust the ringtone volume.
4	**Repeated tone setting** ON = repeated ringtone within 30 s, OFF = rings only once

8.4 Language settings

On "System settings" screen, click "Language" and select the system language.

8.5 Display settings

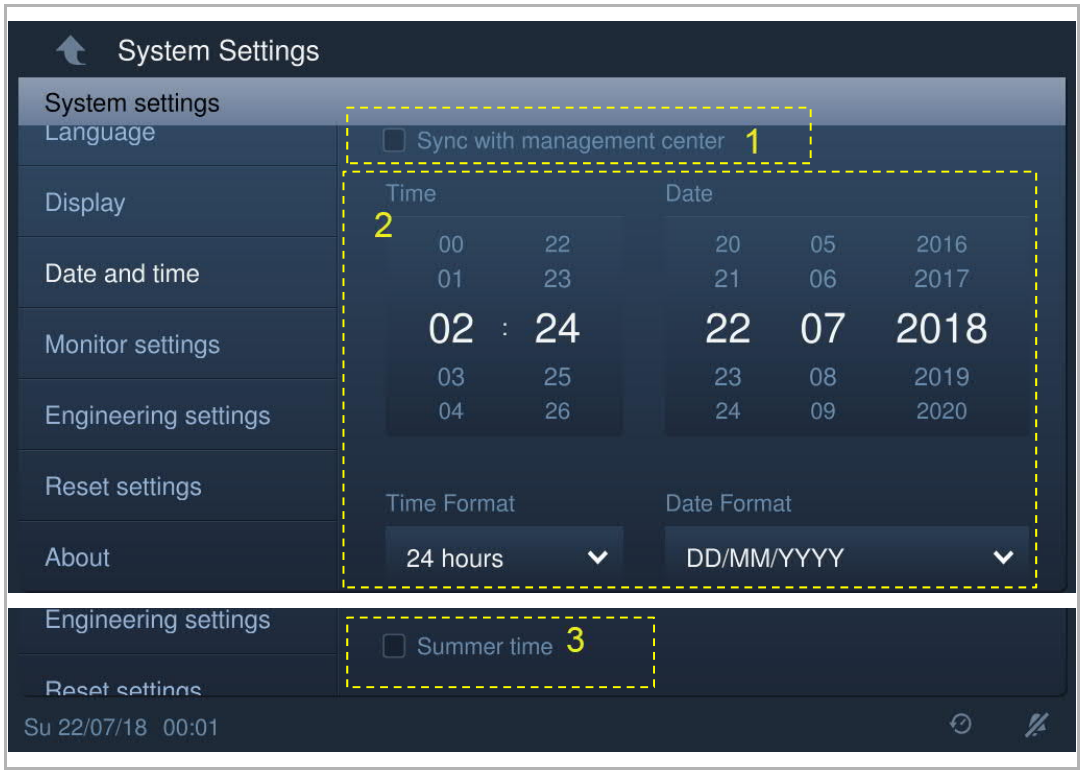
On the "System settings" screen, click "Display" to access the corresponding screen.



No.	Function
1	**Clear screen** ▪ The countdown (1…30) is displayed on the screen if this function is activated. Any actions on the screen will be invalid. ▪ The guard unit will exit "Clean screen" mode if an incoming call is received.
2	**Brightness**
3	**Screensaver** ▪ "Digital clock" displays the current time at a random position on the screen. ▪ "Built-in picture" displays 3 built-in pictures.
4	**Auto full screen (default)**

8.6 Date and time settings

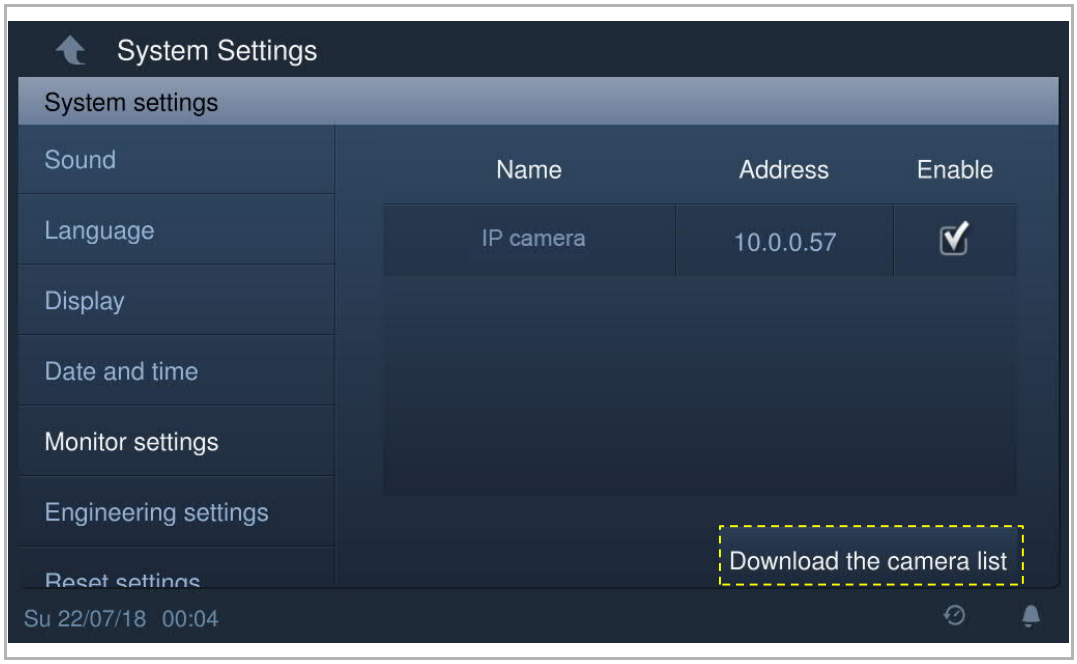
On the "System settings" screen, click "Date and time" to access the corresponding screen.



No.	Function
1	**Sync time type** Tick the checkbox to sync the date and time from the management software automatically.
2	**Time and date setting**
3	**Summer time** Tick the checkbox to enable the function.

8.7 Monitor settings

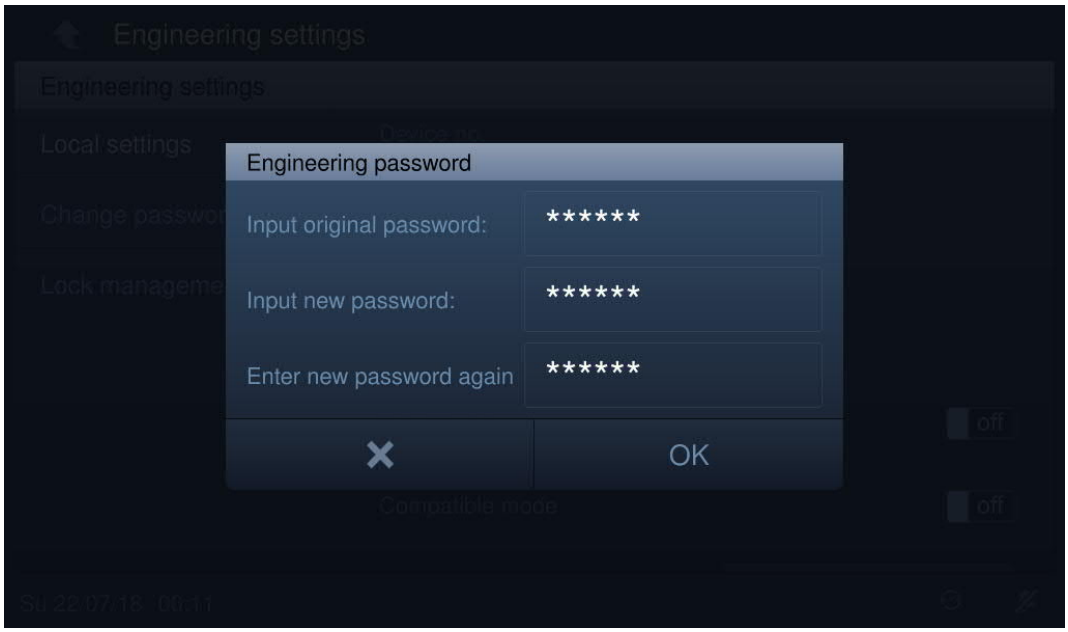
On the "System settings" screen, click "Monitor settings", and then click "Download the camera list" to download the camera list from the management software.



8.8 Engineering settings

8.8.1 Enter engineering settings

On the "System settings" screen, click "Engineering settings", enter the engineering password to access the settings.



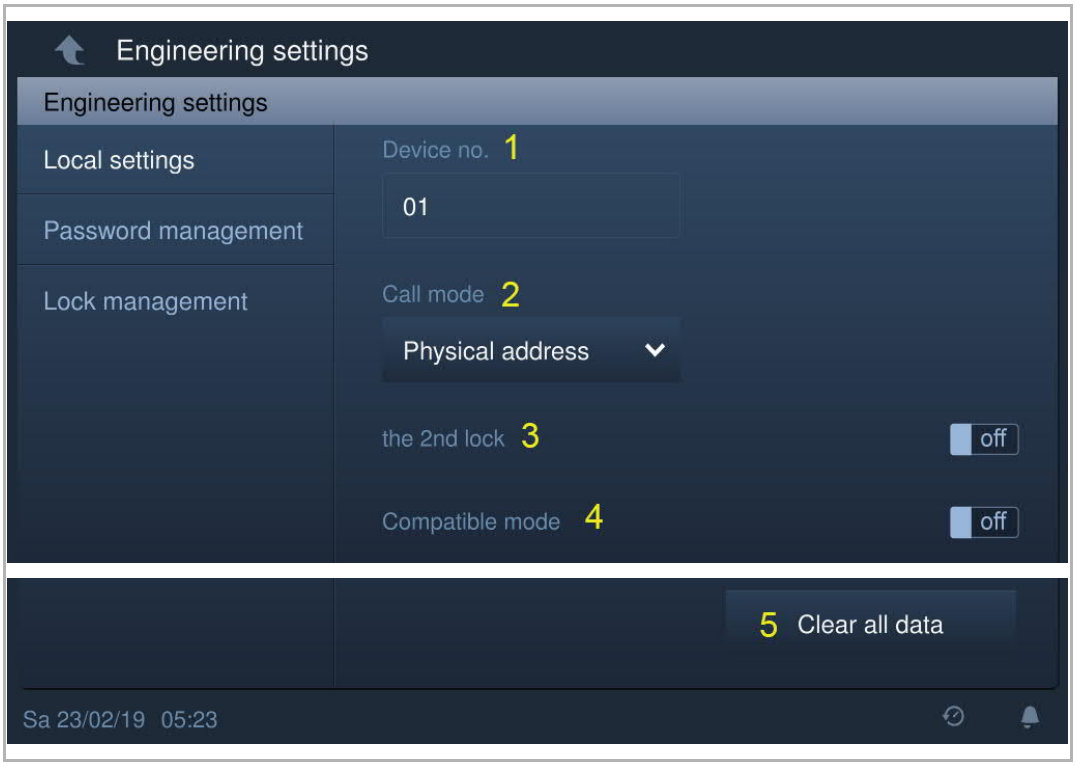
Password rule

The user must change the engineering password when accessing the engineering settings for the first time. This engineering password must not include increasing or decreasing numbers (e.g. 123456, 654321). Three consecutive identical numbers are similarly not permitted (e.g. 123444, 666888).

Wrong password

If the wrong password is entered 10 times within 5 minutes, it is not possible to enter the password again for 5 minutes.

8.8.2 Local settings



No.	Function
1	**Device No** Range is 1...32.
2	**Call mode** Toggles the call mode between "Physical address" (default) and "Logical address".
3	**The 2nd lock** Releases the secondary lock on the outdoor station if the function is enabled.
4	**Security mode/Compatible mode** The guard unit works in "Security mode" by default to guarantee high security (switch is set to "off"). In this mode, the certificate issued by the management software must be set up on the guard unit before use. If there is no management software, the guard unit works in "Compatible mode" to work normally. (switch is set to "on").
5	**Clear all data** This function is only available within 120 s after the indoor station is powered on. All data including user settings and engineering settings will be reset to the factory defaults

8.8.3 Change password

On the "System settings" screen, click "Password management" to access the settings.

No.	Function
1	**Change engineering password** Click here to change the engineering password (the system default is 345678).
2	**Change lock group password** Click here to change the lock group password (the system default is 123456). Please see the "Lock group" chapter for more details.
3	**Change emergency unlock password** Click here to change the emergency unlock password (the system default is 123456). Please see the "Emergency unlock" chapter for more details.

Password rule

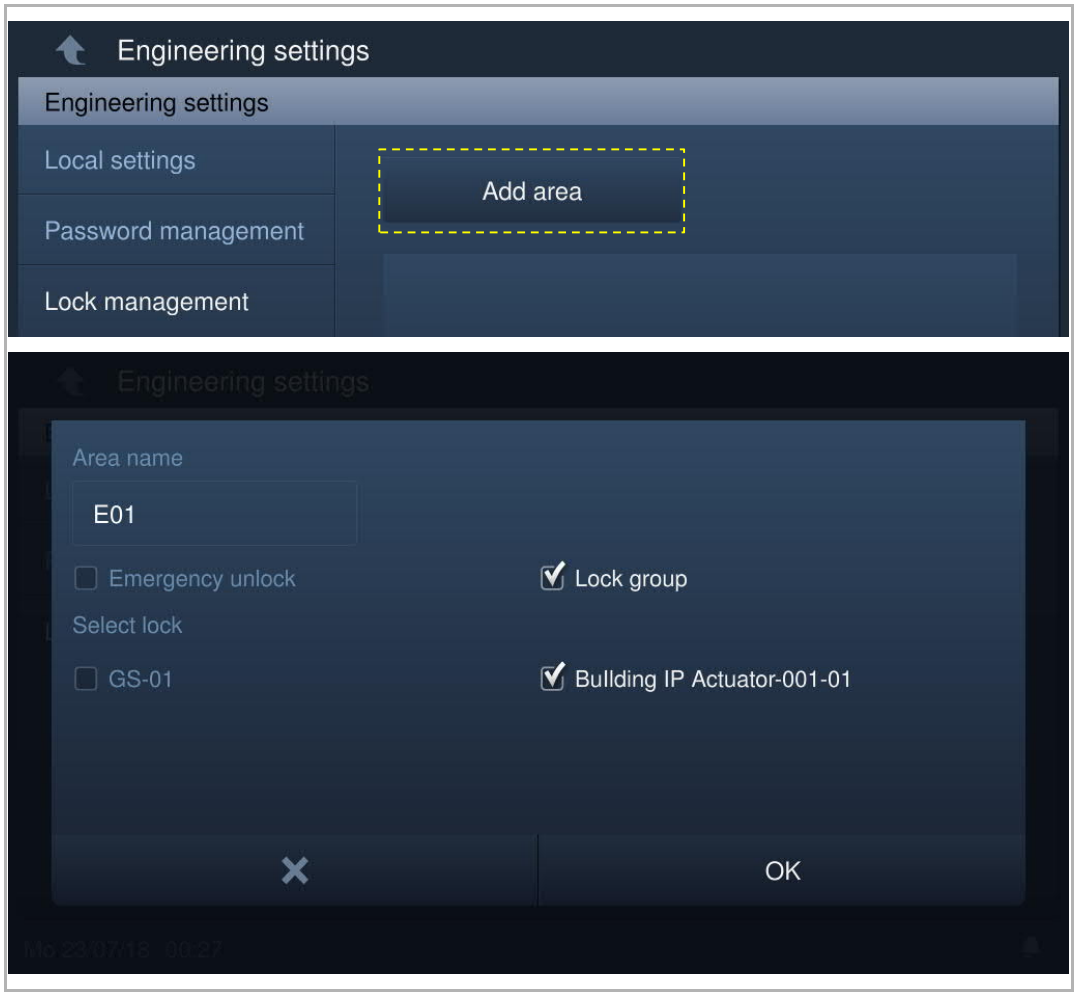
This password must not include continuously increasing or decreasing numbers (e.g. 123456, 654321). Three consecutive identical numbers are similarly not permitted (e.g. 123444, 666888).

8.8.4 Lock group

This function is only available on the guard unit which is set to "Security mode".

On the "Engineering settings" screen, click "Lock management" and "Add area" to access the settings.

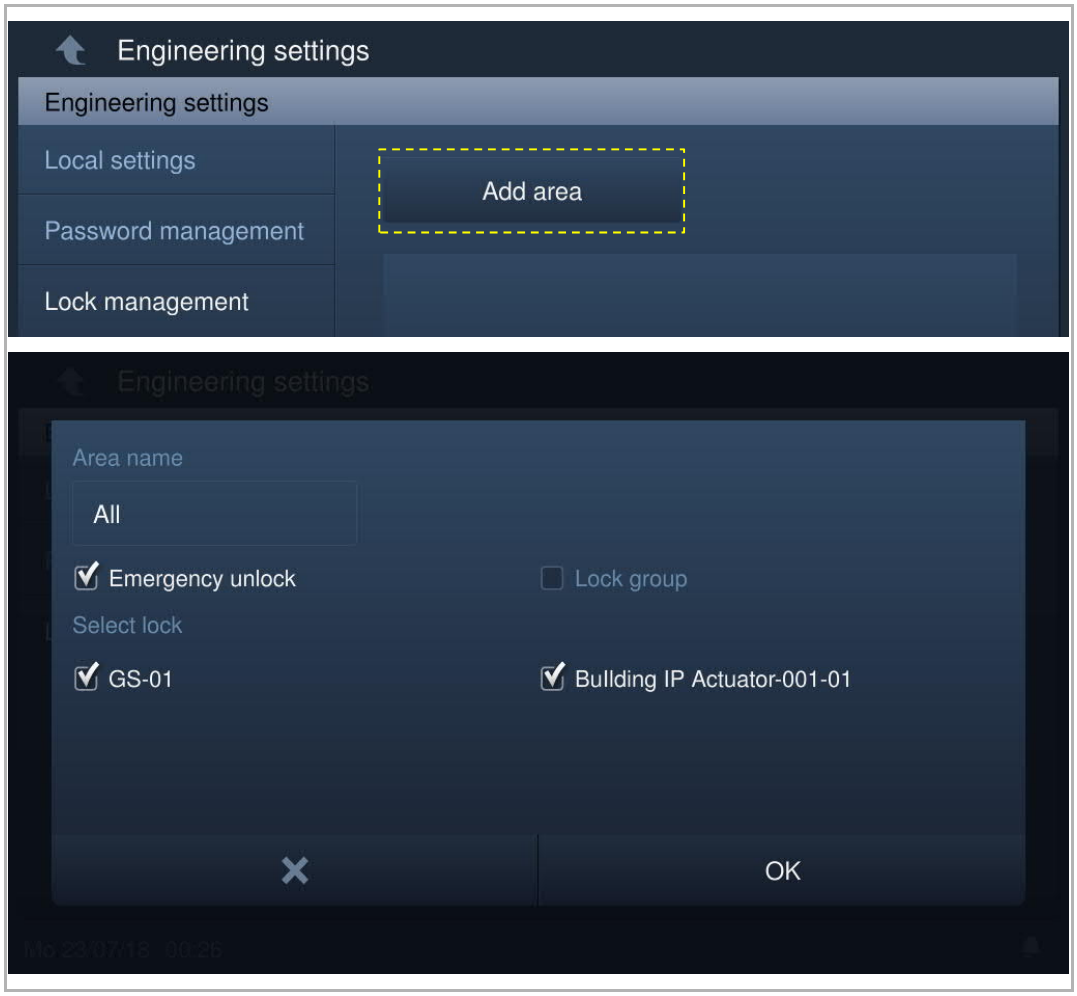
Tick the "Lock group" checkbox to enable the function, select the lock, enter the area name (e.g. "E01") and click "OK" to save.



8.8.5 Emergency unlock

On the "Engineering settings" screen, click "Lock management", then click "Add area" to access the settings.

Tick the check box "Emergency" to enable the function, select the lock, enter the area name (e.g. "All") and click "OK" to save.

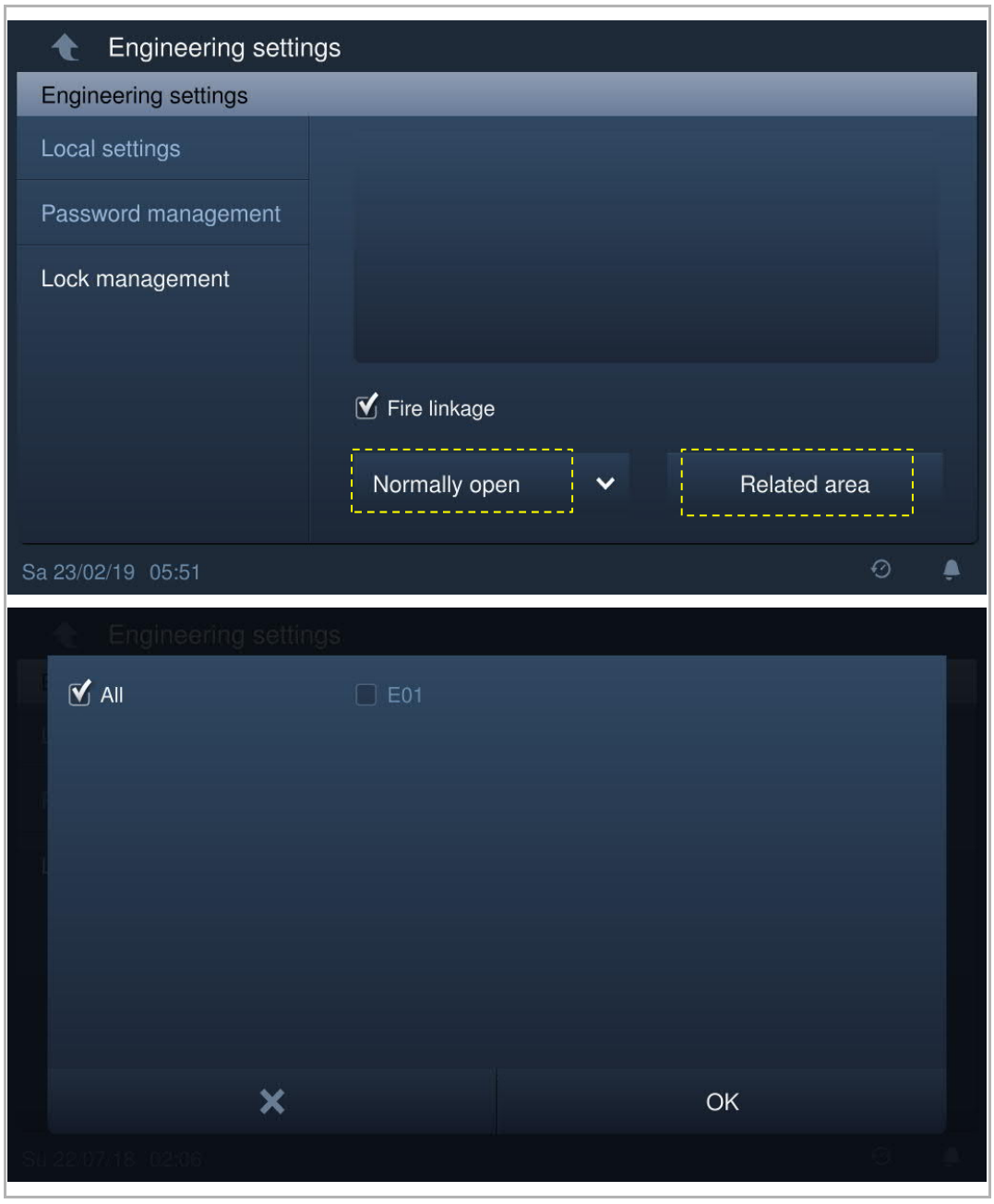


Fire linkage

This function is only available on the guard unit which is set to "Security mode".

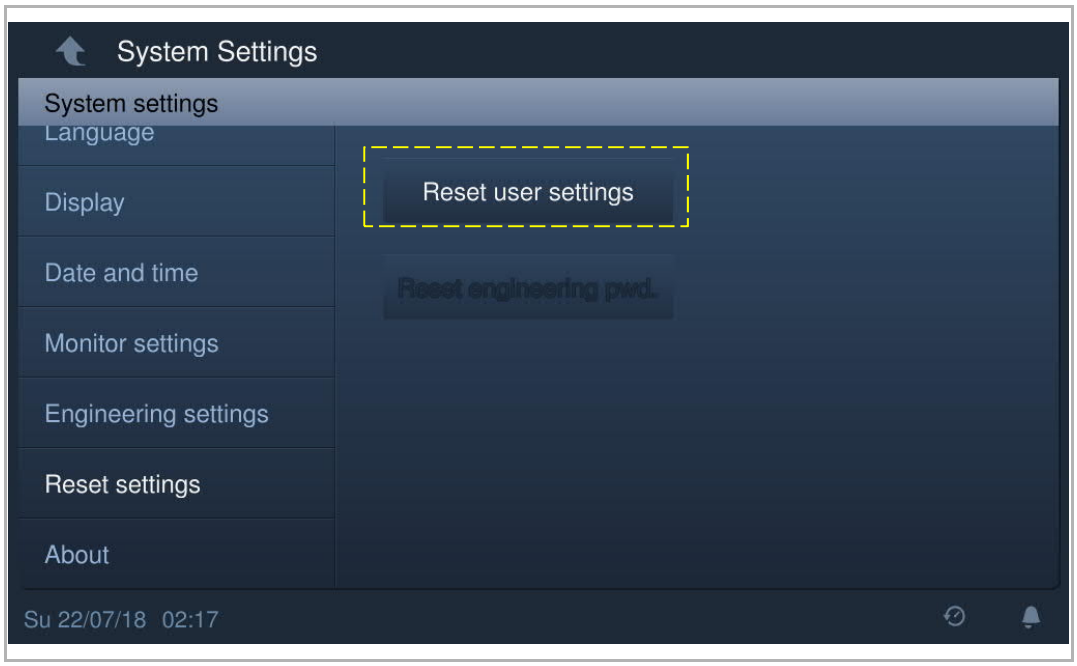
On the "Engineering settings" screen, click "Lock management", tick the "Fire linkage" checkbox to enable the function (the system default is disabled).

Select lock open type (e.g. "Normally closed") and then click "Related area", select an emergency unlock area and click "OK" to save.



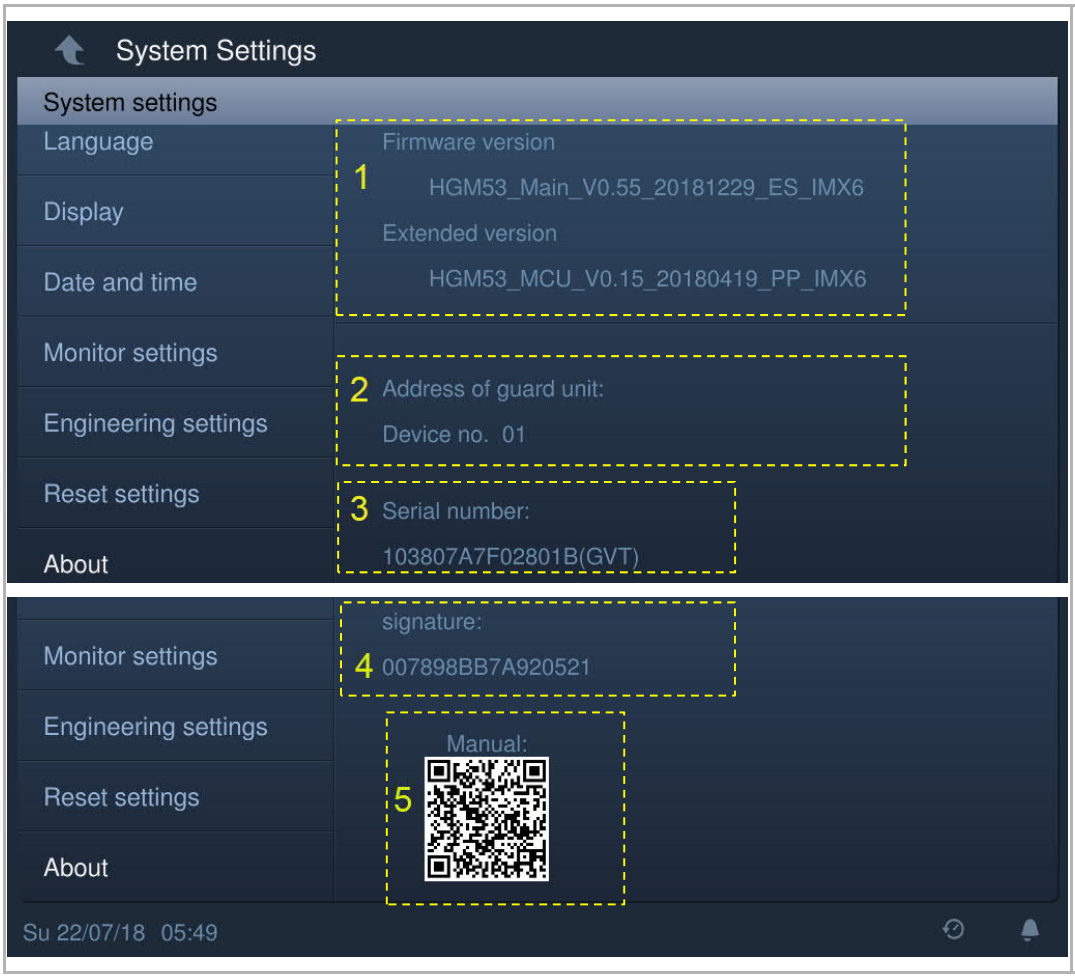
8.9 Reset settings

On the "System settings" screen, click "Reset user settings", enter the user password (the system default is 123456) and click "OK" to reset the user settings.



8.10 About

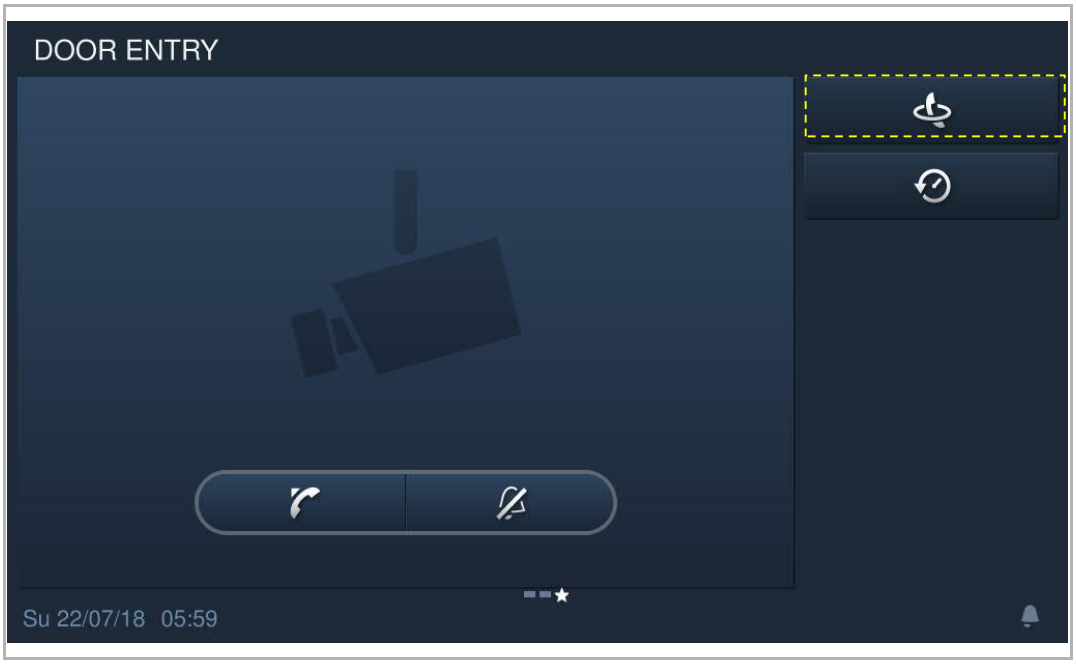
On the "System settings" screen, click "About" to view the version information.



No.	Function
1	Version information
2	Address of the guard unit
3	**Serial number** This number is used to obtain the certificate from the management software.
4	**Signature** This number is displayed when the guard unit receives the certificate from the management software successfully.
5	**Manual** Scan this QR code to call up the product manual for the guard unit.

8.11 Add a contact

On the DES home screen, click to access the corresponding screen.

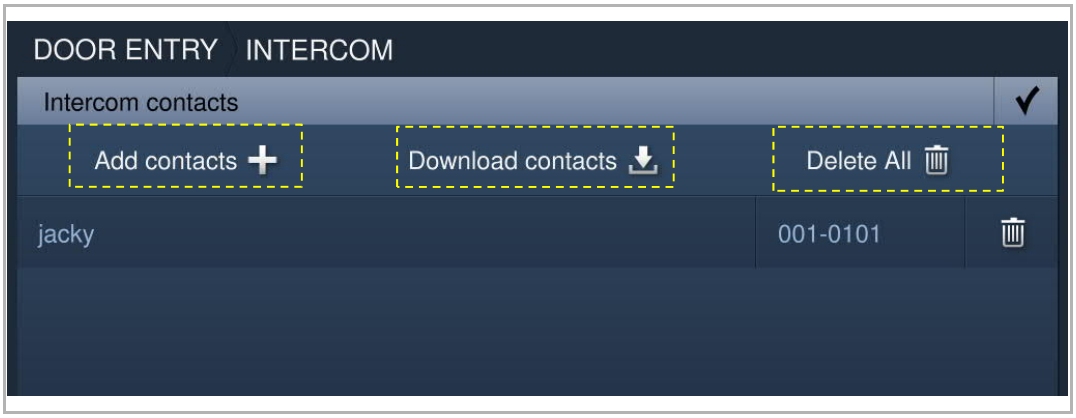


On the "Intercom contacts" screen, click to access the settings.

Click "Add contacts" to add a contact.

Click "Download contacts" to download the contacts from the management software.

Click "Delete All" to delete all contacts.



9 Operation

9.1 Incoming call

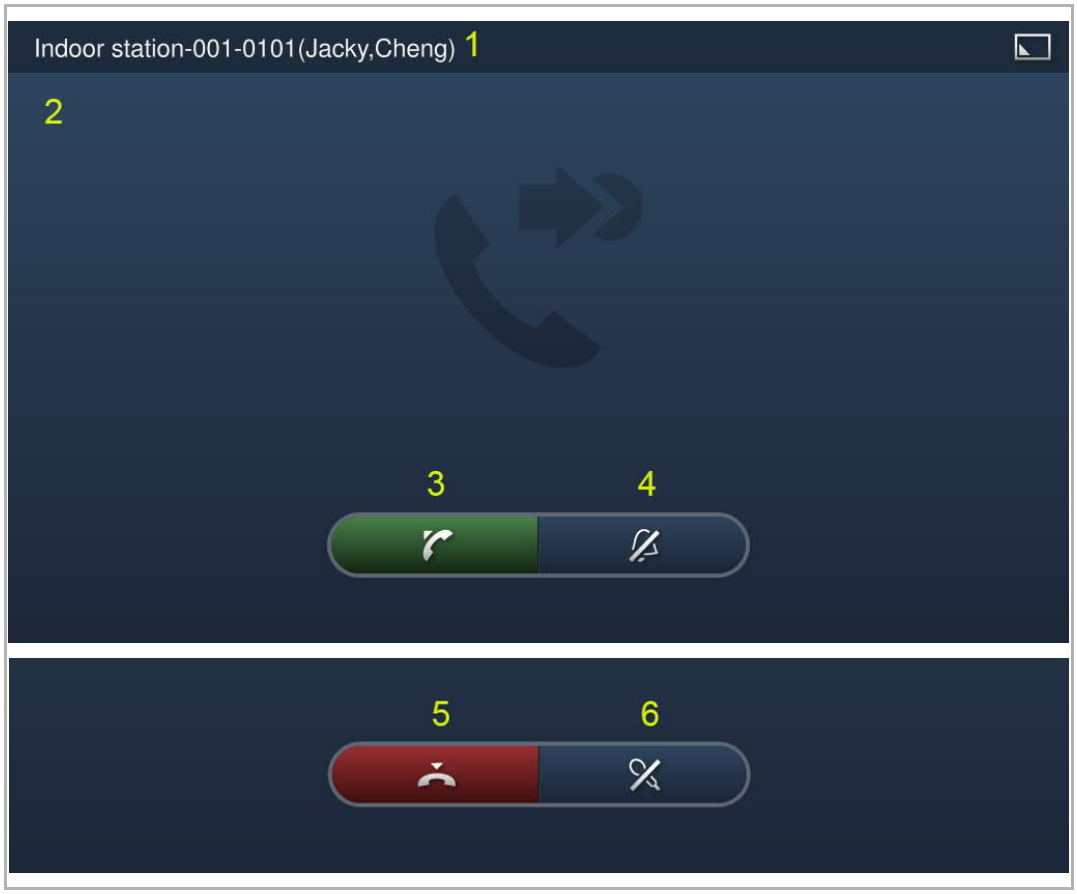
9.1.1 Call from outdoor station/gate station

The guard unit displays the image as full screen by default.

Click to switch to normal screen mode.

No.	Function
1	Caller ID
2	Display the image of the outdoor stations (the countdown will be displayed in the last 9 s).
3	Click this icon to accept the call.
4	**Release the default lock** Click this icon to release the default lock on the calling outdoor station.
5	**Release the 2nd lock** Click this icon to release the secondary lock on the calling outdoor station. This function is disabled by default. Please see the "Local settings" chapter about how to enable the function.
6	Click this icon to mute the ringtone on the guard unit.
7	Click this icon to display the image of the next camera.
8	Click here to switch the image between full screen and normal screen.
9	Click this icon to take a snapshot manually.
10	Select the image of the outdoor station or the camera from the drop-down list.
11	Click "+" or "-" to adjust the volume.

9.1.2 Calling from the guard unit/indoor station

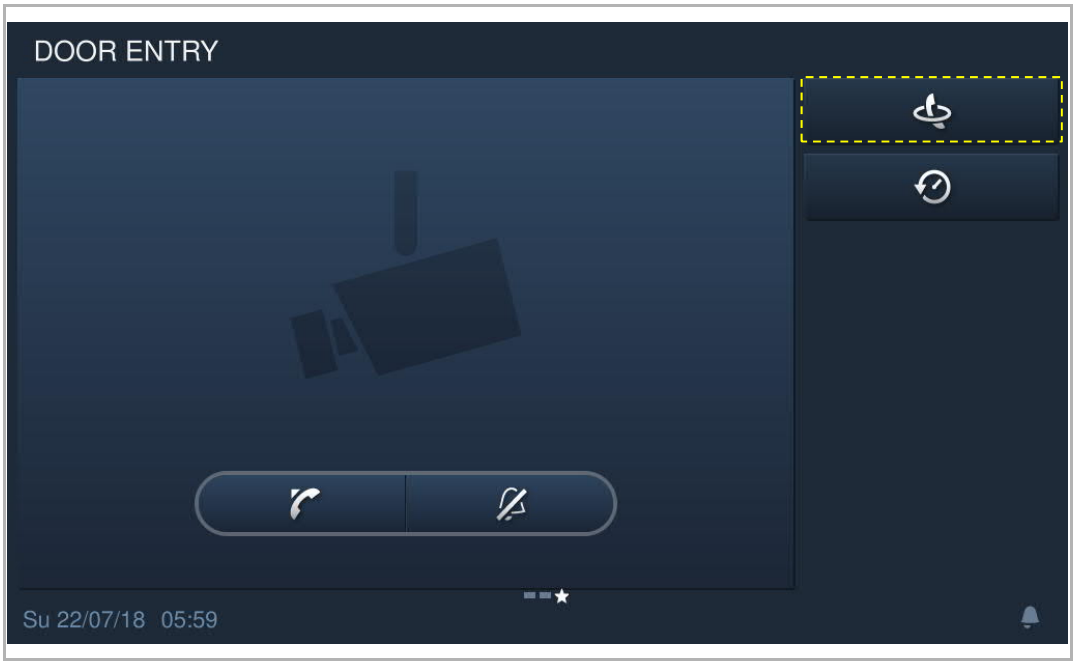


No.	Function
1	Caller ID
2	Display the countdown in the last 9 s.
3	Click this icon to accept the incoming call.
4	Click this icon to mute the ringtone on this device.
5	Click this icon to end the call.
6	Click this icon to mute the volume.

9.2 Intercom

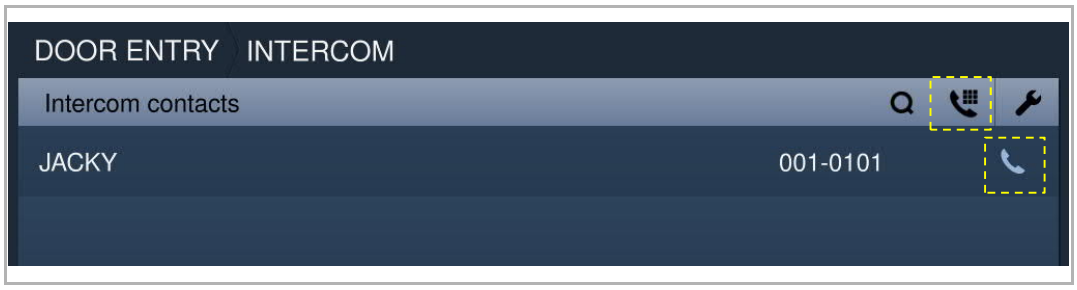
9.2.1 Accessing the intercom screen

In standby mode, click on the DES home screen to access the corresponding screen.

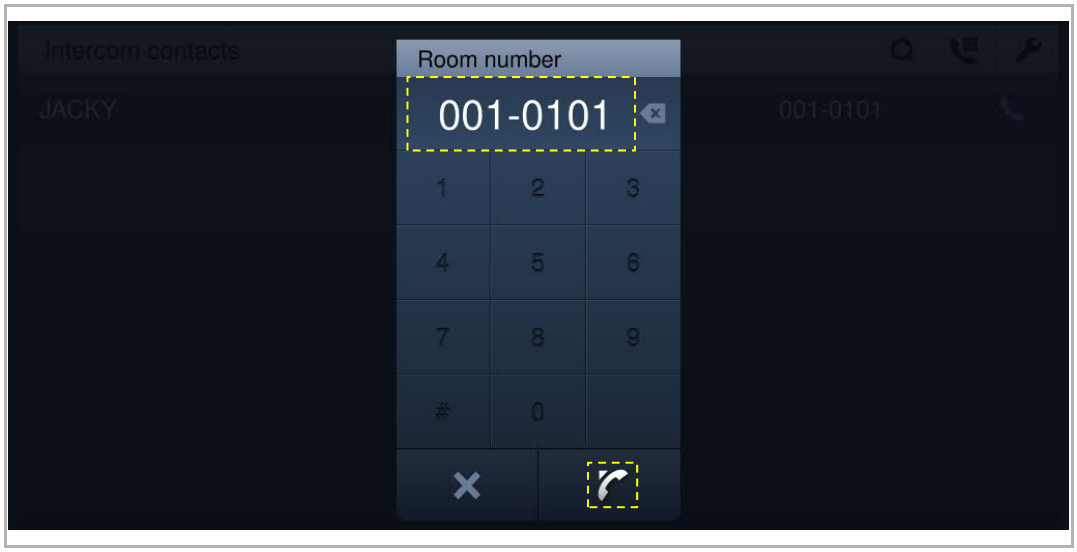


9.2.2 Initiating an intercom call

On the Intercom screen, select a contact, then click to initiate an intercom call

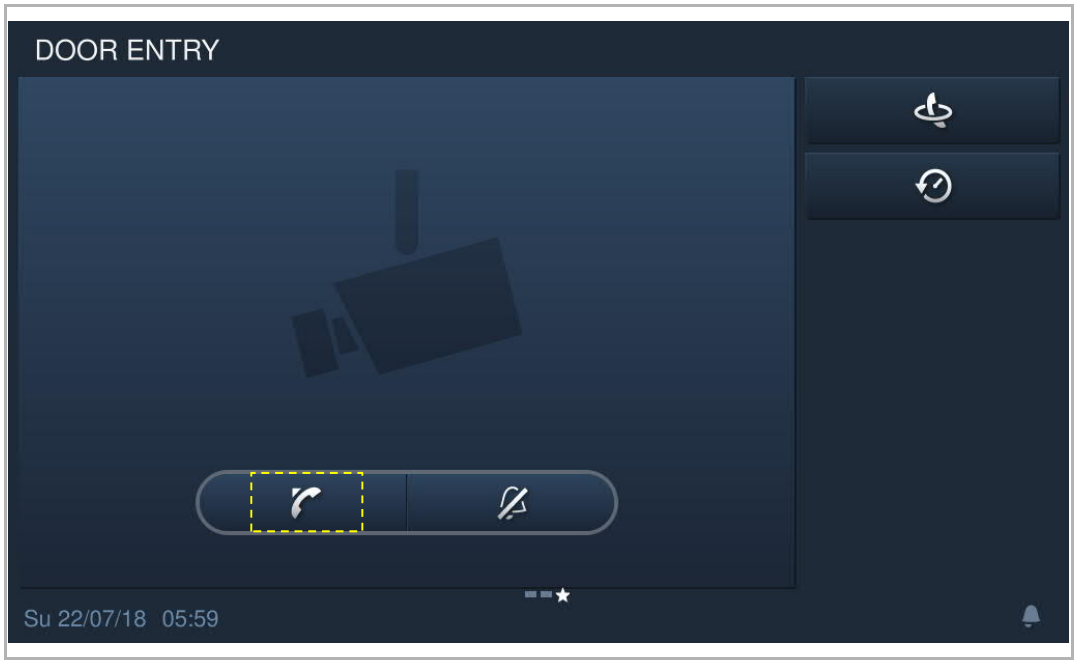


You can also click and enter the physical address/logic address, click to initiate an intercom call.



9.3 Surveillance

In standby mode, on the DES screen, click to start a surveillance.



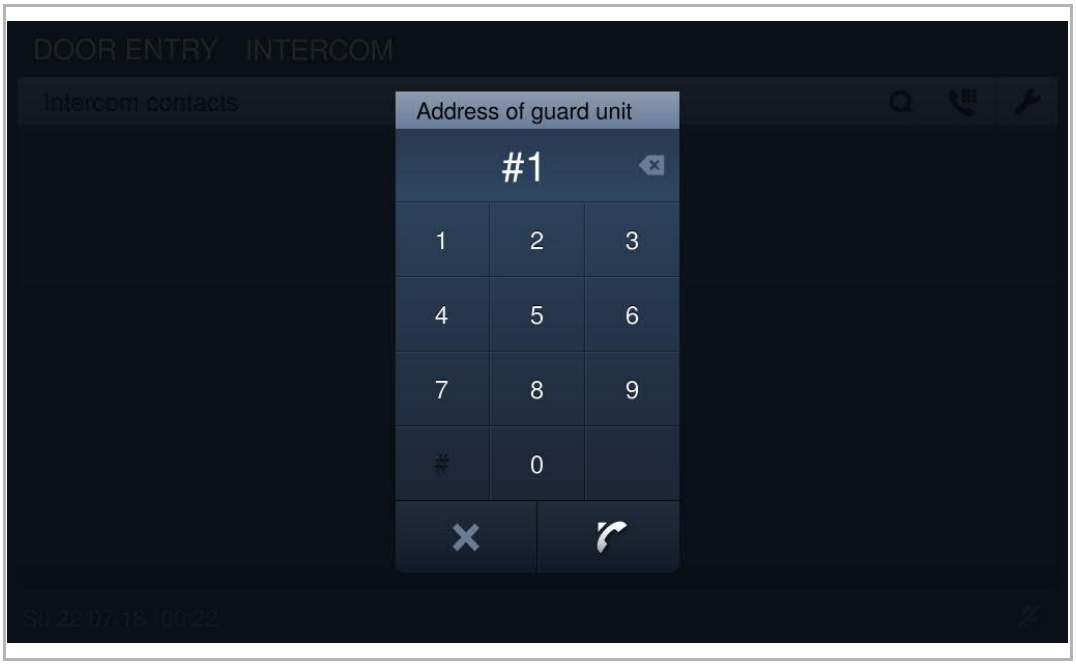
9.3.1 Surveillance from outdoor station/gate station

No.	Function
1	Caller ID
2	Display the image from the outdoor station. (the countdown will be displayed in the last 9 s)
3	End the surveillance.
4	**Release the default lock** Click this icon to release the default lock of the monitored outdoor station.
5	**Release the 2nd lock** Click this icon to release the secondary lock of the monitored outdoor station.
6	Mute (default) or unmute the volume during surveillance.
7	Click this icon to display the image of the next outdoor station or the next camera.
8	Click here to switch between full screen and normal screen.
9	Click this icon to take a snapshot.
10	Select the image of the outdoor station or the camera from the drop-down list.
11	Click "+" or "-" to adjust the volume.
12	Click this icon, enter "Building no."+ "Device no." to monitor the dedicated outdoor station or enter "Device no." to monitor the dedicated gate station.

9.3.2 Calling other guard unit

In standby mode, click on the DES home screen to enter corresponding screen.

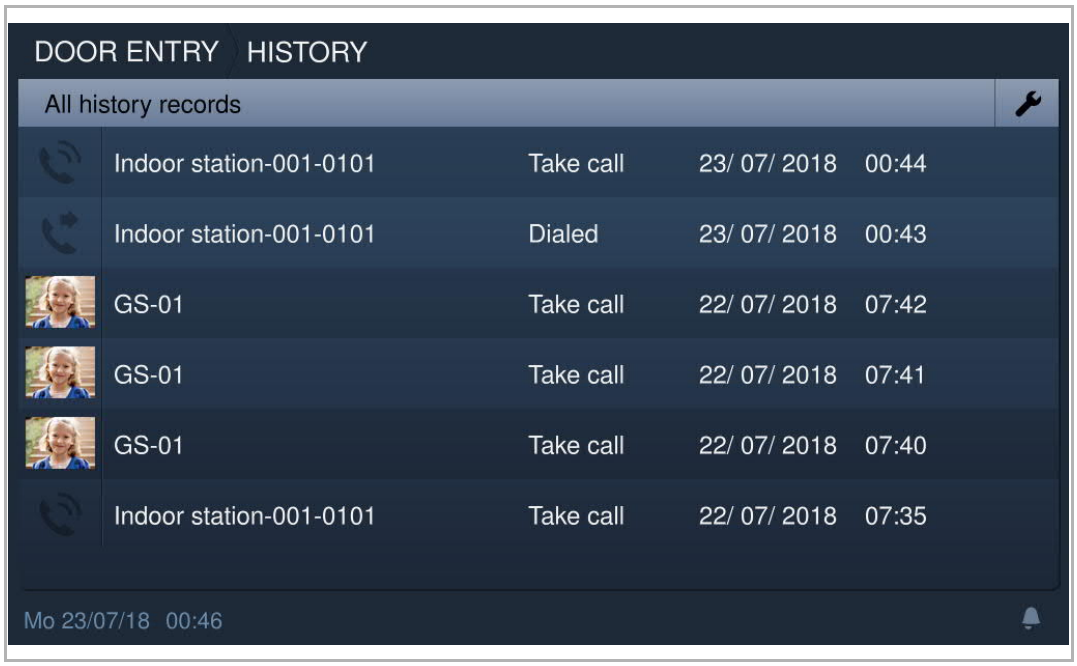
Click and entert "#"+ "Guard unit no.", then click to initiate an intercom call.



9.4 History

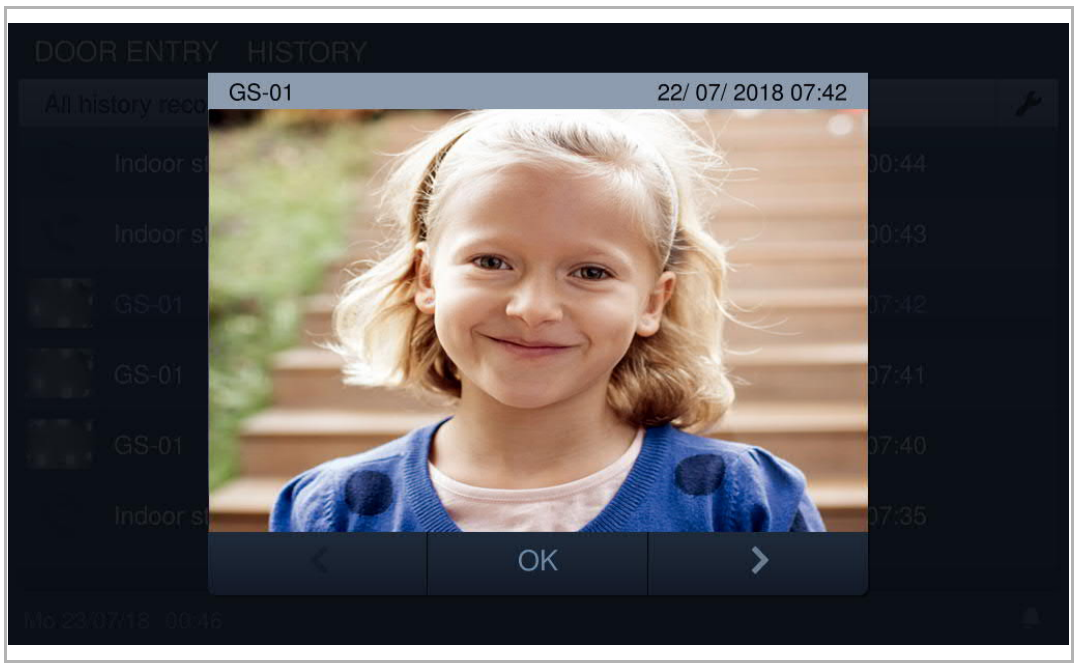
In standby mode, click on the DES home screen or click on the status bar to access the "History" screen.

A maximum of 30 call records can be stored. Highlighting indicates unread status.



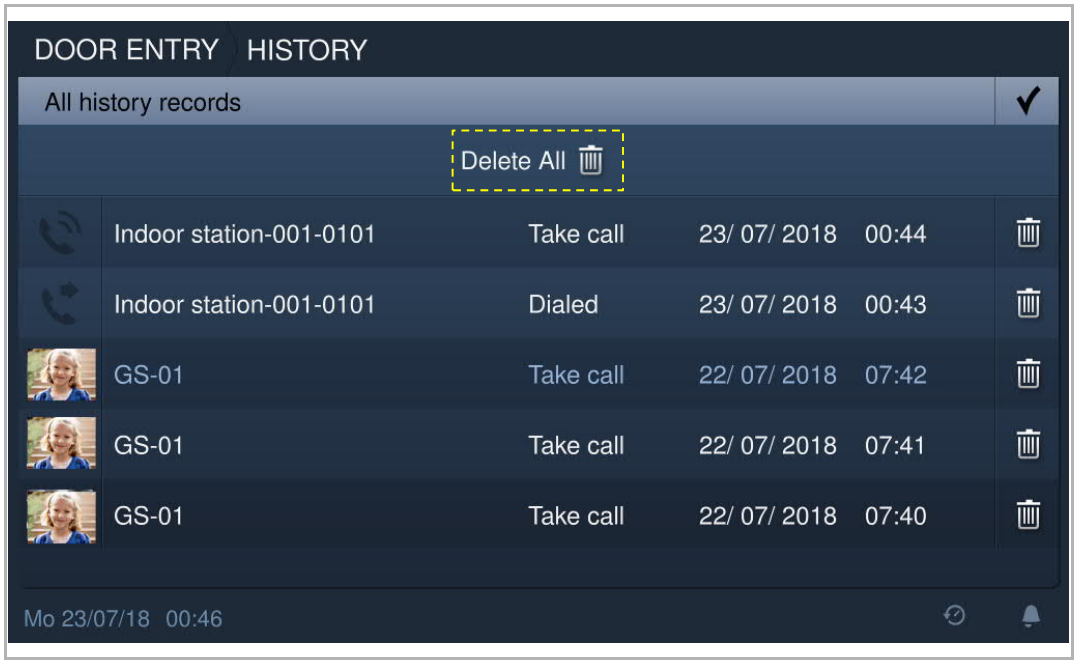
Click the picture to see details on the pop up window.

Click "<" or ">" to view the pictures. (a maximum of 3 pictures for each record)



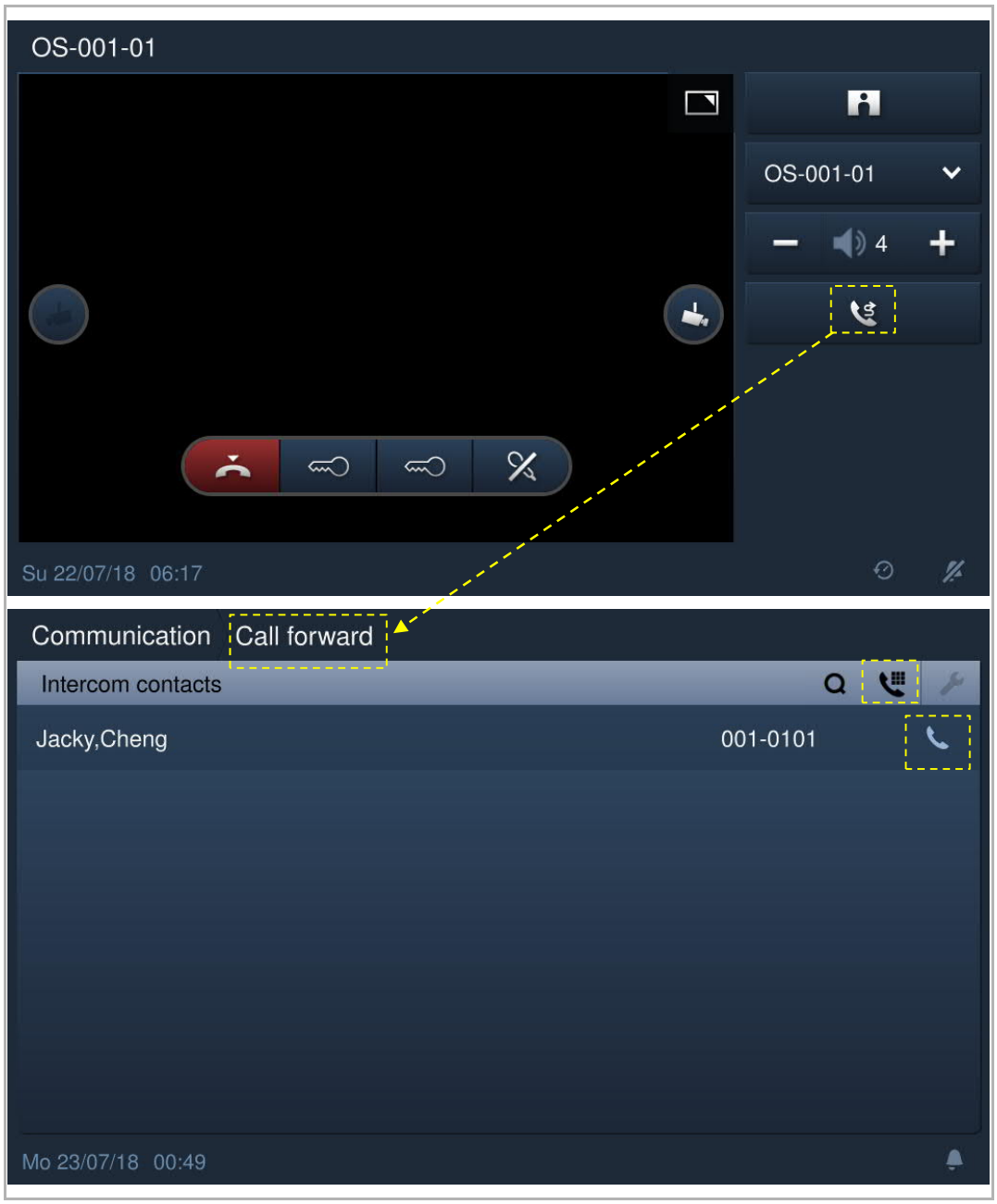
Click to enter the settings.

Click "Delete All" to delete the entire history record.



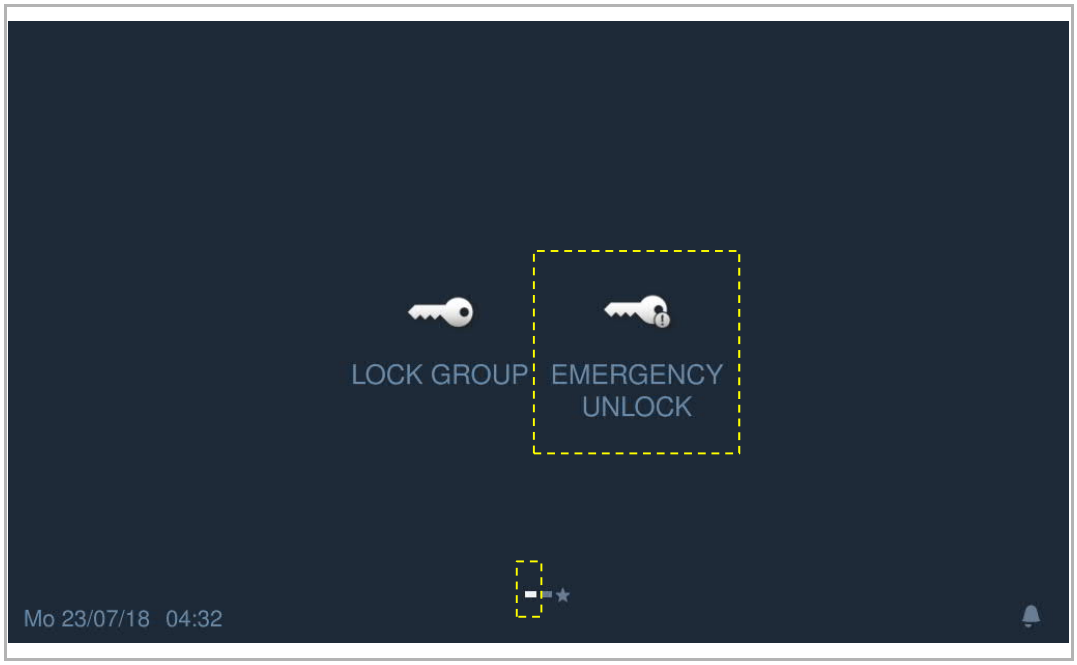
9.5 Call forwarding

When the guard unit receives a call from an outdoor station, you can click to access "Call forward" screen, then click to transfer the call to the indoor station. Or you can click and then enter the address of the indoor station to transfer the call.

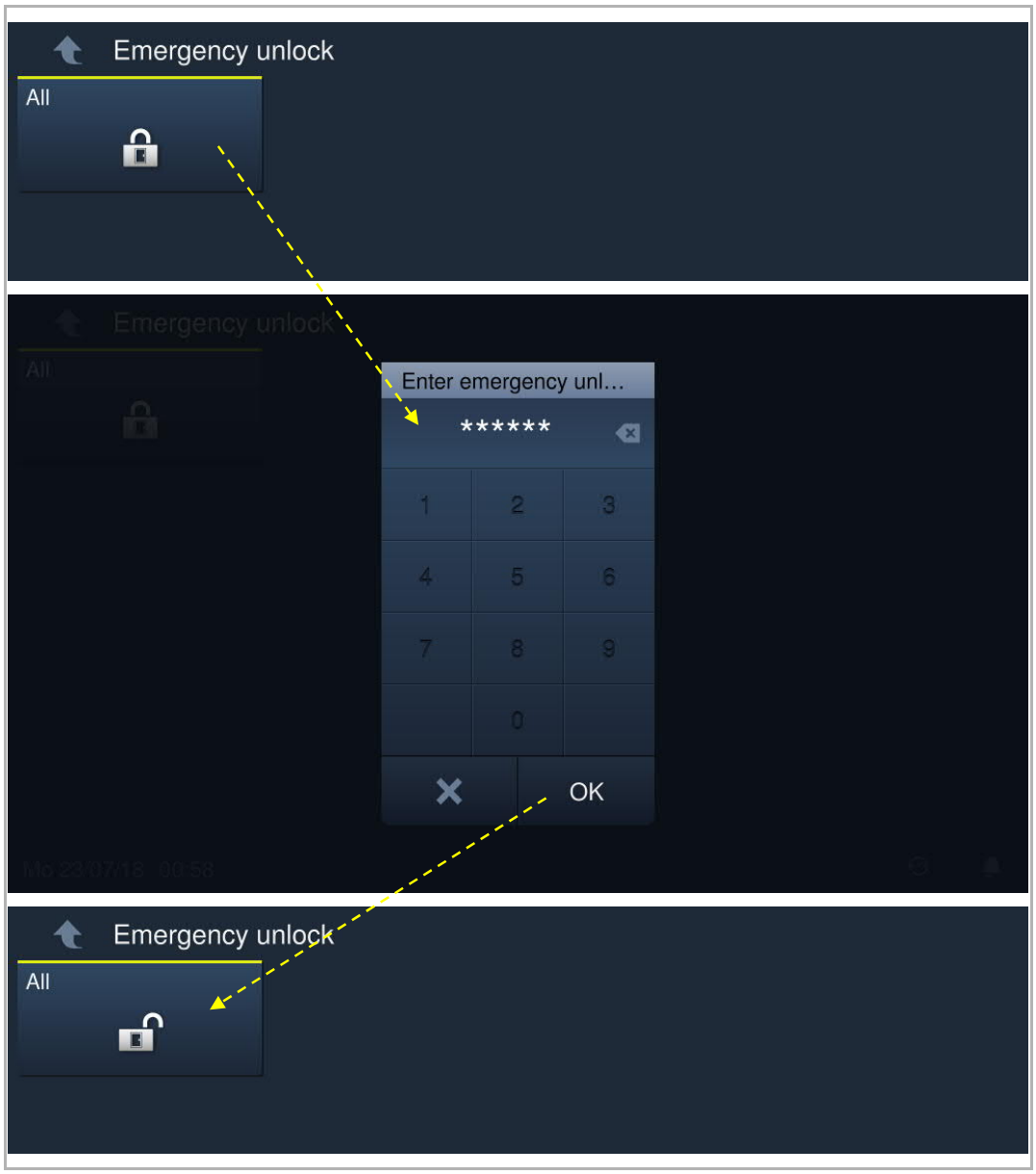


9.6 Emergency unlock

On the extra screen, click "Emergency unlock" to access the corresponding screen.



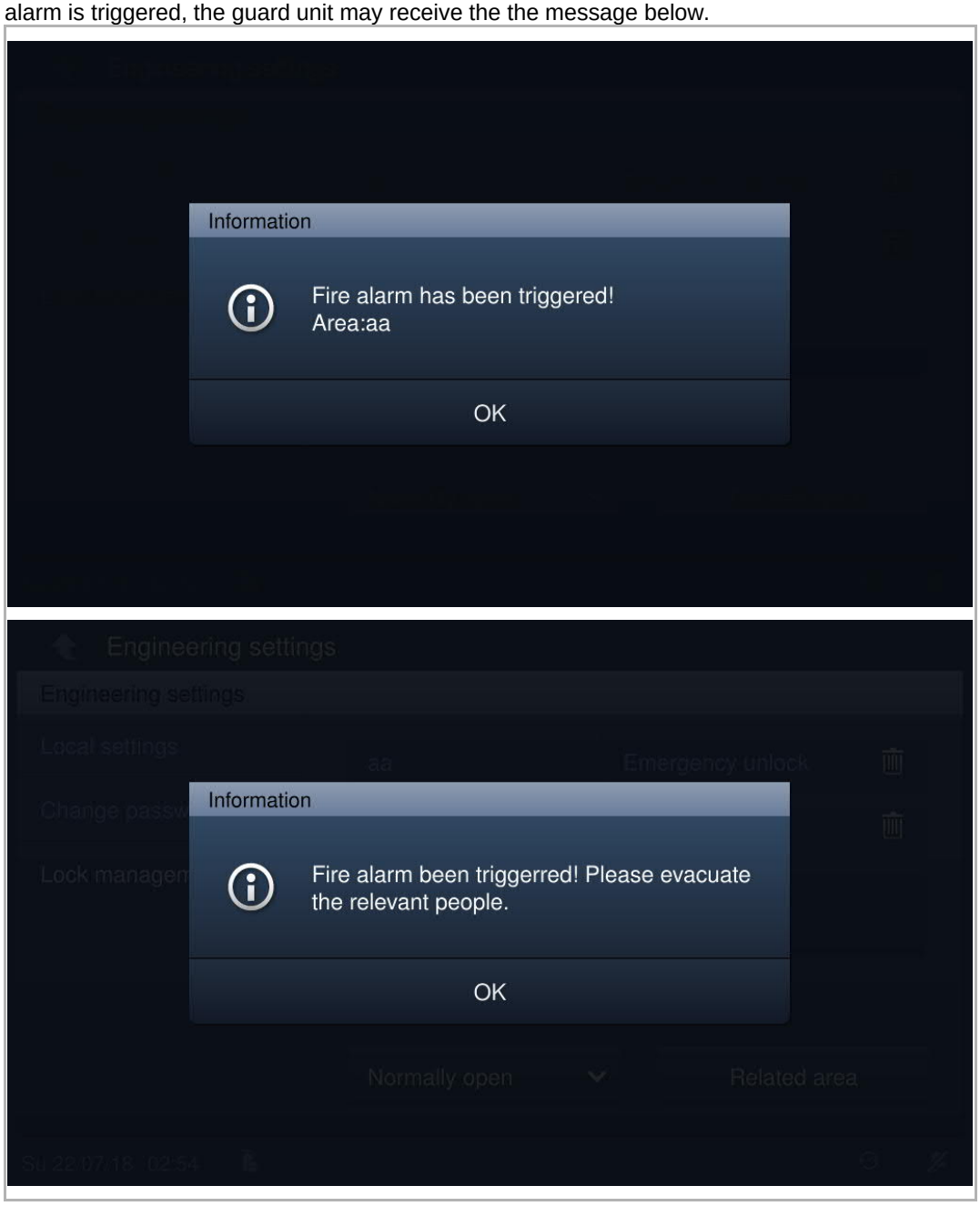
Click , then enter the emengency unlock password (the system default is 123456), click "OK" to unlock. will be displayed if successful.



If you want to lock again, you can click , then enter the emengency unlock password, click "OK" to lock.

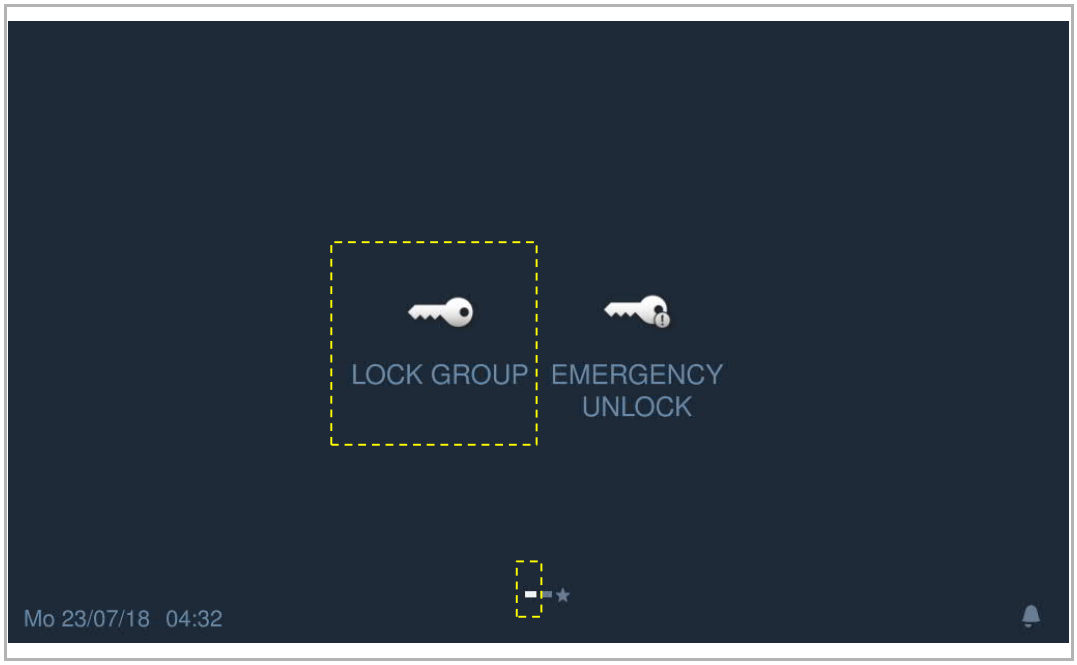
Fire alarm

If the "Fire linkage" function is used and related to the emergency unlock or lock group, when the alarm is triggered, the guard unit may receive the the message below.

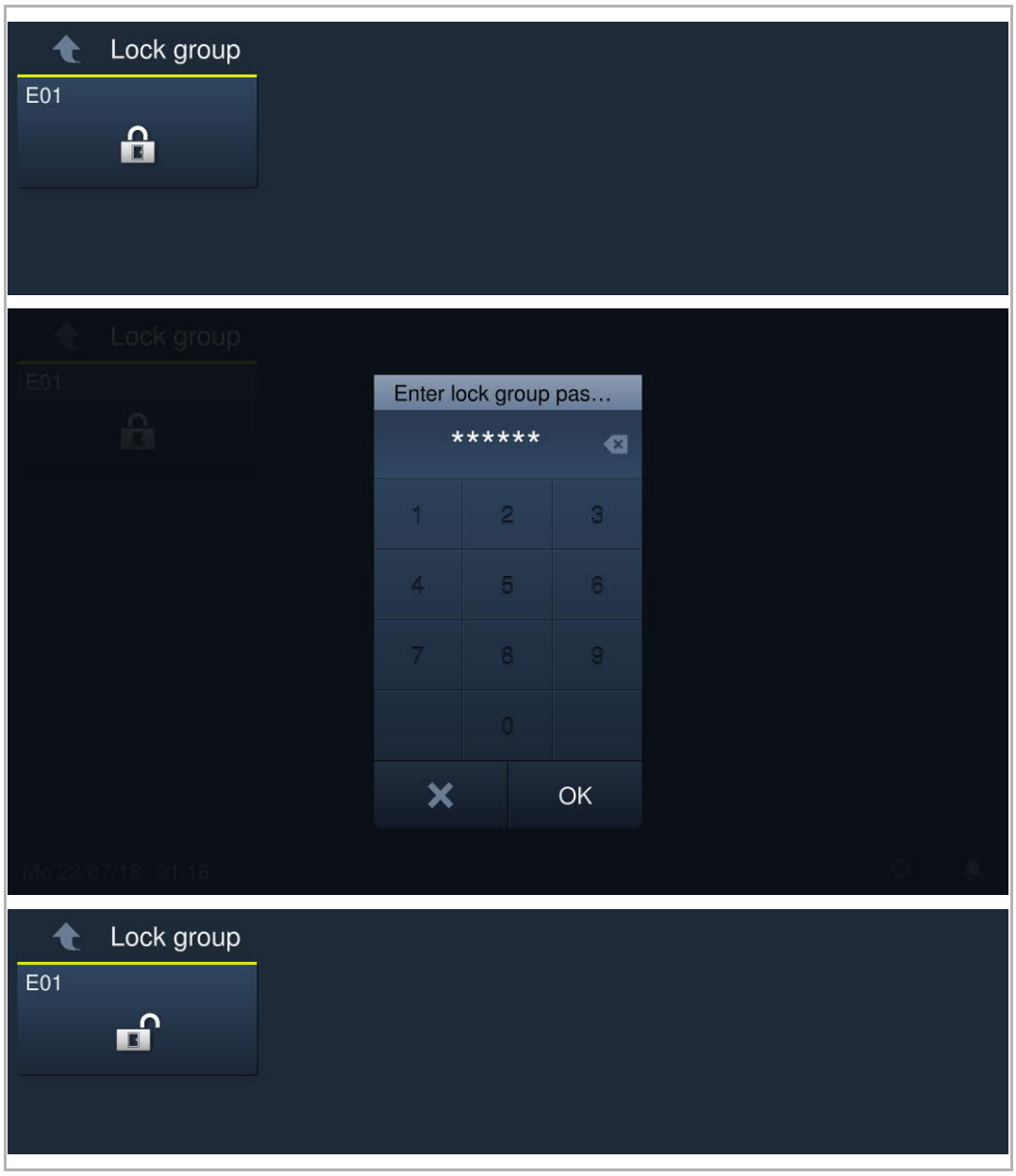


9.7 Lock group

On the extra screen, click "Lock group" to access the corresponding screen.



Click , then enter the lock group passward (the system default is 123456), click "OK" to unlock. will be displayed if successful.

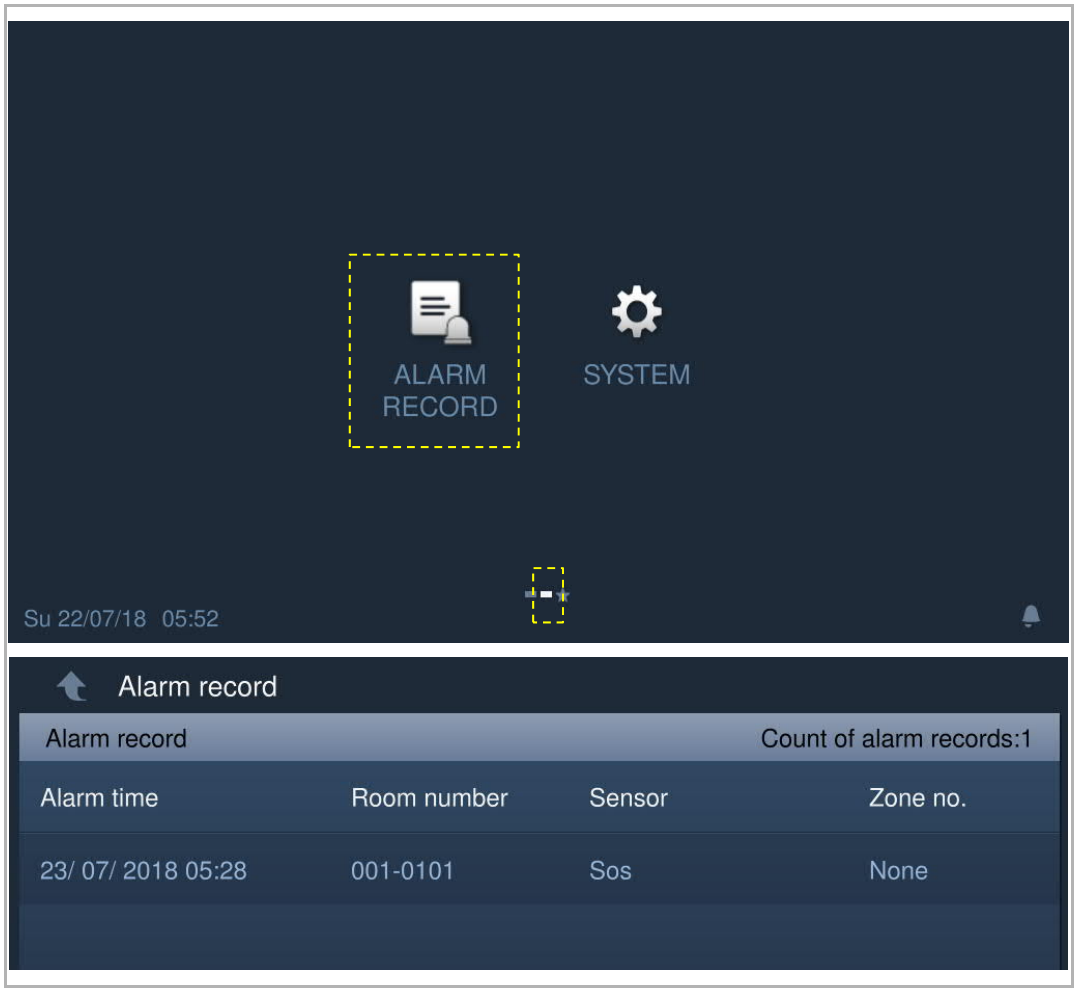


If you want to lock it again, you can click , then enter the lock group password and click "OK" to lock.

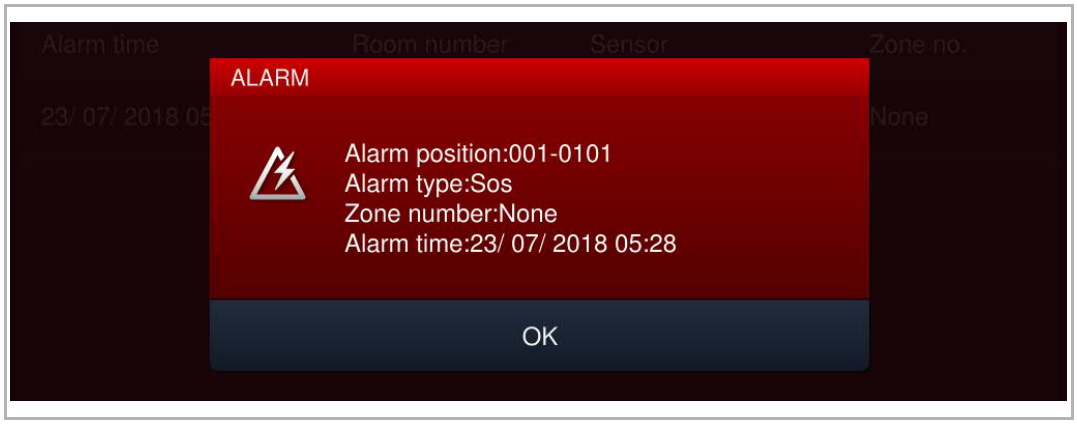
9.8 Alarm record

On the extra screen, Click "Alarm record" to access the corresponding screen.

A maximum of 100 alarm records is supported.



The guard unit will display the alarm message and paly the alarm sound if there is an alarm (e.g. SOS, zone alarm, duress alarm, tamper alarm) is sent from the indoor station or the outdoor station.



10 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.

Only operate the device in accordance with the instructions supplied.

Changes or modifications to this unit 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.

11 Cyber security

11.1 Disclaimer

H8303 product is designed to be connected and to communicate information and data via a network interface, which should be connected to a secure network. It is customer‘s sole responsibility to provide and continuously ensure a secure connection between the product and customer‘s network or any other network (as the case may be) and to establish and maintain appropriate measures (such as but not limited to the installation of firewalls, application of authentication measures, encryption of data, installation of antivirus programs, etc.) to protect the H8303 product, the network, its system and interfaces against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB Ltd and its affiliates are not liable for damages and/or losses related to such security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information.

Although ABB provides functionality testing on the products and updates that we release, you should institute your own testing program for any product updates or other major system updates (to include but not limited to code changes, configuration file changes, third party software updates or patches, hardware change out, etc.) to ensure that the security measures that you have implemented have not been compromised and system functionality in your environment is as expected.

11.2 Performance and service

Network performance

Type	Value
Ethernet	36 Mbps (56,174 packets/s)
ARP	20 Mbps (31,208 packets/s)
ICMP	25 Mbps (39,010 packets/s)
IP	25 Mbps (39,010 packets/sec)

Port and service

Port		
5070	UDP	To be used by SIP client.
7777	TCP/UDP	To be used for device management
8887	TCP	To be used for firmware update
10777	TLS	Secure channel for device management

11.3 Deployment guideline

All devices need to work in security mode by default and. all devices on one system are to be signed by a public CA at commissioning stage; normally the management software acts as CA.

It is suggested that compatible mode is only used when the device needs to communicate with previous generation products. In this mode, data transmission between devices is not encrypted, may lead to data leaks and involves a risk of attacks.

When user decide to remove the device from system, user shall reset the device to factory setting in order to remove all the configuration data and sensitive data in the device. This will prevent sensitive data leak.

It is recommended to apply "MAC filter" and "Rate limiter" in the switch to prevent DOS attack.

11.4 Upgrading

The device supports firmware updates via the management software, where a signature file is used to verify the authentication and integrity of the firmware.

11.5 Backup/restore

None

11.6 Malware prevention solution

The device H8303 is not susceptible to malware, because custom code cannot be executed on the system. The only way to update the software is by firmware upgrading. Only firmware signed by ABB can be accepted.

11.7 Password rule

The user must change the engineering password when accessing the engineering settings for the first time. This engineering password must not include increasing or decreasing numbers (e.g. 123456, 654321). Three consecutive identical numbers are similarly not permitted (e.g. 123444, 666888).

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