2TMD042100D0003 | 29.12.2021

Product manual

ABB i-HD

H81365P.-A Mini video outdoor station

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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 part of the ABB i-HD system, this device can only be used with accessories from that 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)

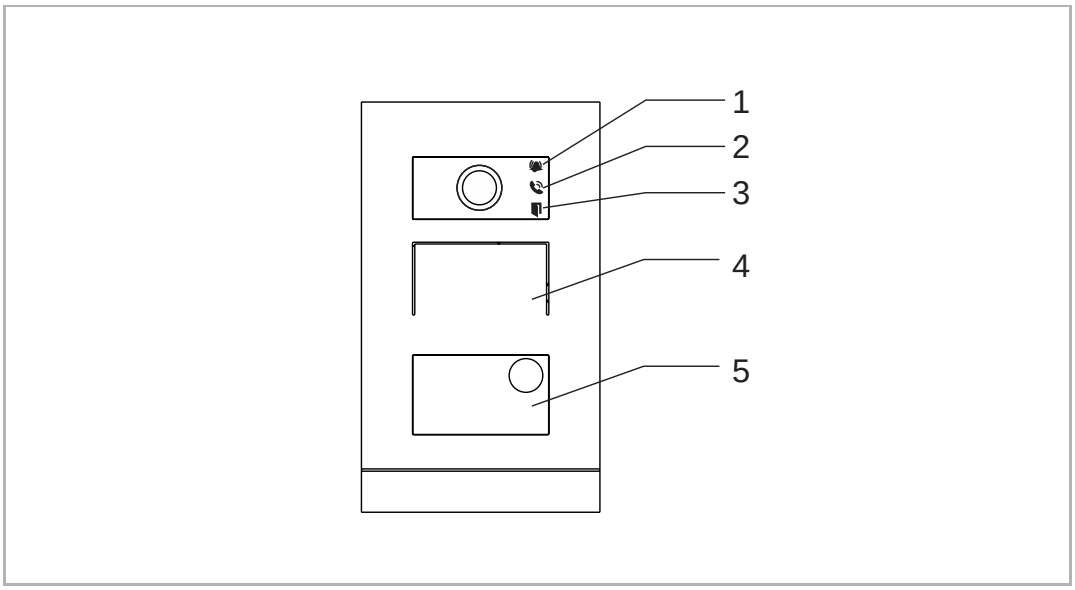
(EU-REACH ordinance and law for the implementation of the ordinance (EG) No.1907/2006)

5 Product description

5.1 Device type

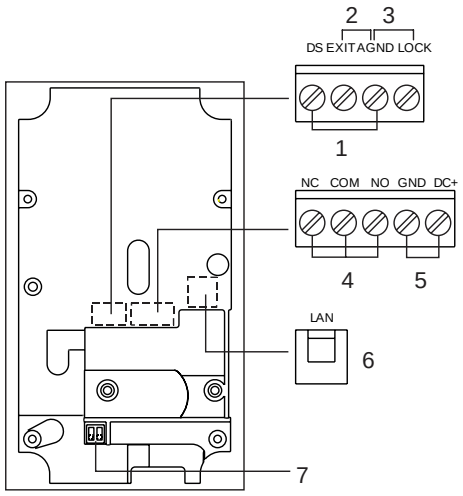
Article number	Product ID	Product name	Colour	Size (HxWxD) Unit: mm
H81365P1-A	2TMA130011A0001	Mini video outdoor station, 1 button, IC, FM	Aluminum alloy	105 x 180 x 43
H81365P2-A	2TMA130011A0002	Mini video outdoor station, 2 buttons, IC, FM	Aluminum alloy	105 x 180 x 43

5.2 Control elements



No.	Description
1	**Ring Indicator** ▪ Indicator flashes slowly: ringing ▪ Indicator flashes quickly: busy line
2	Call indicator
3	Unlock indicator
4	Speaker and microphone integration
5	Round pushbutton module with IC card reader

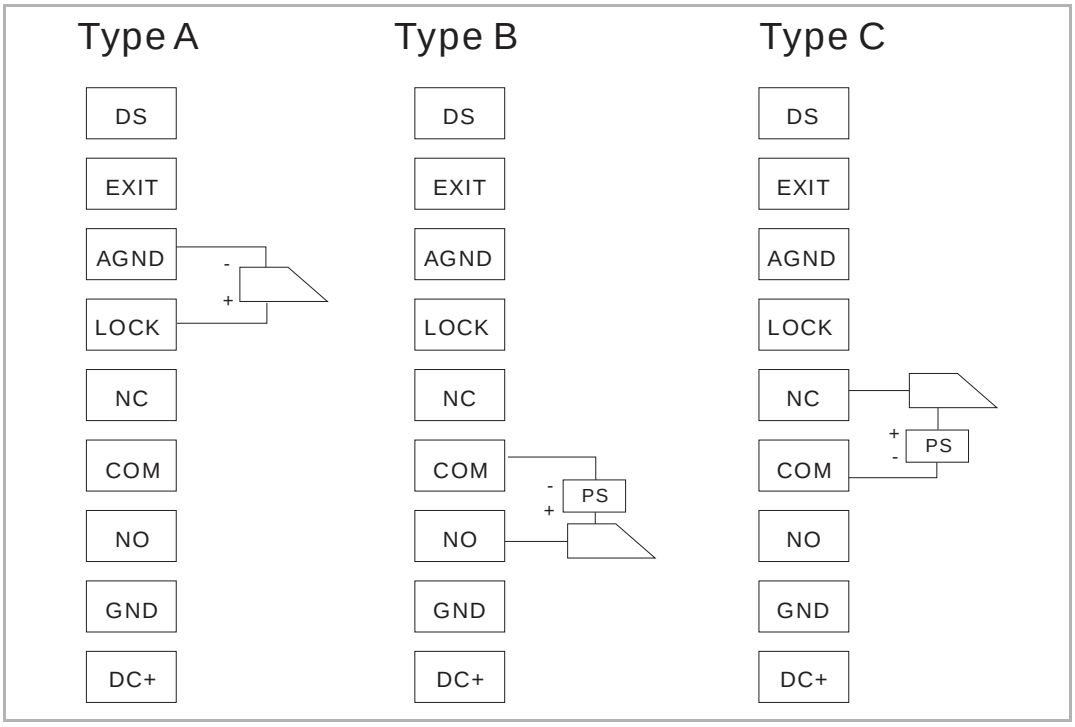
5.3 Terminal description



No.	Description
1	Connector for the sensor used for door status detection
2	Connector for exit button
3	Plug-in clamps (LOCK...AGND) for door opener
4	Plug-in clamps (COM...NC...NO) for floating output
5	Plug-in clamps (DC+...GND) for standalone power supply
6	LAN (PoE)
7	N/A

5.4 Lock type and connection

Lock type	Pic	Operation type	Voltage	Wiring type
Electrical strike lock, 12V		Power on to open	12 V ⎓/~	Type A/B
Electrical strike lock, 24V		Power on to open	24 V ⎓/~	Type B
Electrical rim lock, 12 V		Power on to open	12 V ⎓	Type A/B
Electrical mortise lock		Power off to open	12 V ⎓	Type C
Magnetic lock		Power off to open	12/24 V ⎓	Type C



6 Technical data

Designation	Value
Rating voltage	24 V ⎓
Operating voltage range	20-27 V ⎓
Rating current	27 V ⎓, 310 mA 24 V ⎓, 350 mA
Operating temperature	-40 °C…+70 °C
Product dimensions	105 x 180 × 43 mm
Camera type	CMOS
Camera viewing angle	104°
Power supply for door opener	15 V ⎓, 4A impulse, max. 250 mA holding
Floating output for door opener	30 V ⎓, 3 A
IP level	IP 54
IK level	IK 07

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.

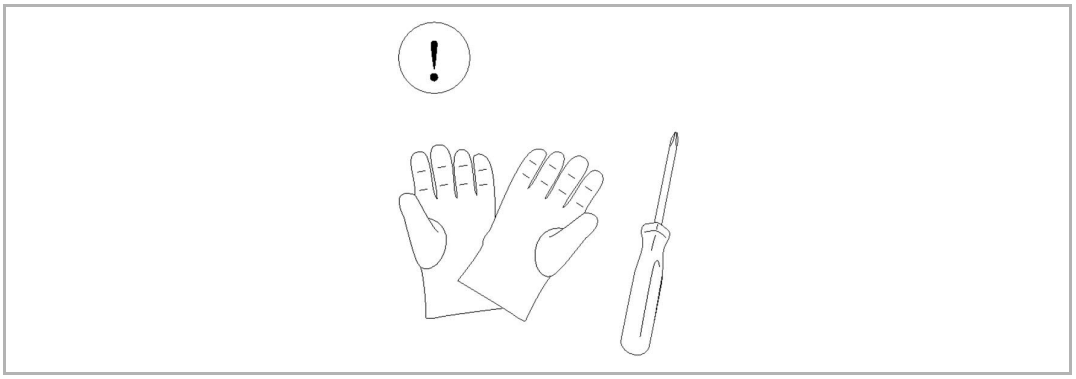
The minimum necessary expert knowledge and requirements for the installation are as follows:

– 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.).

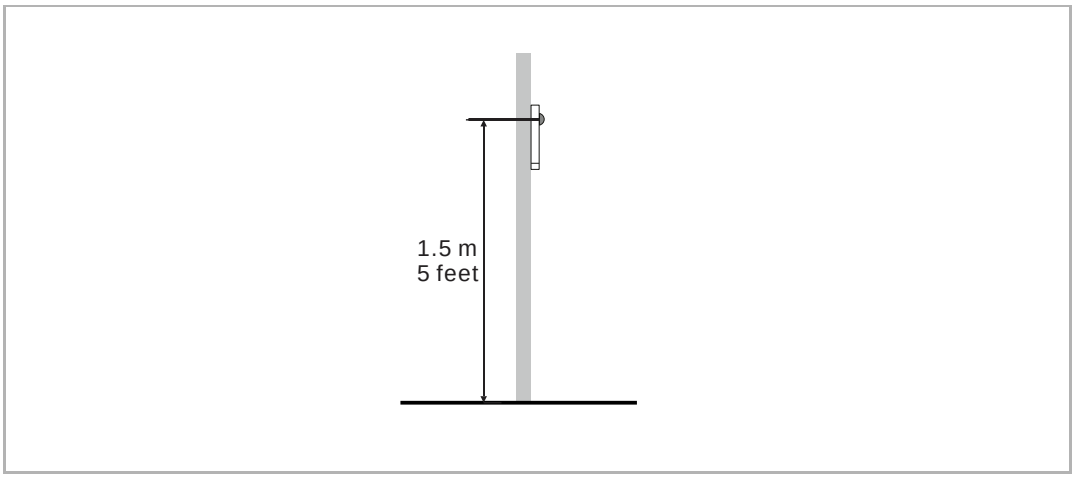
7.2 Mounting

7.2.1 Preparation

Use gloves to protect yourself against cuts.



7.2.2 Installation height



7.2.3 Installation situation

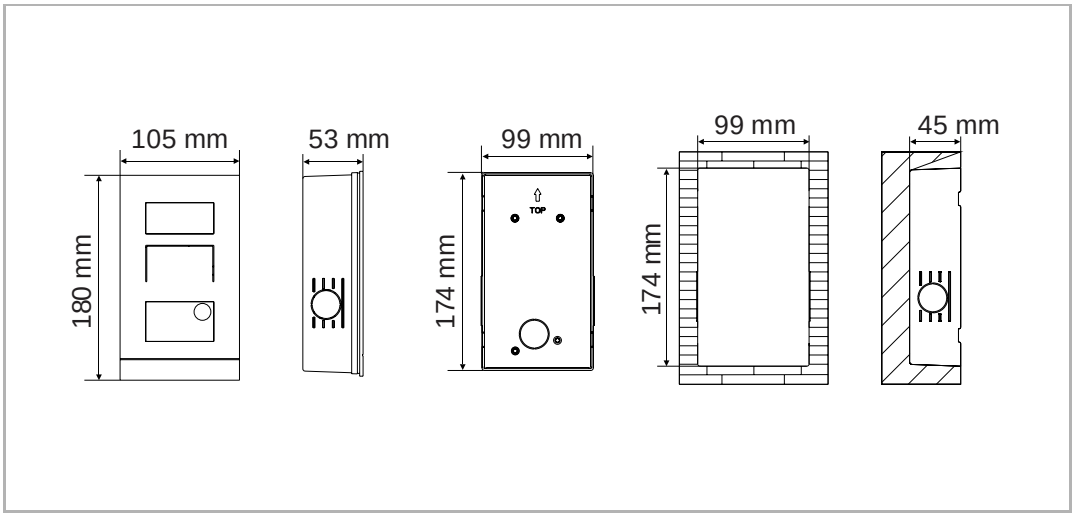
Note

The following installation situations must be avoided without fail to ensure picture quality:

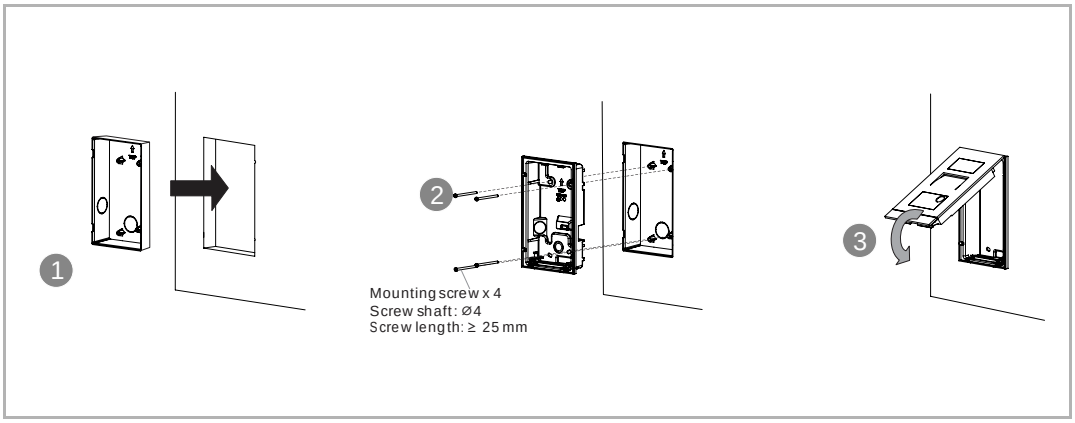
- Direct light
- Direct sunlight
- Extremely bright picture background
- Highly reflective walls on the opposite side of the door station

7.2.4 Flush-mounted installation

Product dimension

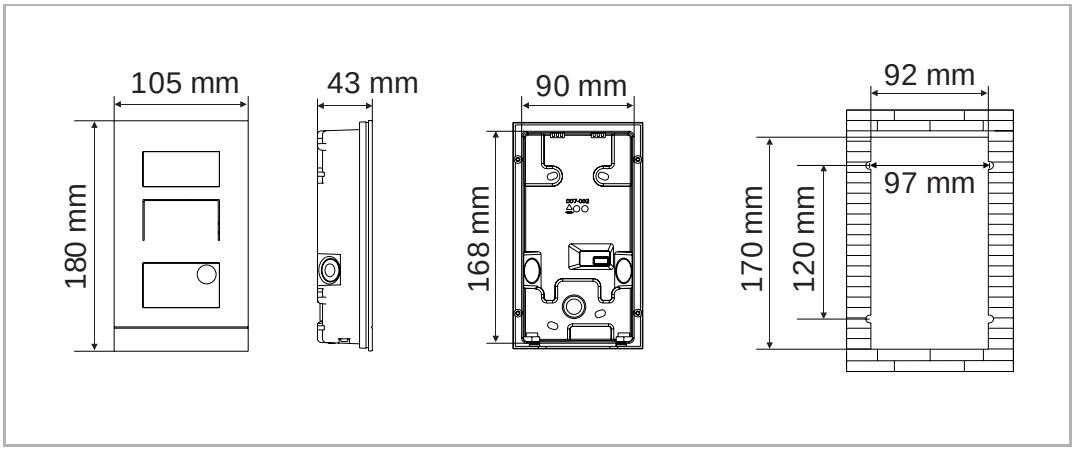


Flush-mounted with pre-installation box

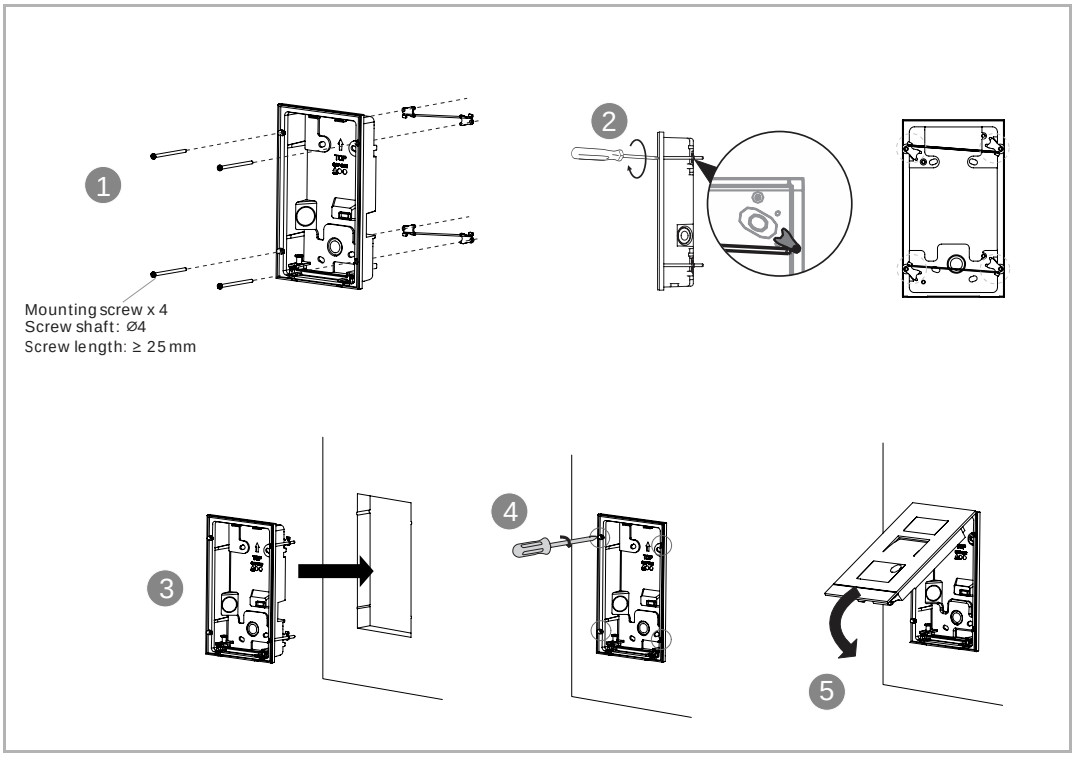


7.2.5 Cavity wall installation

Product dimension



Mounting



8 Commissioning

8.1 Configure the settings on indoor station

8.1.1 Outdoor station enters engineering mode

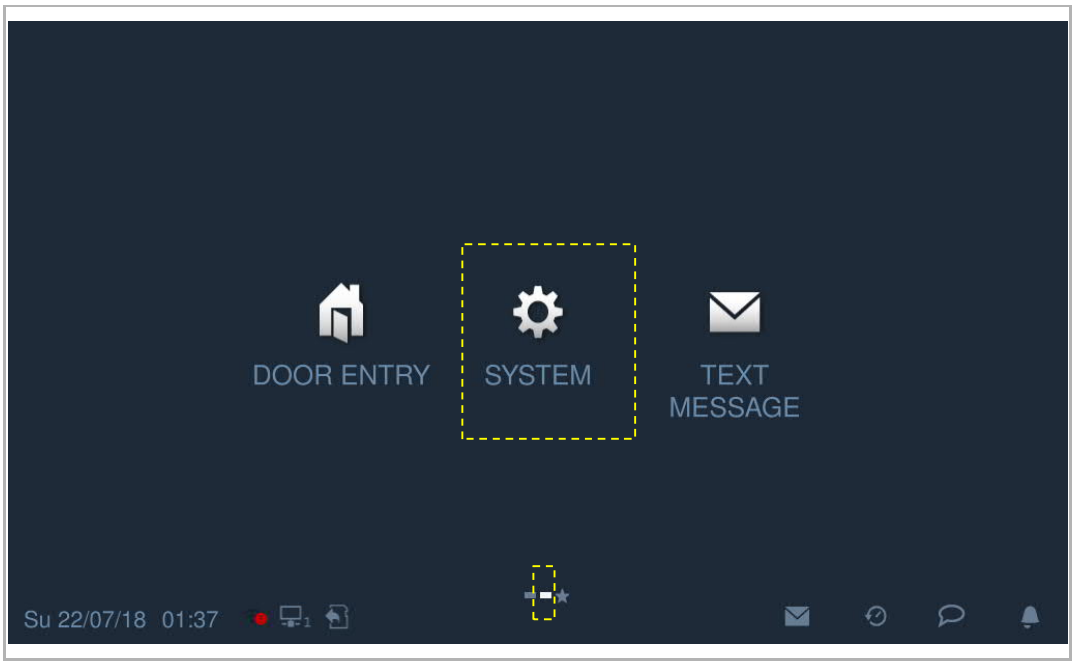
Note
The mini outdoor station must be in the same network with the indoor station.

Please follow the steps below,

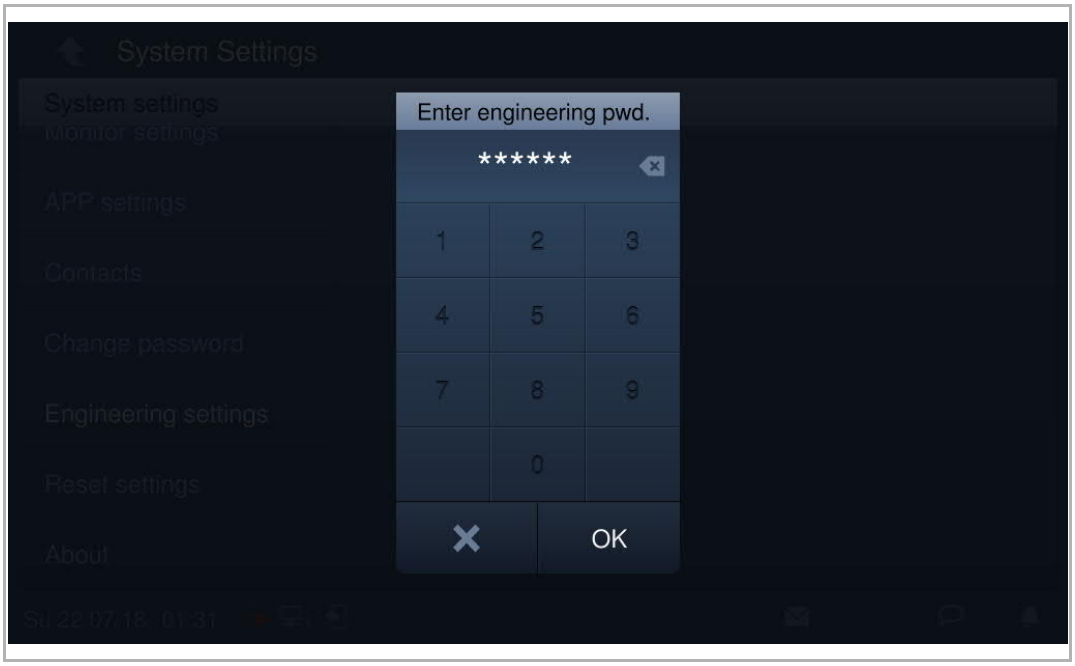
- Power up the mini outdoor station, three indicators light green.
- After a period of time, three indicators light down.
- Hold the first pushbutton for 5 s.
- When three indicators flash green, the mini outdoor station enters the engineering mode.

8.1.2 Indoor station enters engineering settings

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



On the "System settings" screen, click "Engineering settings", enter the engineering password and then click "Outdoor station settings" to access the corresponding screen.

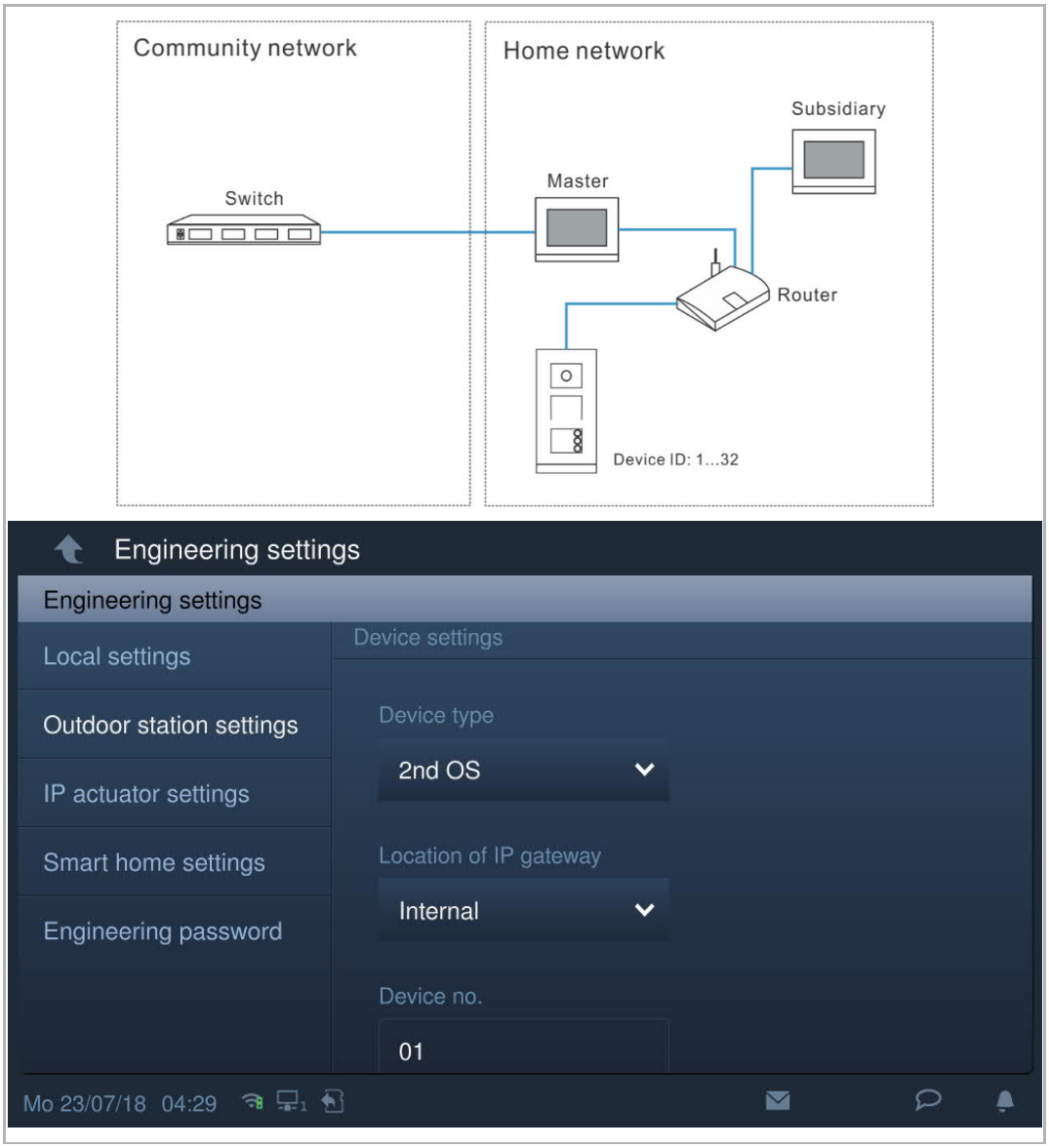


8.1.3 Local device settings

On the "Outdoor station settings" screen, select the device type = "2nd OS".

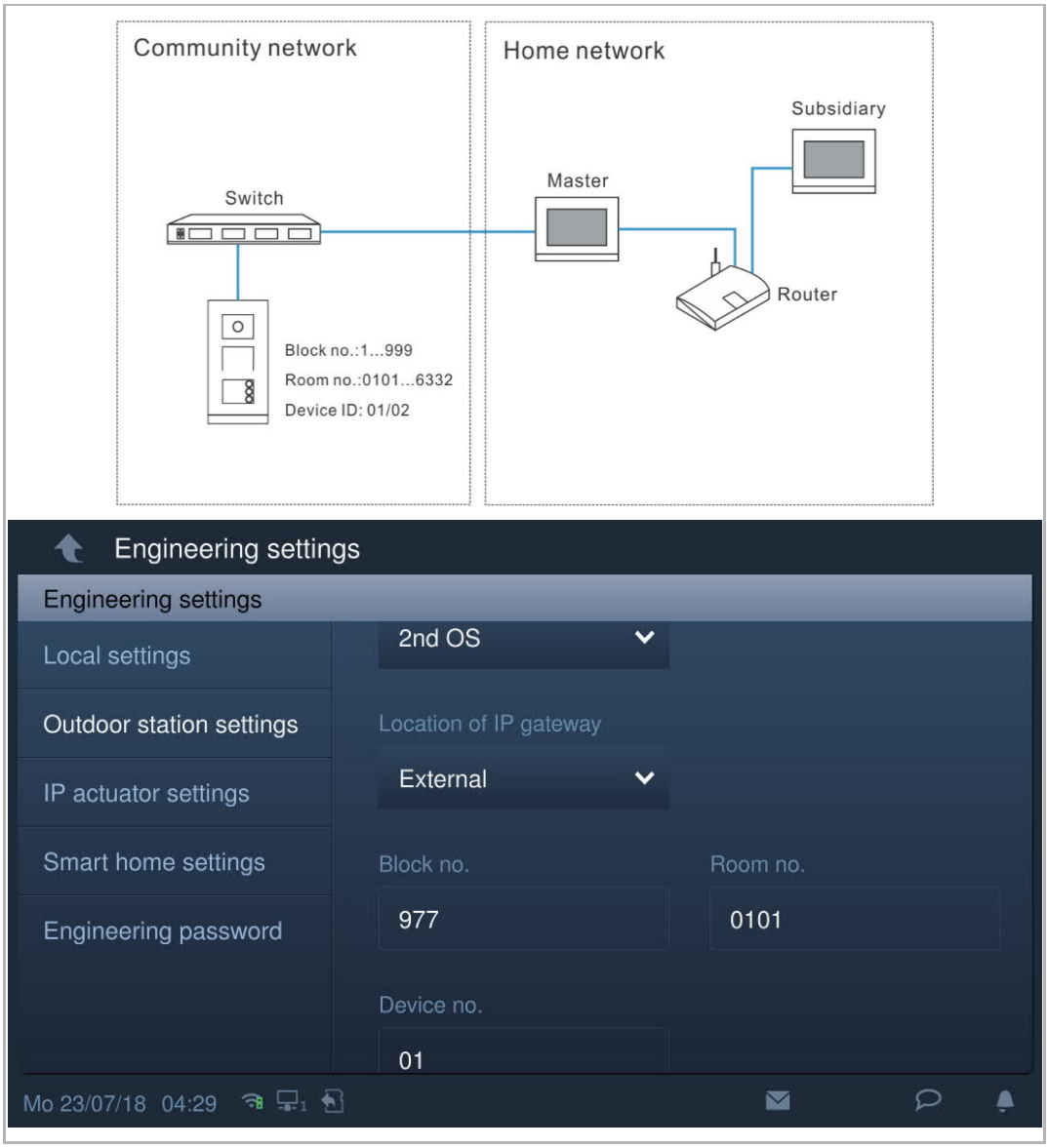
[1] Location = Internal

With this setting, 2nd OS is connected to the router in the apartment.



[2] Location = External

With this setting, 2nd OS is connected to the switch outside the apartment.

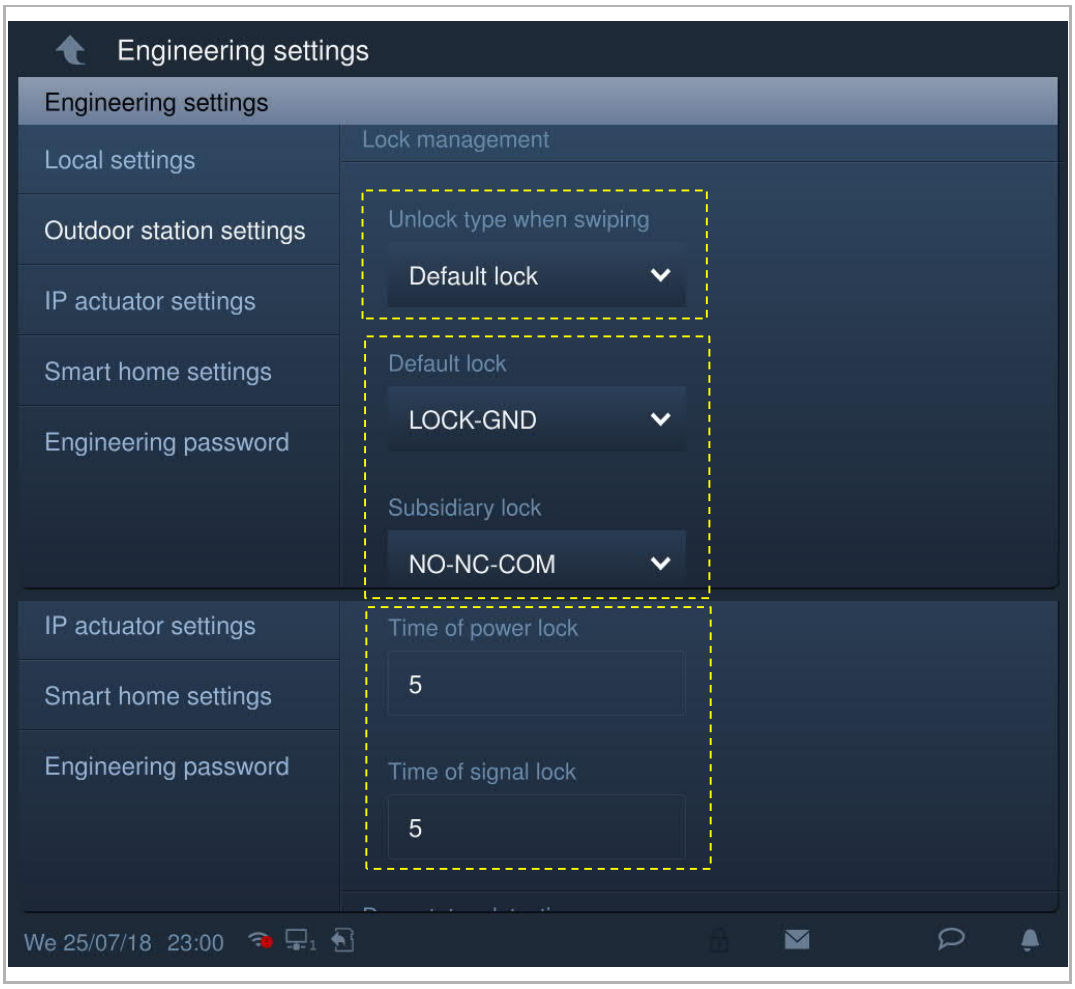


Note

The external and internal types cannot be used in mixed scenarios in the same apartment.

8.1.4 Lock management

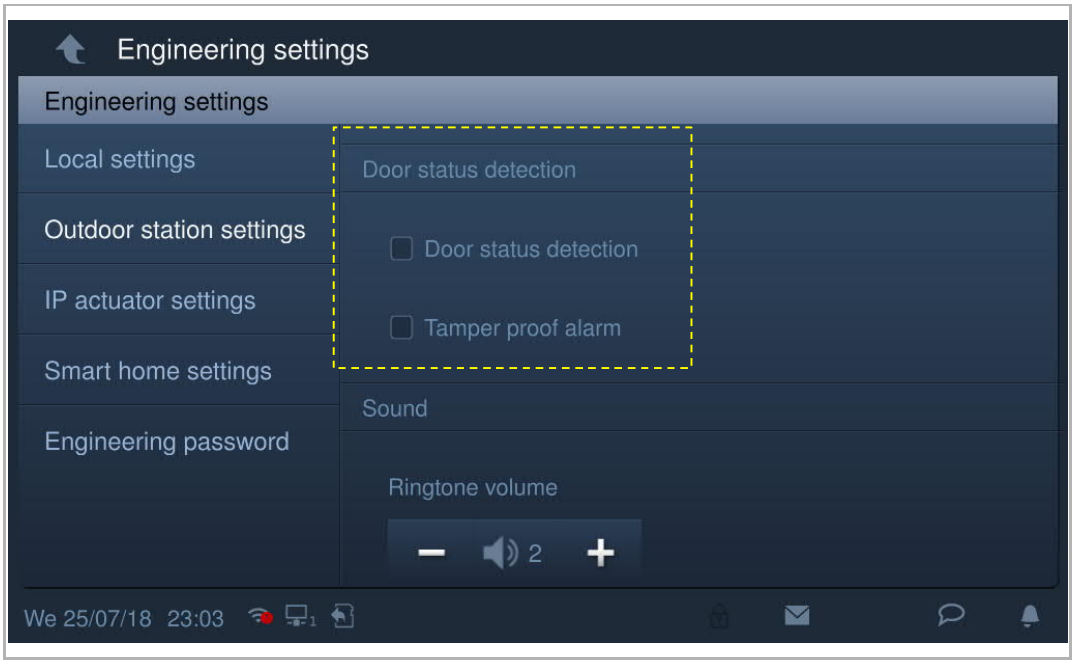
On the "Outdoor station settings" screen,



No.	Function
1	**Unlock type when swiping** Set the lock to be released when swiping. ▪ Default lock (default) ▪ Subsidiary lock.
2	**Lock type** Set the lock type for the default lock and subsidiary lock. ▪ Lock-GND ▪ NO-NC-COM ▪ IP actuator
3	**Time of unlock** Set the time for unlock ▪ Power lock = Lock-GND ▪ Signal lock = NO-NC-COM

8.1.5 Door status detection

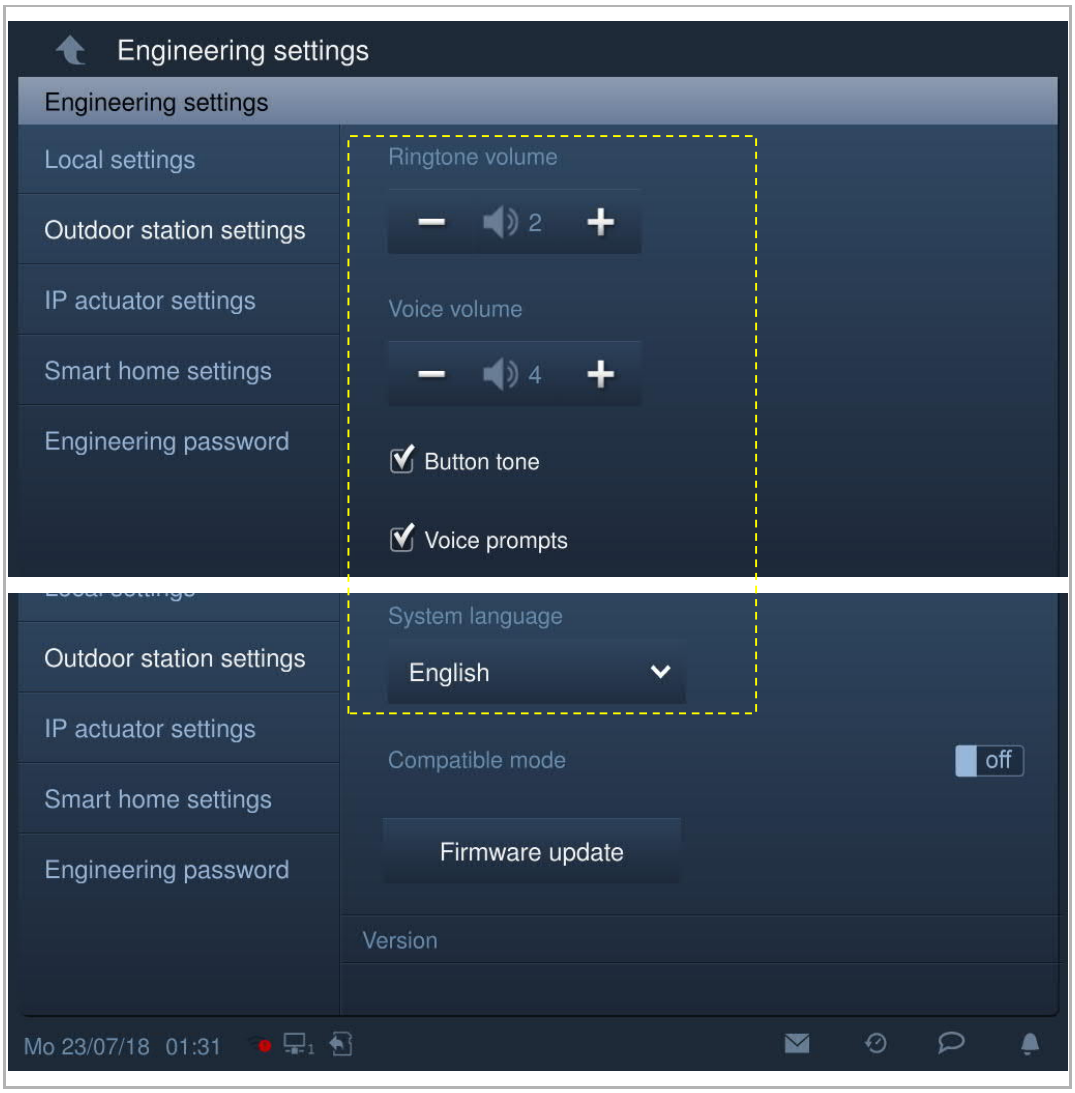
Go to the "Outdoor station settings" screen.



No.	Function
1	**Door status detection** If this function is enable, the outdoor station will send an alarm to the management software if the door is open longer than 120 s (A sensor should first be connected to the outdoor station).
2	**Tamper proof alarm** If this function is enabled, the outdoor station will send an alarm to the management software if the outdoor station is removed from the wall.

8.1.6 Sound setting

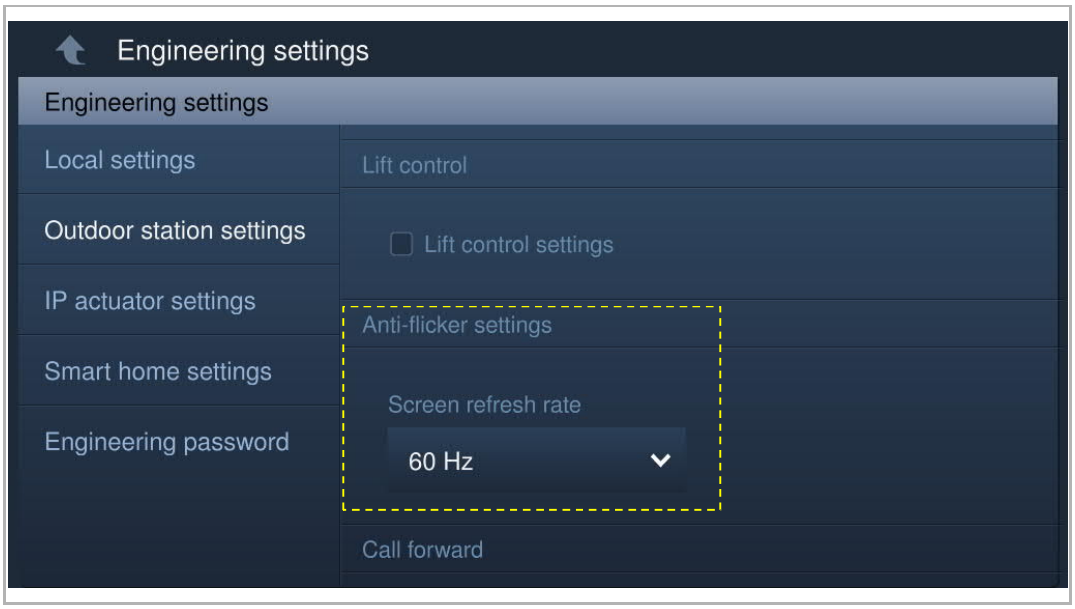
Got to the "Outdoor station settings" screen.



No.	Function
1	**Volume of outdoor station** Click "+" or "-" to adjust the ringtone volume and the voice volume on the outdoor station.
2	**Button tone** Tick the checkbox to enable button tones on the outdoor station.
3	**Voice prompt** ▪ Tick the checkbox to enable voice prompts on the outdoor station. ▪ Choose the language for the voice prompts from the drop-down list.

8.1.7 Anti-flicker setting

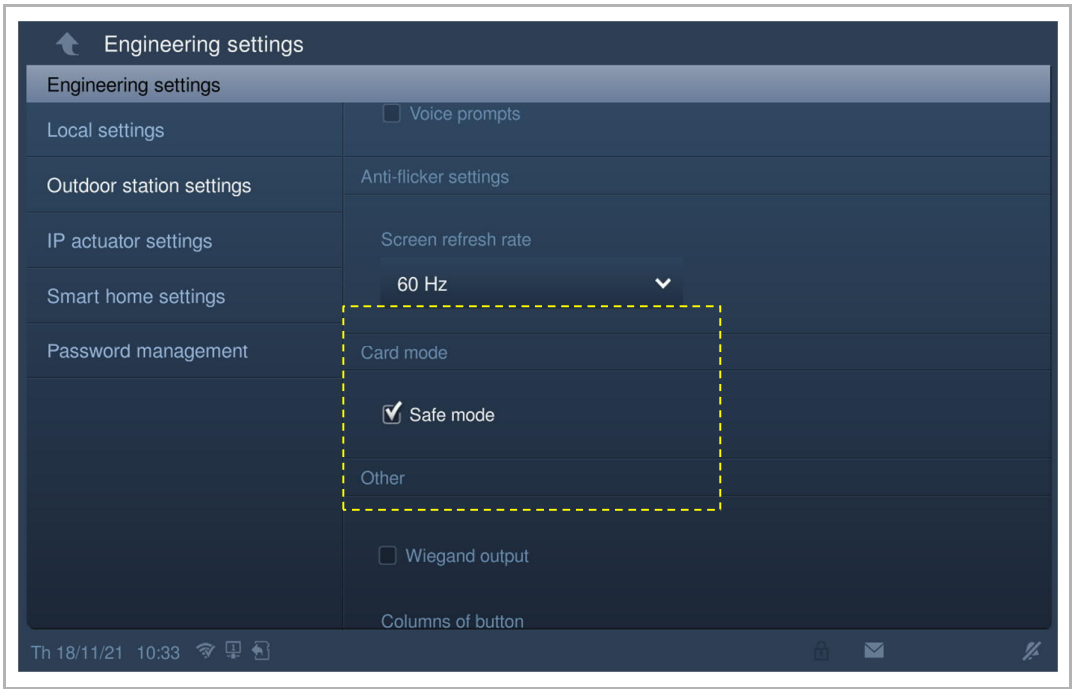
On the "Outdoor station settings" screen, select the refresh rate from the drop-down list.



8.1.8 Card mode

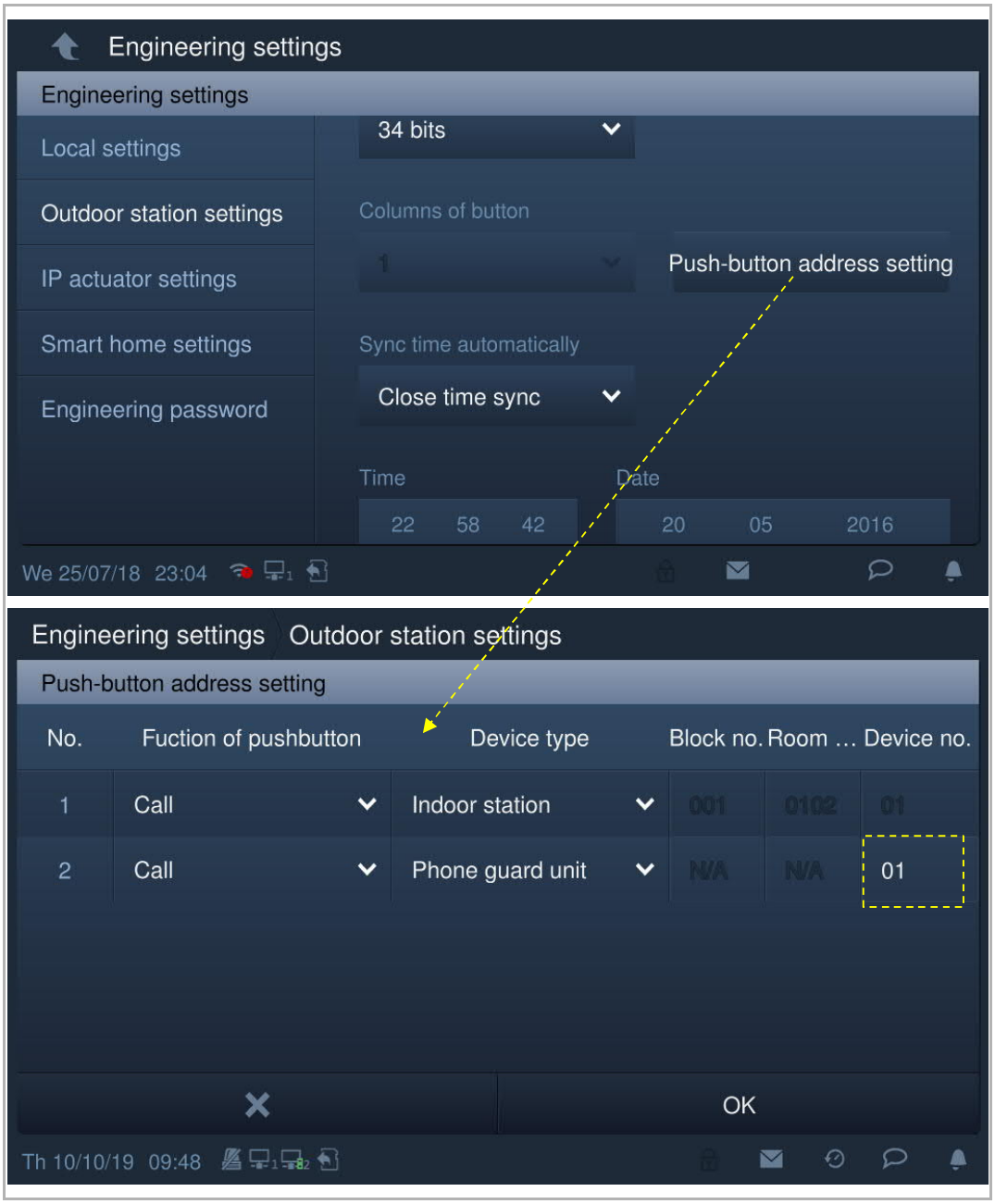
On the "Outdoor station settings" screen, tick/untick the checkbox to enable/disable the function.

When the "Safe mode" is enabled (default), this outdoor station will only support the IC cards with a secret key.



8.1.9 Set the function of pushbutton

On the "Outdoor station settings" screen, click "Pushbutton address setting" to access the settings of the pushbuttons.



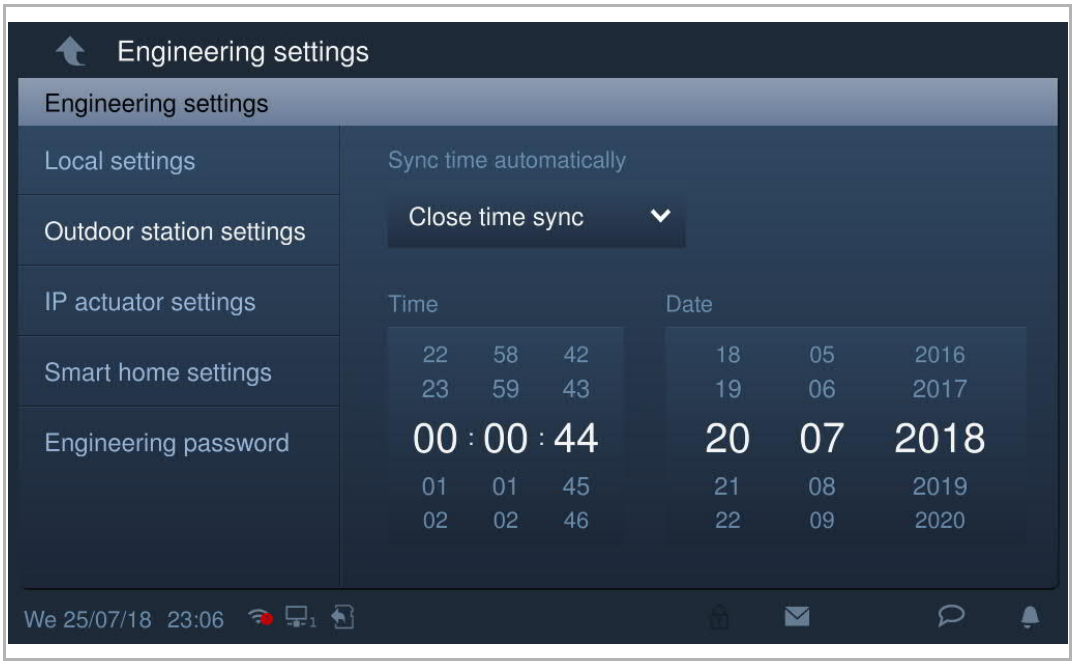
Note
Device no. should be entered if "Phone guard unit" is selected.

8.1.10 Time sync setting

On the "Outdoor station settings" screen.

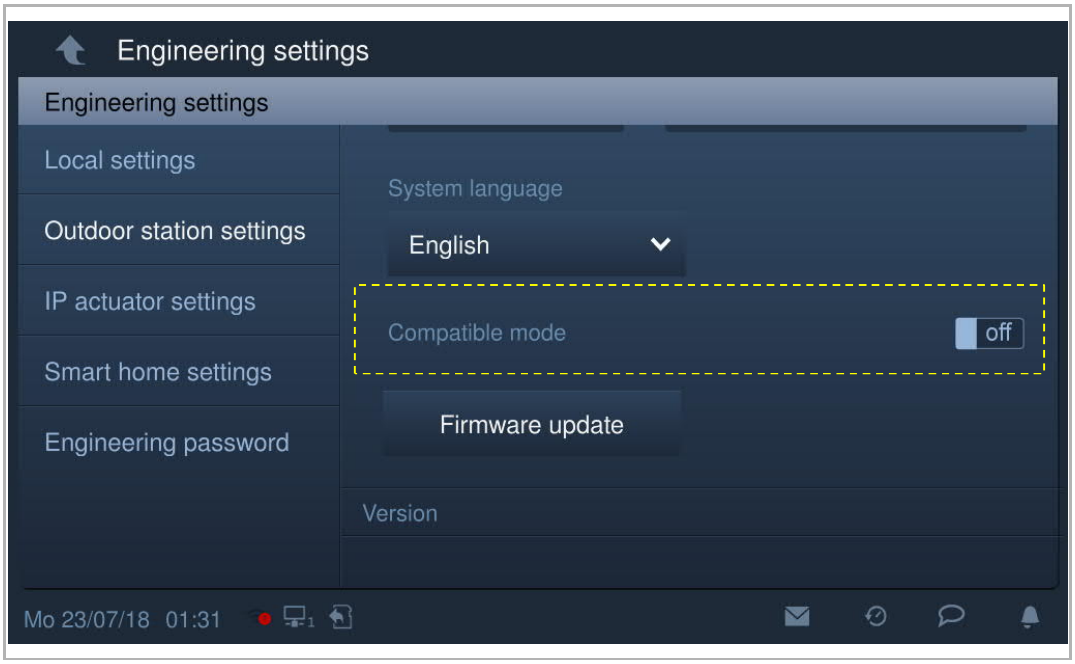
If "Sync time with management" is selected, the outdoor station will sync the time from the management software.

If "Close time sync" is selected, the time and date needs to be set manually.



8.1.11 Compatible mode setting

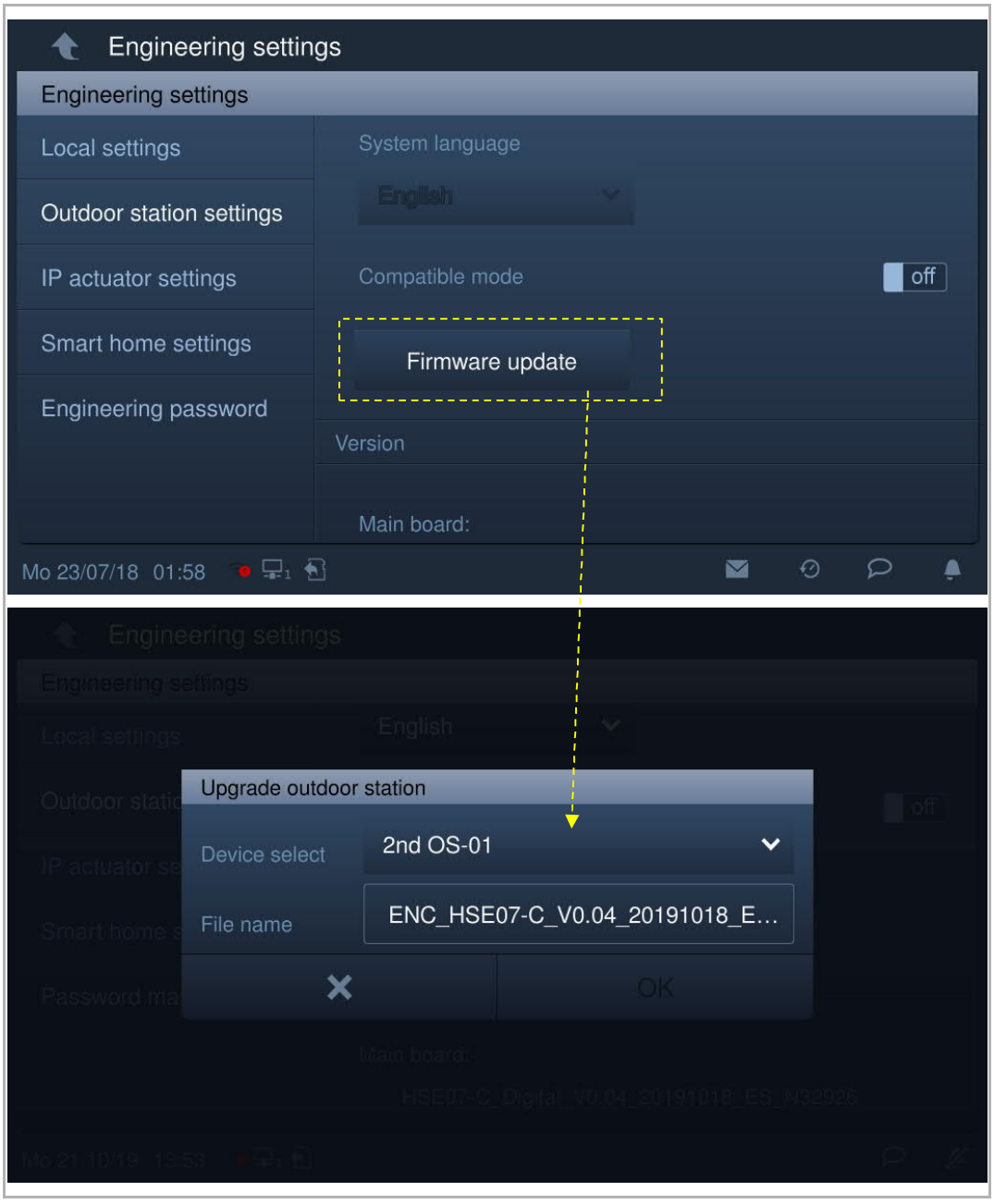
On the "Outdoor station settings" screen, the outdoor station is set to "Security mode" by default (Compatible mode = off).



8.1.12 Updating the firmware

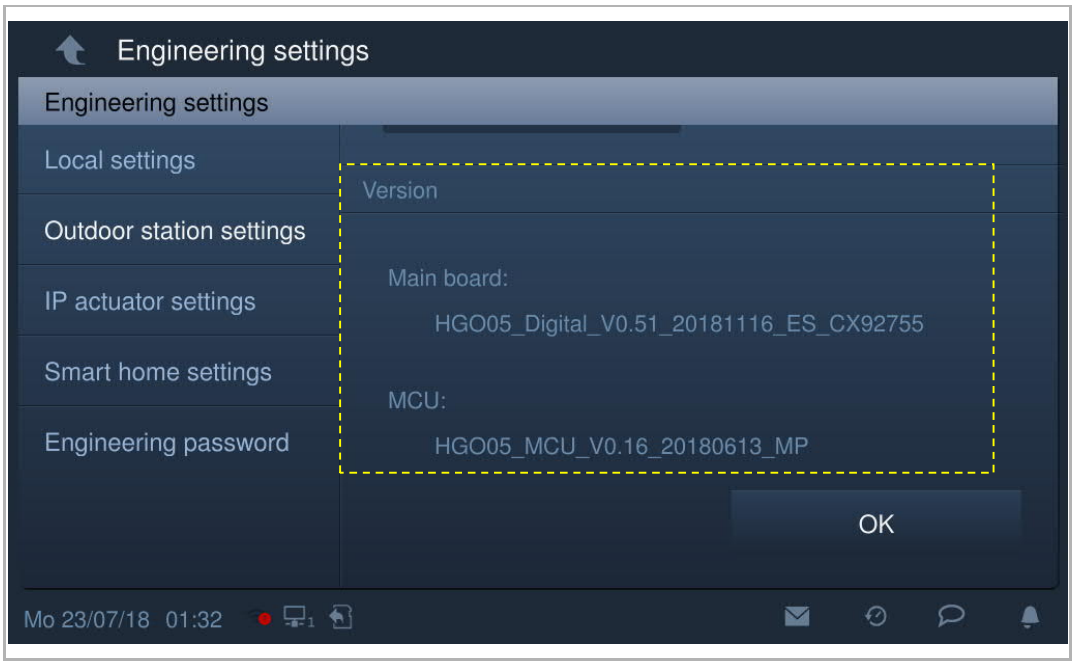
Note
The outdoor station doesn't need to enter engineering mode when you want to upgrade the firmware.

On the "Outdoor station settings" screen, click "Firmware update", select the outdoor station and the file from SD card, then click "OK" to update the firmware.



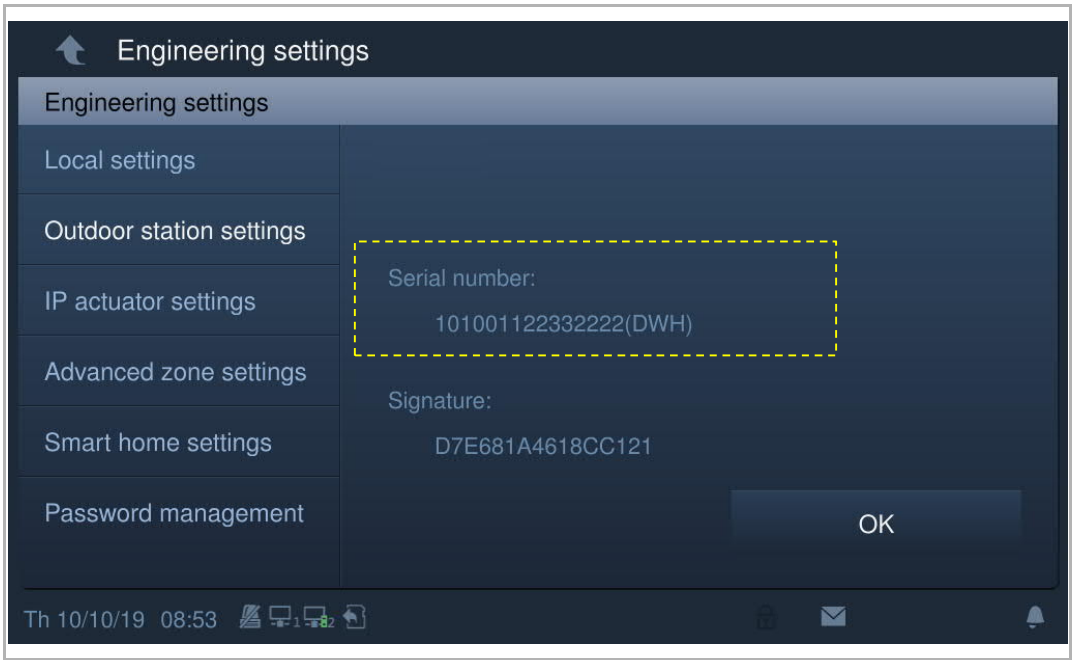
8.1.13 Viewing the version

On the "Outdoor station settings" screen, view the version information.



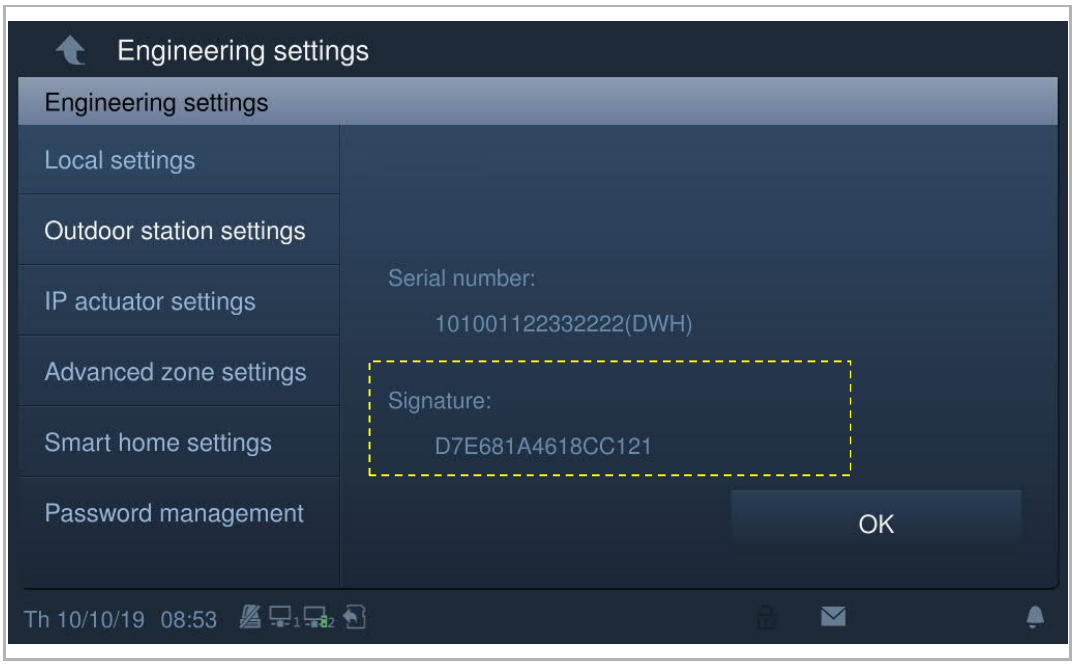
8.1.14 Serial number

On the "Outdoor station settings" screen, view the serial number, this number is used to get the signature from the management software.



8.1.15 Signature

On the "Outdoor station settings" screen, view the signature.



8.2 Configure the settings on PC management software

Please see the product manual of "ABB i-HD management software" for more details.

8.3 Card management

Note
It is recommended that IC cards are created and maintained using local outdoor station or management software only.

1. Card management on local outdoor station

Programming

The system will take the first card swiped after powering up the system within 60s as the admin card.

Function	Action	Unlock indicator
Create admin card	Swipe card 1x	Green
Enter settings	Swipe admin card 1x	Orange

After entering settings, following functionalities can be implemented:

Function	Action	Unlock indicator
Enroll user	Swipe admin card 1x	Orange flash 1x
	Swipe user card 1x	Green
Delete user	Swipe admin card 2x	Orange flash 2x
	Swipe user card 1x	Green
Enroll new admin	Swipe admin card 3x	Orange flash 3x
	Swipe new admin card 1x	Green
Delete admin	Swipe admin card 4x	Orange flash 4x
	Swipe other admin card 1x	Green
Delete all users	Swipe admin card 5x	Orange flash quickly
	Swipe admin card 1x	Green

During setting, please swipe the same admin card.

Function	Action	Unlock indicator
Exit settings	Swipe admin card 1x or no cards swiped within 15 seconds	--

Function	Action	Unlock indicator
Open a door	Swipe the enrolled keycard	Green
Reset to factory default	Press and hold the 1st button for 3 s to enter configuration mode.	3 LED: flash green
	Press and hold the 1st button for 10 s to reset to factory default.	3 LED: OFF
	Reboot the device	Door open LED: red, green, orange cycle flash

Technical data of IC card

Work frequency	Standard
13.56 MHz	Mifare one S50/S70, Mifare

Note
A maximum of 64 IC cards can be supported by mini outdoor station.

2. Card management on management software

Please see the "ABB i-HD management software" product manual for more details.

9 Cyber security

9.1 Disclaimer

These products are 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 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 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.

9.2 Performance and service

Network performance

Type	Value
Ethernet	24 Mbps (37,449 packets/sec)
ARP	12 Mbps (18,724 packets/sec)
ICMP	22 Mbps (34,328 packets/sec)
IP	22 Mbps (34,328 packets/sec)

Port and service

Port	Service	Purpose
5070	UDP	To be used by SIP client.
7777	TCP/UDP	To be used for device management.
10777	TLS	Secure channel for device management
7005	TCP	To be used for connectivity detection when this feature is enabled.
8887	TCP	To be used for firmware update.

9.3 Deployment guideline

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

It’s suggested that compatible mode only to be used when device needs to communicate with previous generation products. In this mode, data transmission between devices are not encrypted, it may lead to data leaks and has the risk of being attacked.

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.

9.4 Upgrading

Device supports firmware updates via management software, a signature file will be used to verify the authentication and integrity of firmware.

9.5 Backup/Restore

None.

9.6 Malware prevention solution

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

10 Notice

We reserve the right to at all times make technical changes as well as changes to the contents of this document without prior notice.

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