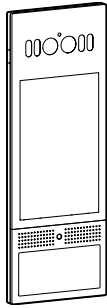


6LE008977A



(GB)

RTQ520Y, RTQ521Y
Elcom motion



Safety instructions

Electrical devices may only be installed and assembled by a qualified electrician in accordance with the relevant installation standards, guidelines, regulations, directives, safety and accident prevention regulations of the country.

When installing and routing cables, always comply with the applicable regulations and standards for SELV electrical circuits.

These instructions are an integral component of the product and must be retained by the end user.

Scope of delivery

Outdoor unit	
1x	Outdoor unit
1x	Torx TR10 fixing screw M3x6 mm
1x	Torx TR10 wrench
2x	Cable entry seal, self-adhesive, small
2x	Cable entry seal, self-adhesive, medium
2x	Cable entry seal, self-adhesive, large
1x	Connection compartment cover plate
1x	Connection compartment seal
6x	PH2 cross-head screw M3x4 mm for cover plate
1x	Connection terminal block 2 x 6 PIN
1x	Connection terminal block 2 x 5 PIN
1x	Connection terminal block 2 PIN
3x	Diode
1x	Connection terminal block removal aid tool
RFID card	
1x	RFID user card For reordering: RTH303Y (3 pcs) RTH310Y (10 pcs)
1x	RFID registration card
1x	RFID configuration card

Optional accessories, scope of delivery

Flush-mounted installation housing, RTW021Y	
1x	Flush-mounted installation housing
4 x	PH2 cross-head screw M4x40 mm
2x	Plaster masks
4 x	PH2 cross-head screw 4x35 mm
4 x	Anchor Ø 6 mm
Surface-mounted installation housing, RTW121Y	
1x	Surface-mounted installation housing
2x	PH2 cross-head screw M4x30 mm
4 x	PH2 cross-head screw 4x20 mm
4 x	Anchor Ø 6 mm
Hollow wall installation housing, RTW022Y	
1x	Hollow wall installation housing

Design and layout of the device

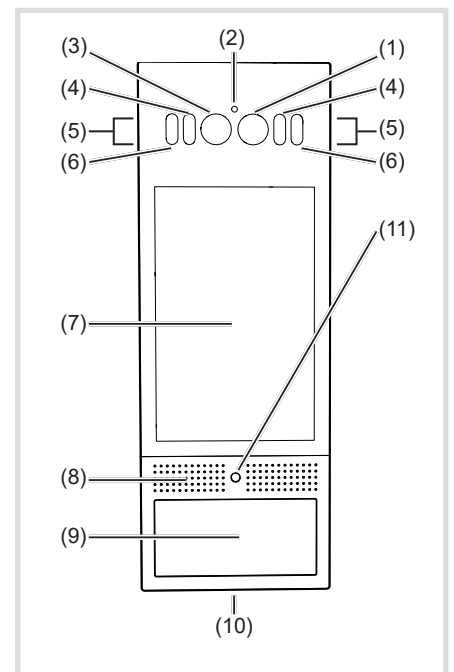


Fig. 1: Front side, outdoor station

- (1) Main camera
- (2) Twilight sensor for the connection of the IR-LED
- (3) Camera for facial recognition
- (4) IR-LED to support facial recognition
- (5) Microphone
- (6) White light LED for night vision
- (7) Touchscreen
- (8) Loudspeaker
- (9) RFID card reader
- (10) Safety screw of the outdoor station
- (11) Motion sensor

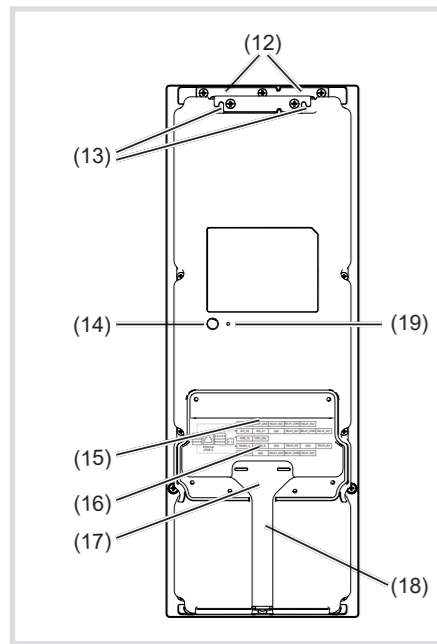


Fig. 2: Rear side, outdoor station

- (12) Openings for attachment in the installation housing
- (13) Suspension option as mounting aid
- (14) Sabotage contact
- (15) Sockets for connecting terminal blocks and RJ45 network connection
- (16) Connection compartment
- (17) Adhesion point for one part of the two-part cable entry seal
- (18) Storage space for connection cables
- (19) Opening, Reset button

Function

The Elcom motion IP outdoor station is suitable for modernisation and new construction. It is operated via the Hager TJA470 / TJA510N gateway on 2-wire intercom systems from Elcom. The gateway connects the IP outdoor station with the Elcom 2-wire bus. Elcom motion allows audio-video communication. Elcom motion offers an access control option using a PIN code and / or RFID card reader. In addition, the RTQ521Y possesses a facial recognition function.

Correct use

- For vertical surface-mounted, flush-mounted or hollow-wall mounting in the appropriate installation housing (see Accessories)
- Not compatible with intercom systems of other manufacturers
- Suitable for use exterior applications

Bell operation

The search for a contact is carried out on the touch display by scrolling through an alphabetical list or searching using a virtual keyboard.

Cleaning and care

To clean the surfaces, we recommend using a lint-free cloth with warm water and a little detergent. Tough and resistant grease residues can be removed with an alcohol-based cleaning agent.

- i** Do not use any abrasive polishing agents. These can cause destruction through microscratches on the surface.

- i** Do not use a citrus-based glass cleaner. This can cause the metal components on the surfaces to oxidise.

Information for electricians

Installation and electrical connection

⚠ DANGER!
Touching live parts in the installation environment can result in an electric shock!
An electric shock can lead to death!
Before working on the device or load, disconnect all associated circuit breakers. Cover all live parts in the area!

When installing door communication systems, comply with the general safety regulations for telecommunications systems according to VDE 0800:

- Separate routing of power and door communication cables with a minimum spacing of 10 cm
- Partitions between power and door communication cables in shared cable ducts
- Use of standard Cat. 6 or 7 network cables for the outdoor station and gateway as well as telecommunications cables, e.g. J-Y(St) Y with 0.8 mm diameter for the 2-wire bus.

Selecting installation location

The device can be installed both in interiors and in outdoor areas.

- Keep it as free as possible from strong outside light, such as lamps, streetlights, garden lighting, which shine directly onto the outdoor station.

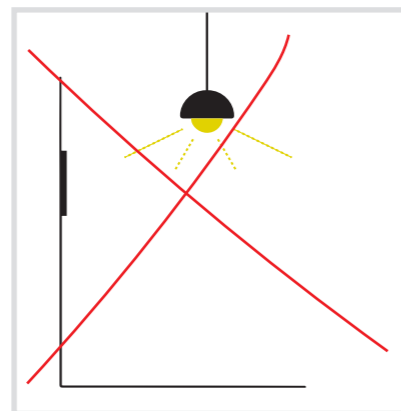


Fig. 3: Outside light

- No direct sunlight.

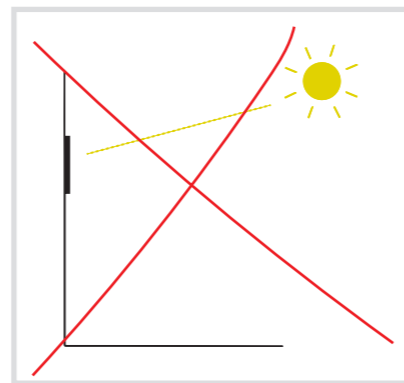


Fig. 4: Direct sunlight

- If possible, no extremely bright or contrasting background.

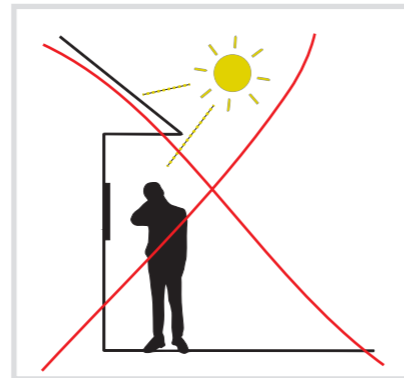


Fig. 5: Bright / contrasting background

- No direct sunlight through a window or door

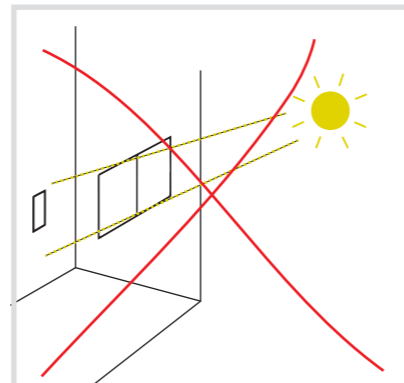


Fig. 6: Direct sunlight through a window

- If possible without indirect sunlight through a window or door.

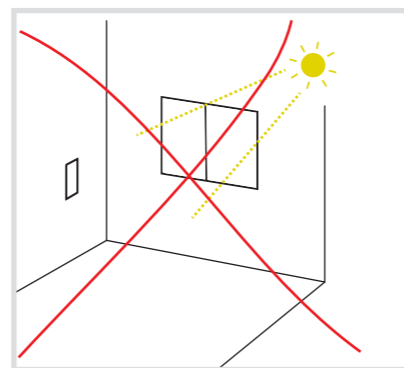


Fig. 7: Direct sunlight through a window

- i** Biometric detection products may not be exactly 100% accurate and suitable for all scenarios and environments. For uses or scenarios requiring increased security, please set up a combination of the access authentications RFID card, number code and facial recognition.

Mounting of installation housing

⚠ DANGER!
Damage from condensation.
Heat bridges can lead to condensation collecting.
Only use thermally-decoupled fastening material that is suitable for outdoor areas. Do not use any silicone containing acetic acid, as this can lead to corrosion.

- i** An installation height of approx. 1.6 m (middle of the camera lens) is recommended for persons of average size. Depending on the mounting type of the appropriate installation housing, the height of the cable entry can be found in the surface-mounted, flush-mounted or hollow-wall drawings.

- i** Maintain a minimum distance of 50 mm from any underlying objects, e.g. projection on a wall. To allow the opening of the door station with the opening tool (Figure 9).

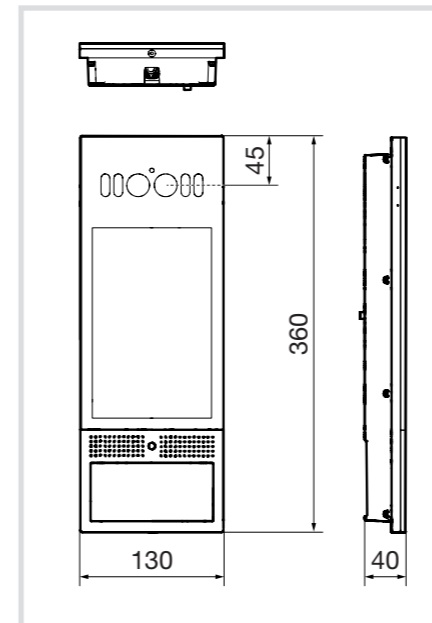


Fig. 8: Outdoor station dimensions

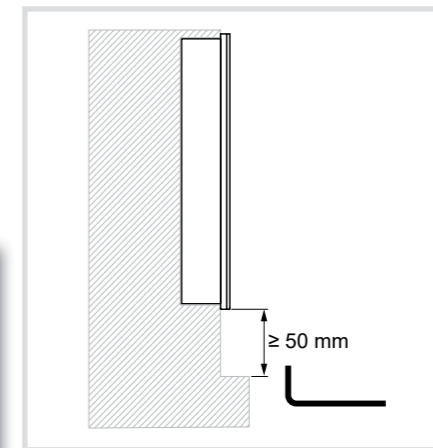


Fig. 9: Minimum spacing for mounting / dismantling

- Observe camera aperture angle (Figure 10 / 11)

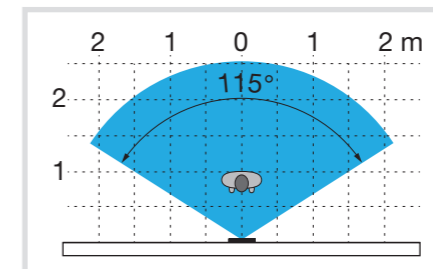


Fig. 10: Camera aperture angle horizontal

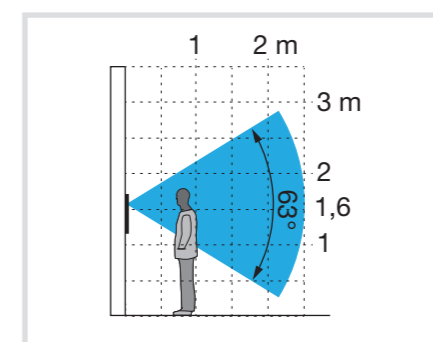


Fig. 11: Camera aperture angle vertical

Flush-mounting of installation housing

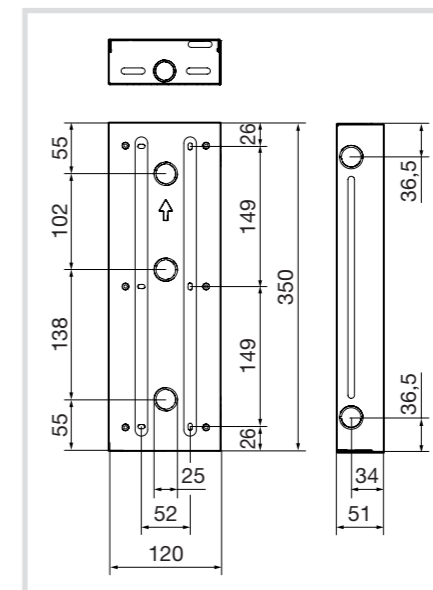


Fig. 12: Dimensions, flush-mounted installation housing

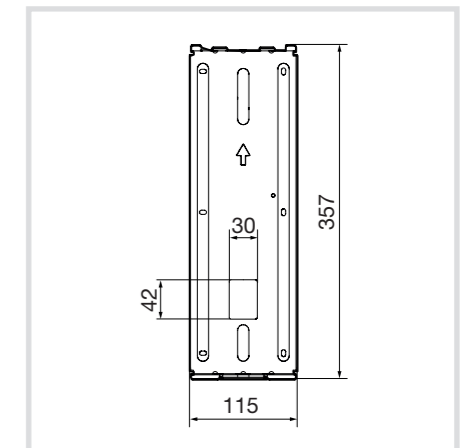


Fig. 13: Dimensions, flush-mounted installation housing insert

- Hold the installation housing in the correct position at the mounting location with the arrow ↑ pointing upwards, align it with a spirit level and draw it onto the wall (Figure 14).

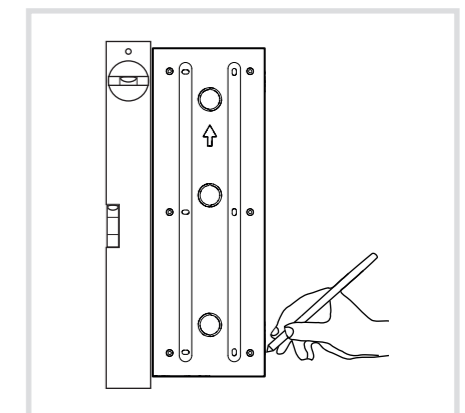


Fig. 14: Drawing on the flush-mounted installation housing

- Knock out the wall recess at the required depth using the appropriate tool.

⚠ DANGER!
Sharp metal edges on the flush-mounted housing.
Sharp edges could cause injury from cuts.
Before mounting, wear protective gloves!

- Break out the required cable entries in the housing and screw on the plaster masks.

- i** In so doing, only screw in the screws lightly, in order to avoid deformations.
- If necessary, insert a stripped cable, terminated with an RJ45 plug into the housing through the cable entry.
- Insert the flush-mounted installation housing in the wall recess in the correct position with the arrow ↑ pointing up and align with the spirit level. If necessary, draw on the fastening holes of the plaster masks and drill them (Figure 15).

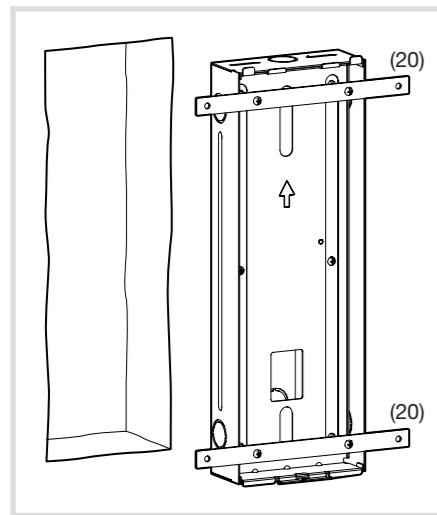


Fig. 15: Flush-mounted installation housing with plaster masks

(20) Plaster masks

i With raw construction walls, the plaster thickness should be taken into account. The housing should be mounted as flush as possible with the surface of the finished plaster. If necessary, compensate the plaster thickness by relining the plaster masks (20).

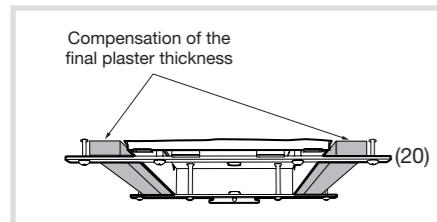


Fig. 16: Surface compensation through relining

- Check the position once again using a spirit level.
- i** Align precisely as it is not possible to align the front plate laterally.

During mounting in a thermal insulation composite system, observe the following:

- If necessary, compensate for the depth of the installation opening until the bottom of the housing using insulation material with high insulation value such as Polyurethane (PUR).
- i** Vertically adjustable insulated device supports can also be used instead of the insulation material.
- Drill cable bushing into the compensation insulation if required.
- If necessary, attach and seal insulation material with building foam layer by layer in order to prevent air circulation in cavities.
- Only use fastening materials suitable for outdoor areas, such as building foam, screws and anchors suitable for composite insulation systems.

When installing in single-wall masonry, also bear in mind the following:

- Close any cracks, holes and openings in order to prevent any air circulation.
- Depending on the masonry, fasten the housing with building foam or cement filler suitable for outdoor areas and wait the relevant amount of time for it to harden.

- Attach the housing to the wall with screws and dowels via the fixing holes at the back.

Mounting of the hollow-wall installation housing

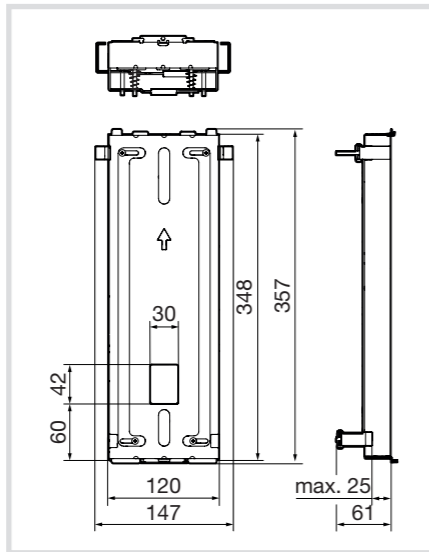


Fig. 17: Hollow wall installation housing dimensional drawing

- Assembling the hollow-wall installation housing (Figure 18)

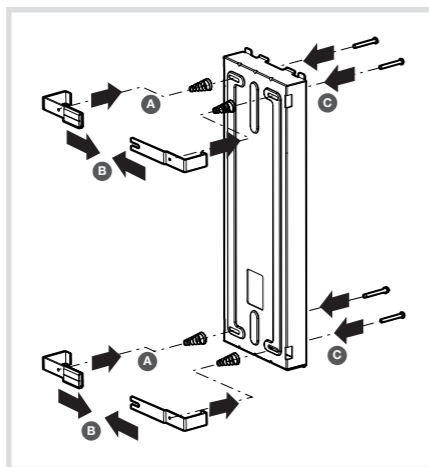


Fig. 18: Assembling the hollow-wall installation housing

- Hold the hollow-wall installation housing in the correct position at the mounting location with the arrow ↑ pointing upwards, align it with a spirit level and draw it onto the wall (Figure 19).

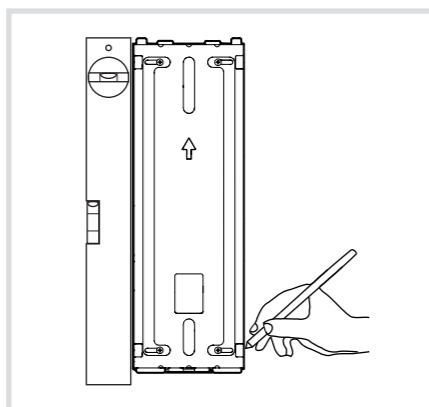


Fig. 19: Drawing on the hollow-wall installation housing

- Cut out a wall cut-out of exactly 348 x 1210 mm using a suitable tool.
- i** The cut-out must be accurate as the wall support of the installation housing is only 4 mm to the top and bottom.
- If necessary, insert a stripped cable, terminated with an RJ45 plug into the rear of the housing through the cable entry.
- Insert the housing in the wall cut-out in the correct position with the arrow ↑ pointing up, align it with the spirit level and hold it with one hand.
- Loosen the 4 screws for hollow-wall fastening using a screwdriver (A), push outwards (B) and screw tight (Figure 20).

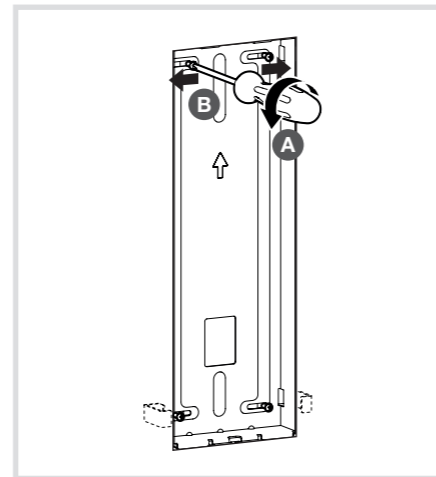


Fig. 20: Hollow-wall installation housing fastening

Mounting of surface-mounted installation housing

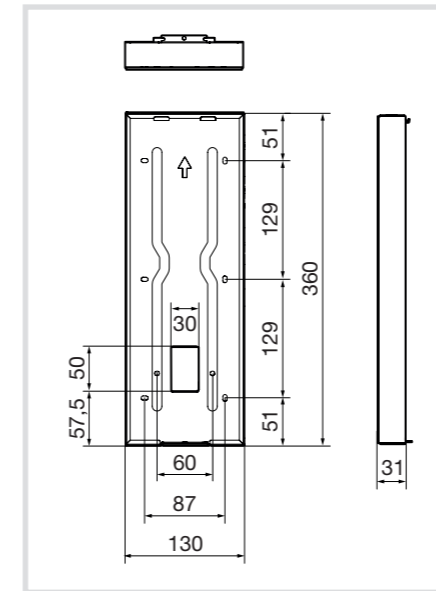


Fig. 21: Surface-mounted installation housing dimensional drawing

- If necessary, insert a stripped cable, terminated with an RJ45 plug into the rear of the housing through the cable entry.
- Hold the surface-mounted installation housing in the correct position at the mounting location with the arrow ↑ pointing upwards, align it with a spirit level and draw the rear-side fastening holes onto the wall (Figure 22).

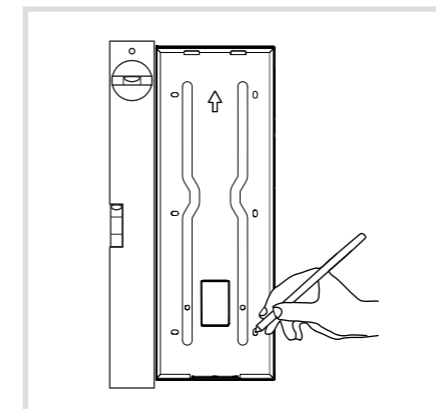


Fig. 22: Drawing on the surface-mounted installation housing

- Drill the fastening holes and fasten the installation housing with screws and anchors suitable for the substrate.

System expansion

- Quantity of TJA470 / TJA510N: Max. 1 per system (from Q3 2023, multiples planned - more information on installation, system setup and system limits can then be found at www.hager.com)
- Number of residential units per system: Max. 255 with own bus address
- Number of indoor stations: Max. 3 in parallel per residential unit (more than 3 possible by using secondary line couplers)
- Number of users / names: Max. 1000 per outdoor station RTQ52xY
- Number of users: Max. 1000 per TJA470 / TJA510N
- Number of users per residential unit: Max. 5 (maximum number of RFID cards)
- PIN code: 1 PIN code per user / name
- Number of outdoor stations RTQ52xY: Max. 10 per TJA470 / TJA510N
- Number of line couplers RED111Y: Max. 64 per system
- Number of secondary line couplers RED115Y: Max. 8 per system

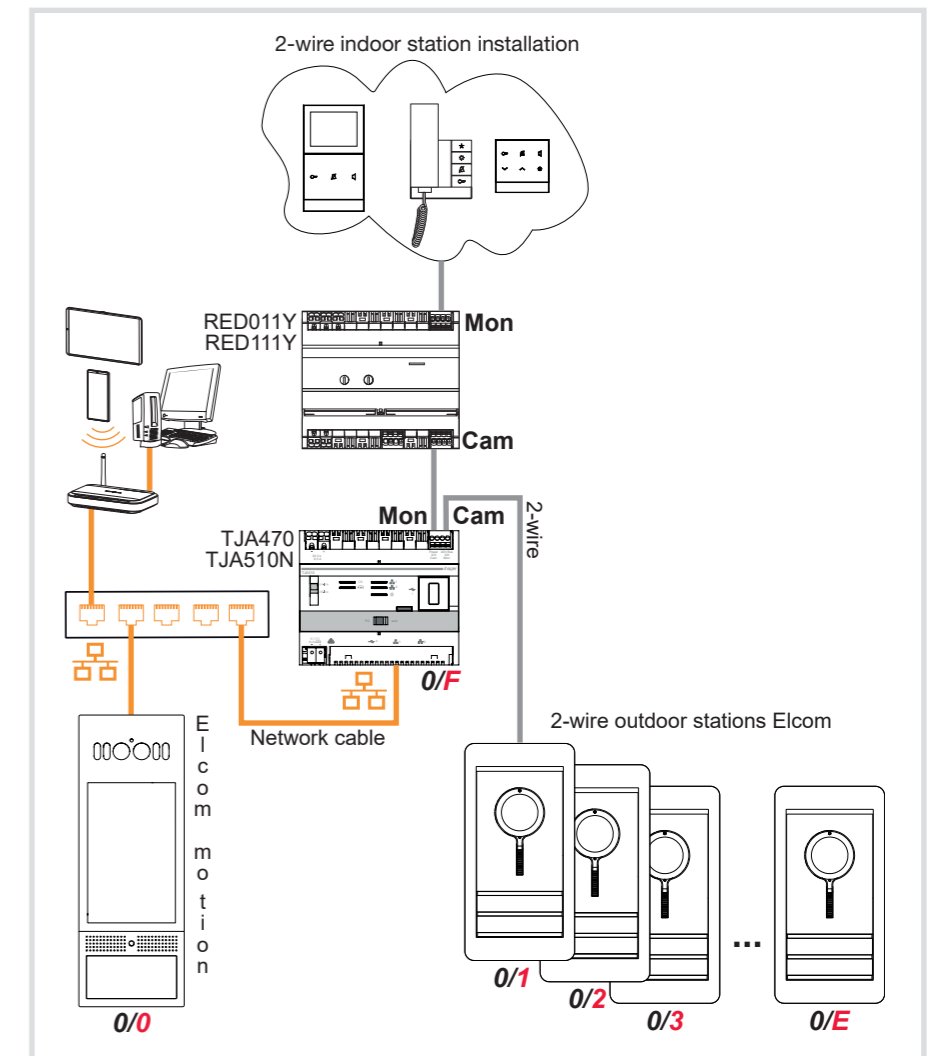


Fig. 23: Installation example without coupler

Connections of the outdoor station

Power is supplied to the outdoor station and the gateway via PoE+ or an external power supply. The outdoor station and the TJA470 / TJA510N gateway are operated as a separate IP network using an Ethernet switch. The transition to the 2-wire audio / video bus is on the TJA470 / TJA510N.

- PoE+ power supply:

The outdoor station and the gateway must be connected with a PoE+ or PoE++ Ethernet switch according to IEEE 802.3bt.

- With external power supply:

For operation with a switch without PoE+, the outdoor station and the gateway must each be connected with a Hager HTG911H power supply. The HTG911H external power supply is only suitable for the power supply of one device and may not, under any circumstances, be used for a further device.

The cable length of the PoE+ cable may not exceed 20 m. With longer network cables, a Hager HTG911H external power supply must be used.

Connection to the 2-wire bus

The 2-wire video/audio system can be installed in various ways. The wiring diagram below shows a star shape installation by way of example.

Other installation types can be found in the 2-wire system manual and online on our website.

The following example, Figures 24 and 25, shows the integration of the RTQ52xY outdoor station in a multi-dwelling building with 3 indoor stations via the TJA470 / TJA510N gateway. The system can be supplemented with further indoor stations, outdoor stations and accessories devices (Figure 23).

The second HTG911H power supply, shown hatched, is only required for the variant without PoE+.

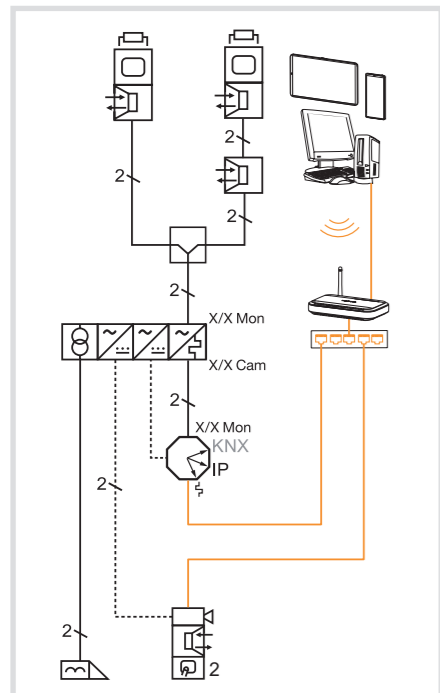


Fig. 24: Installation example, multi-dwelling building shown unresolved

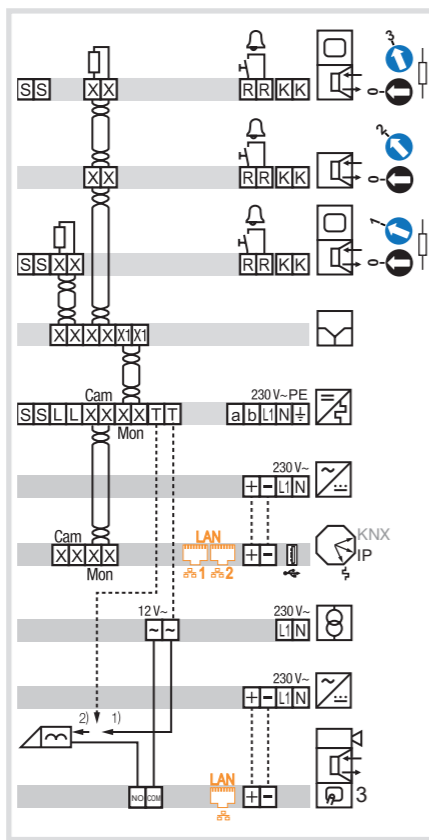


Fig. 25: Installation example, multi-dwelling building shown resolved

	Indoor station
	Video indoor stations
	Bus line power supply 2D RMD
	Power supply 24 V DC RMD
	Network transformer 12 V~
	2x video distributor
	- Elcom motion Controller IP/2D - Domovea expert KNX
	Storey call push-button
	Terminator / terminating resistor
	Door opener
	Outdoor station with touch display + camera
	Twisted wire pair
	Untwisted wire pair, for e.g. for door release

Table 1: Switching symbols

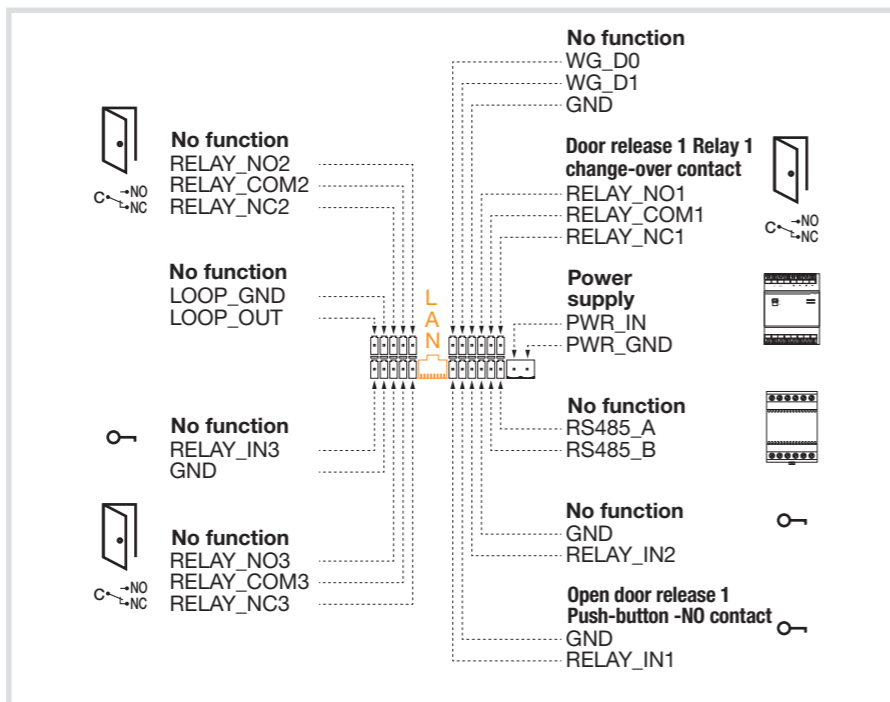


Fig. 26: Connections of the outdoor station

Connection of inductive devices to door release relay

When connecting inductive devices - with a coil - (e.g. door release, electromagnetic lock), it is necessary to protect the relay contact against high making currents. For this, we recommend switching one of the supplied diodes 1 A/200 V in parallel in the blocking direction.

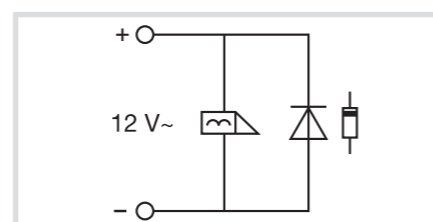


Fig. 27: Diode connection

Connecting to the IP network

ATTENTION!
We recommend installing the system in a segmented LAN network (separated from any other use) and protecting it with a firewall.

The outdoor station is connected to the indoor stations and the local IP network via the TJA470 / TJA510N gateway.

The outdoor station is commissioned via the configuration interface of the appropriate gateway.

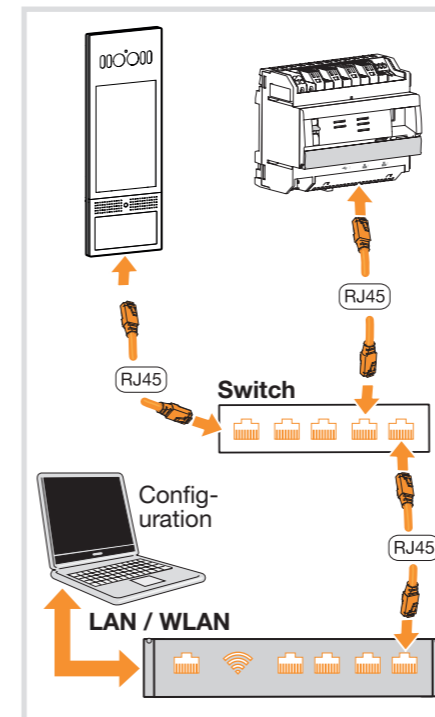


Fig. 28: Connecting to the IP network

Mounting of the outdoor station

The installation housing is mounted and the required connection cables in the housing have been prepared.

- Connect the connection cables and network cables to the outdoor station according to Figure 28.
- Stick the size of the two-part cable entry seal (22) required for the cables in the connection compartment cover plate (21) and in the connection compartment of the outdoor station. Then, insert the connection compartment seal (23) in the recess provided around the connection compartment and then close it by screwing on the connection compartment cover plate (Figure 29).

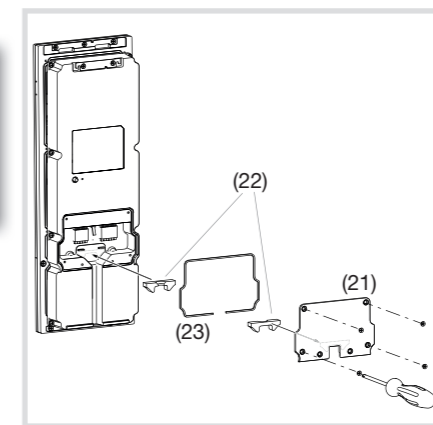


Fig. 29: Cable entry, outdoor station
(21) Connection compartment cover plate
(22) Two-part cable entry seal
(23) Connection compartment seal

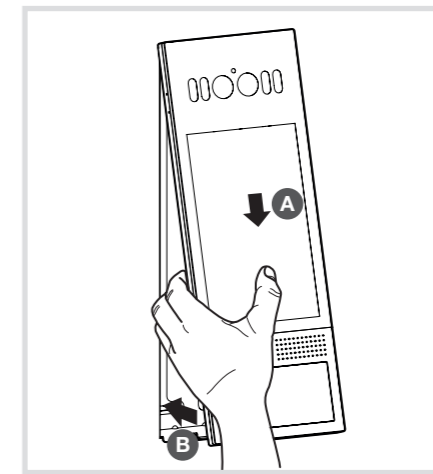


Fig. 30: Insertion of the outdoor station

- Using the safety screw (10), screw the outdoor station to the installation housing at the bottom centre (Figure 31).

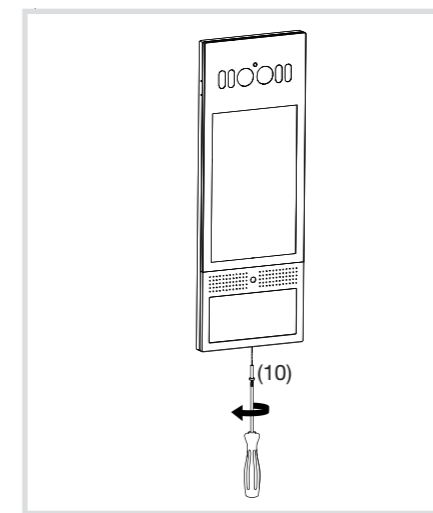


Fig. 31: Securing the outdoor station

RFID cards

The RFID cards are contactless cards from the MIFARE DESfire range with a unique serial number (UID), which is used as an identifier.

There are 3 types of RFID cards, with different access authorisations:



The **Configuration card** for the electrician (white corner), allowing local polling and setting of various parameters.

The Configuration card is set at the factory for the configuration of this outdoor station and, initially, only works with this outdoor station. At a later time, the card can also be assigned to other outdoor stations.



The **Registration card** for the administrator (white banner), allowing the assignment of the PIN code to users (Enrolment) and the assignment of a face on the RTQ521Y.

The Registration card is set at the factory for the configuration of this outdoor station and, initially, only works with this outdoor station. At a later time, the card can also be assigned to other outdoor stations.



The **User card** for the tenant (completely green), authorising the user to open the door.

The User card can be registered on multiple outdoor stations.

Configuration via the touch display

The Configuration card allows the local settable of some parameters directly on the outdoor station.

- Hold the **Configuration card** (white corner) in front of the RFID card reader of the outdoor station to identify yourself.

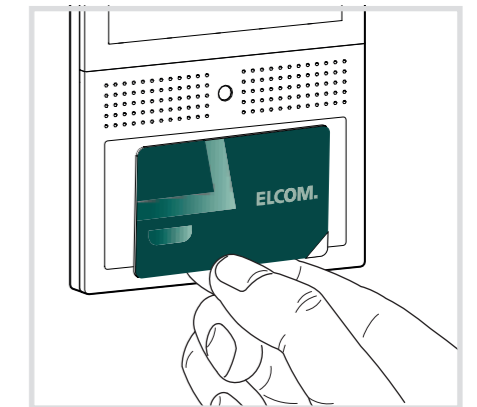


Fig. 32: Identification with the Configuration card

The **settings** (Figure 33) appear on the touch display.

- Select the setting to be changed on the touch display (Figure 33) and follow the instructions on the display.

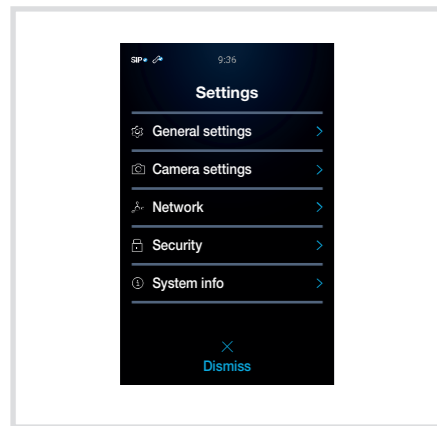


Fig. 33: Configuration card settings

General settings

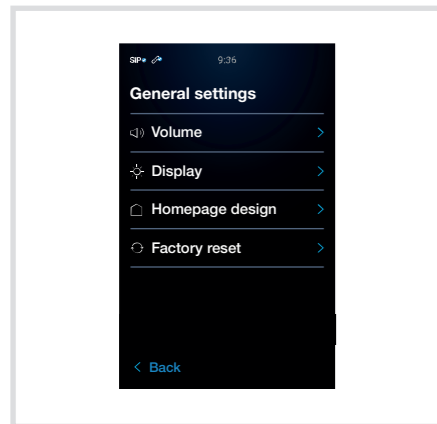


Fig. 34: General settings

- Select the **general setting** to be changed on the touch display (Figure 34) and follow the instructions on the display.
- **Volume** to set the: Microphone side, microphone sensitivity, loudspeaker volume, volume of the button sounds
- **Screen** to set the: Display backlighting, IR LED additional lighting for facial recognition
- **Home page** for the configuration of: Contents on the Home page
- **Language setting** to adapt: The announcement voice
- **Resetting to factory settings**

Camera settings

For data protection reasons, up to 4 masks can be added to the camera picture to hide parts of the image.

- To insert and change the size, follow the instructions on the display (Figure 35).

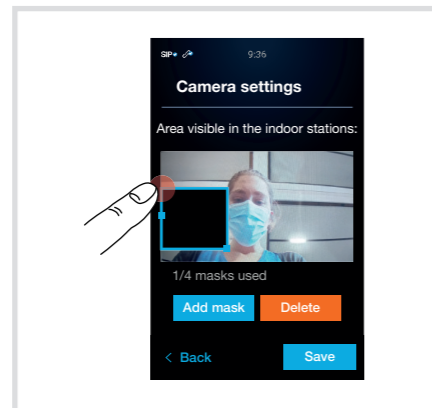


Fig. 35: Camera settings, masking

Network settings

An IP address is required for addressing in the network. The IP address can be assigned automatically via DHCP or permanently in a manual manner (the IP address is usually provided by the system administrator).

ATTENTION!
Possible synchronisation problems between the gateway and outdoor station.
Communication problems possible between the devices during automatic assignment.
Ensure the use of fixed IP addresses in agreement with the system administrator.

Automatic assignment

- For the automatic network setting, position **DHCP** on On (Figure 36).
The automatically assigned addresses appear in the **Network** menu.

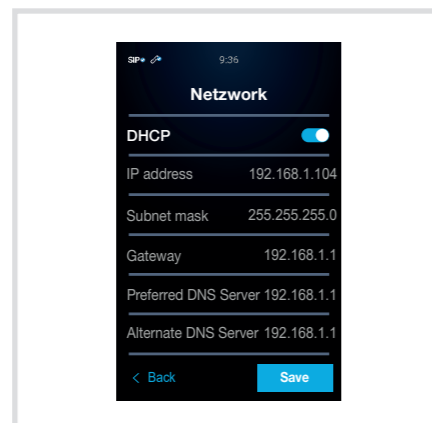


Fig. 36: Automatic assignment

Manual assignment

- For manual network settings, position **DHCP** on Off (Figure 37).
- By selecting the appropriate address, this can be entered manually using the number keypad shown.

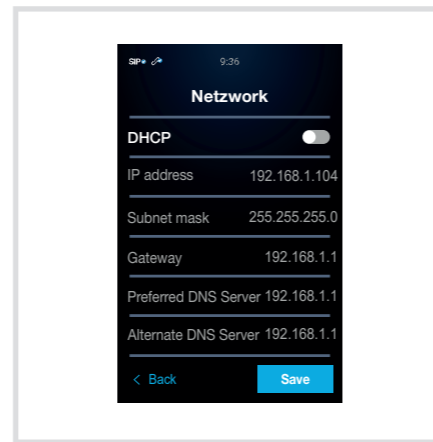


Fig. 37: Manual assignment

Security settings

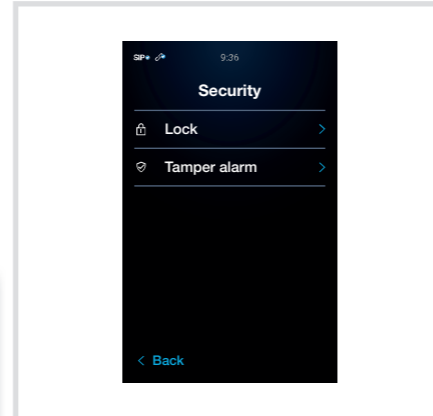


Fig. 38: Security settings

- Select the security setting to be changed on the touch display and follow the instructions on the display (Figure 38).
- **Door release** to set: Door release signal type, delay time
- **Sabotage warning** to set: Activation of the sabotage contact, volume setting of the sabotage message

System information

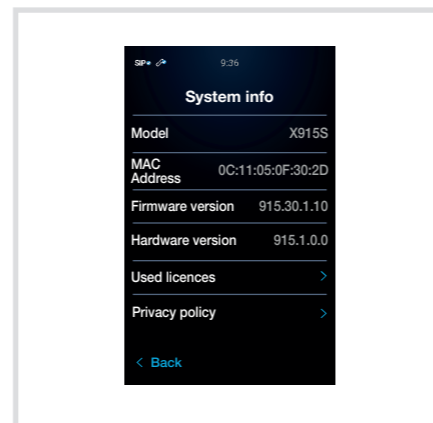


Fig. 39: System information

All the relevant device information is displayed under System information (Figure 39).

- **Used licences** can be opened
- **Data protection guidelines** can be opened

Access options

Any user registered in the database via the TJA470 / TJA510N configuration interface can use a unique PIN code and / or an RFID card and / or facial recognition for access to the building.

The user cards are available as RTH303Y (3x pack) and RTH310Y (10x pack). The UID of a user card (completely green) for building access can be read by the RFID card reader integrated into the outdoor station and assigned to a user using a configuration interface.

- Alternatively, the UID (unique ID) of a Mi-fare RFID card can also be read out using a separate reader (connected to a PC via USB) and then entered in the configuration interface of the TJA470 / TJA510N gateway.
- Biometric detection products may not be exactly 100% accurate and suitable for all scenarios and environments. For uses or scenarios requiring increased security, please set up a combination of the access authentications RFID card, number code and / or facial recognition.
- The various access options (PIN code, RFID card or facial recognition or combination of these options) must be activated for each user using the registration card in the outdoor station.
- The assignment must take place separately for each user (not to a call area, as there is otherwise no synchronisation with the configuration interface).
- Each PIN code can be assigned only once for the entire system. A maximum of 1 PIN code, 5 RFID cards and 1 face can be assigned to each user.
- An RFID card and PIN code can only be deleted from the system via the TJA470 / TJA510N configuration interface.
- The PIN code consists of a number made up of between 4 and 8 digits and may not begin with a 0.

Administration of the access options

Using the **Registration card** for the Administrator (white banner), it is possible to save or modify the different access options.

- Hold the **Registration card** (white banner) in front of the RFID card reader of the outdoor station to identify yourself (Fig. 40).



Fig. 40: Identification with the Registration card

Registered users appear on the touch display (Figure 41).

- Select the user on the touch display:

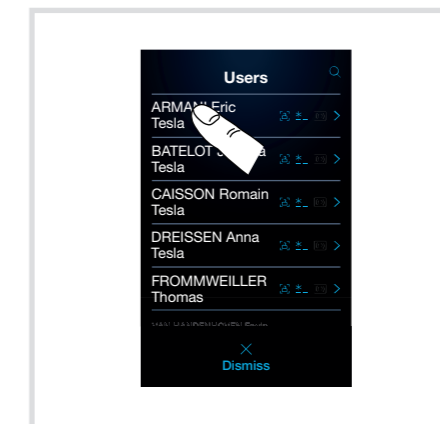


Fig. 41: Display of registered users

- Select the access option to be changed on the touch display and follow the instructions on the display:

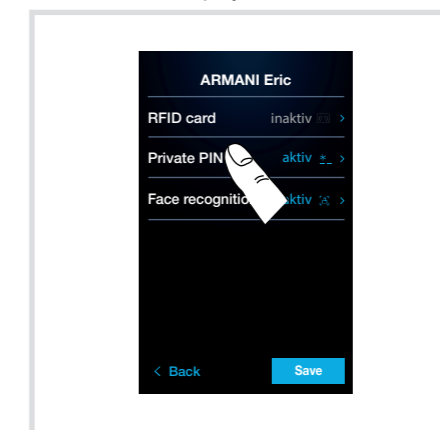


Fig. 42: Access options of the user

Appendix

Technical data

RAM / ROM	2 GB / 16 GB
Touch display	8" IPS LCD
Display brightness	650 cd/m ²
Horizontal field of view	130°
Main camera 1 / 2.8" CMOS, HDR mode, Starlight	
Camera aperture angle	115° (H) / 63° (V)
Video resolution	max. 1920 x 1080 px
Video encoding format	H.264
Access control	PIN, RFID, facial
RFID cards	13.56 MHz & 125 kHz
Facial recognition accuracy	> 99%
Residential units	max. 255
User entries	max. 1000
Loudspeaker	2, 8 Ω / 2 W
Microphones	2 (left or right), -42 dB
Ethernet connection	RJ45, 10/100Base-T
Network cable	Cat. 6 FTP or STP
Network cable length	with PoE+ max. 25 m (depending on the audio and display settings at the outdoor station) with power supply max. 100 m
Connecting terminals external power supply	0,2 ... 2,5 mm ²
Connecting terminals relay	0,2 ... 1,5 mm ²
PoE+ power supply	IEEE 802.3bt
Separate power supply with HTG911H (if no PoE+)	24 V=
Interfaces	RS485
Relay outputs, potential-free	1 change-over contact
Relay switching current max.	1 A at 36 V= / 24 V~
Potential-free inputs for changeover relay	1
Relative humidity	10 ... 90% (not condensing)
Minimum ambient brightness	0.1 Lux
Protection class	IP65 / IK10
Storage temperature	-30 ... 70°C
Operating temperature	-30 ... 60°C
Mounting height, camera middle	1.6 m
Dimensions (W x H x D)	130 x 360 x 40 mm
Weight	2300 g

Standards

- EN 300330 V2.1.1 (Art. 3.2)
- EN 301489-1 V2.2.3 (Art. 3.1b)
- EN 301489-3 V2.1.1 (Art. 3.1b)
- EN 301489-17 V3.2.4 (Art. 3.1b)
- EN 62368-1:2014+A11:2017 (Art. 3.1a)
- EN 50663:2017 (Art. 3.1a)
- EN 62479:2010 (Art. 3.1a)
- EN 50364:2018 (Art. 3.1a)

Warranty

We reserve the right to realise technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale.

Note

Any access to device-internal areas, which goes beyond the areas described in these instructions, is prohibited and will lead to the guarantee becoming null and void, along with any other form of warranty.

Such interventions can damage the electronics and / or electronic components. These products were designed in such a way that these areas need not be accessed during commissioning and maintenance work.

Disposal



Disposal of electrical and electronic devices in the European Union.

(Applicable in the European Union and other European countries with separate collection systems).

This marking shown on the product or its documentation indicates that it should not be disposed of with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this device from other types of waste. Recycle the device responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this device for environmentally safe disposal.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

CE declaration of conformity

The corresponding declaration of conformity is available for downloading at www.hager.de.