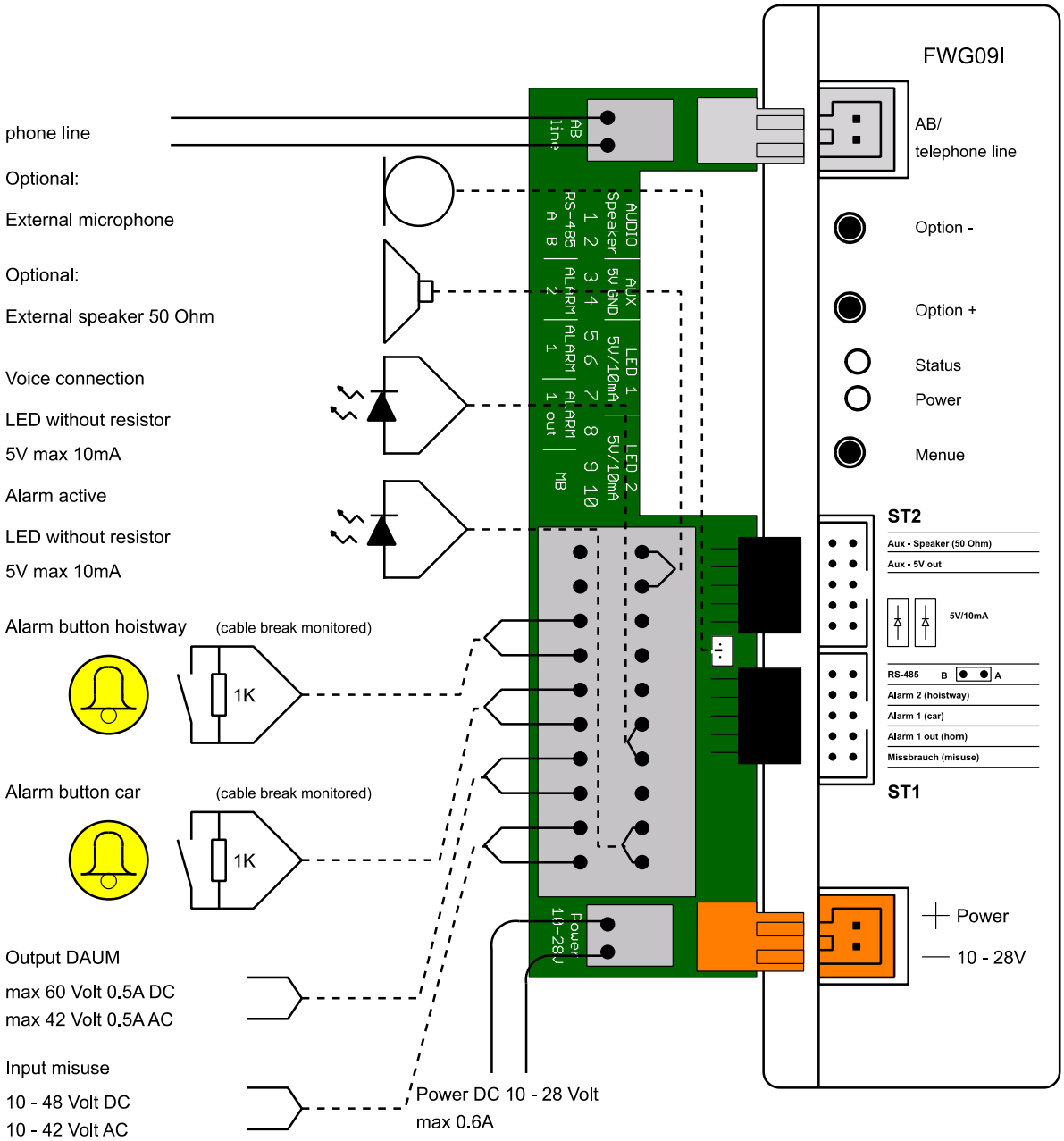
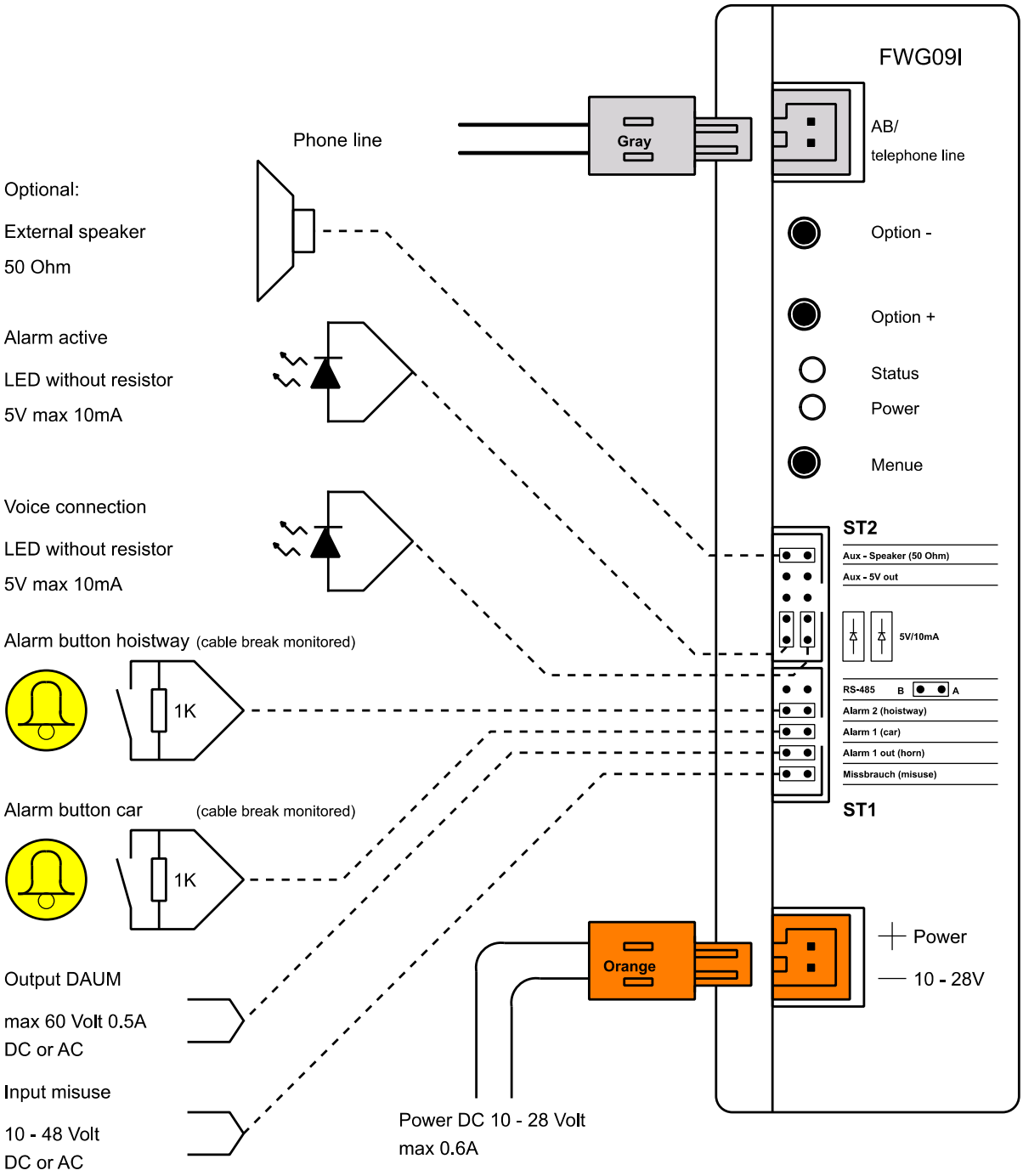
FWG09 Assembly instructions

Connections with adapter board



Direct connections without adapter board



Advice on VoIP telephone systems

Before operating with telephone systems based on the Internet protocol IP, please set the following parameters: The G.711a codec should be used. The transmission must be transparent, meaning that measures to reduce bandwidth such as detecting whether someone is speaking (voice/silence detection), noise suppression and echo cancellation or similar must be deactivated to connect the FWG09. The conversion of faxes according to T.38 must also be prevented. If necessary, establish contact between the person responsible for the telephone system and base engineering gmbh.

Surroundings

The FWG09 is only approved for use in a temperature range from 0°C to +40°C.

Installation

When connecting the adapter board please wear protection gloves.

With the supplied mounting kit the installation on the car roof is the easiest and fastest option.

The position of the FWG09 is important for the quality of the voice connection. Please consider the following points:

- Keep the FWG09 away from car ventilators, ballasts for fluorescent tubes or door motors.
- Pay attention to sufficiently large sound openings to the car space, use ventilation openings etc.
- Preferably direct the sound outlet opening of the FWG09 to the side of the shaft wall; never up. The connectors should point downwards.
- Avoid sound reflections on plane surfaces that are too close, keep at least 20cm distances.
- If there is distortion during the speech connection from the loudspeaker, use the service menu to reduce the speaker volume.
- The FWG09 should be protected from dripping water, if possible with the connectors pointing downwards. If protection according to IPX1 is required at the installation site, use watertight tape on the connector at the back of the device next to the object number sticker. The housing then fulfills the requirements of IPX1.

The FWG09 can also be mounting behind the control panel. It should be noted that it needs to be protected against vandalism.

Commissioning

1. Ensure that the batteries are inserted.

   Please pay attention to the correct polarity, as the unit is not supplied with backup power if the batteries are inserted the wrong way around.
2. Connect a power supply of 10–28V DC voltage or use a suitable plug-in power supply. The external power supply must be able to supply 600mA of current and should not be supplied with emergency power, since the FWG09 has its own battery power supply.
3. Configure the FWG09 using the service menu: Usually set the alarm button types or switch to gate keeper mode.
4. Connect the telephone line. Please use a twisted pair cable if possible!

5. Connect the alarm buttons, misuse input and signal lamps.

Decommissioning

1) Disconnect the power supply.
   a) When using the adapter board disconnect the board or the power supply.

   When disconnecting the adapter board please wear protection gloves.

   b) Without the adapter board pull the orange plug.
2) Press the buttons "*Option+*" and "*Option-*" simultaneously. A shutdown sound plays.

This is important as otherwise, the unit will continue to run on battery mode and the battery will be nearly completely discharged.

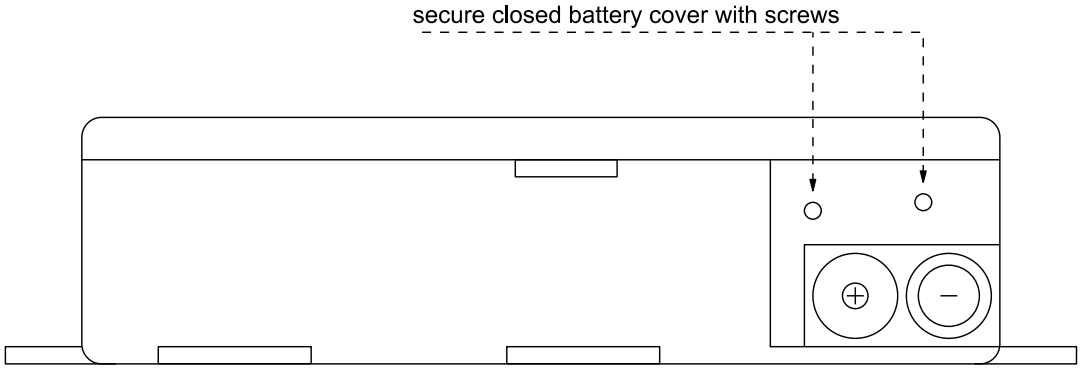
Reset

If the buttons "*Option+*" und "*Option-*" are pressed simultaneously with external power present, a system reset is triggered. All pending messages are deleted.

Alarm

Pressing the button "Option+" for longer than 1.5 seconds triggers an alarm.

Battery compartment



LED Pictograms

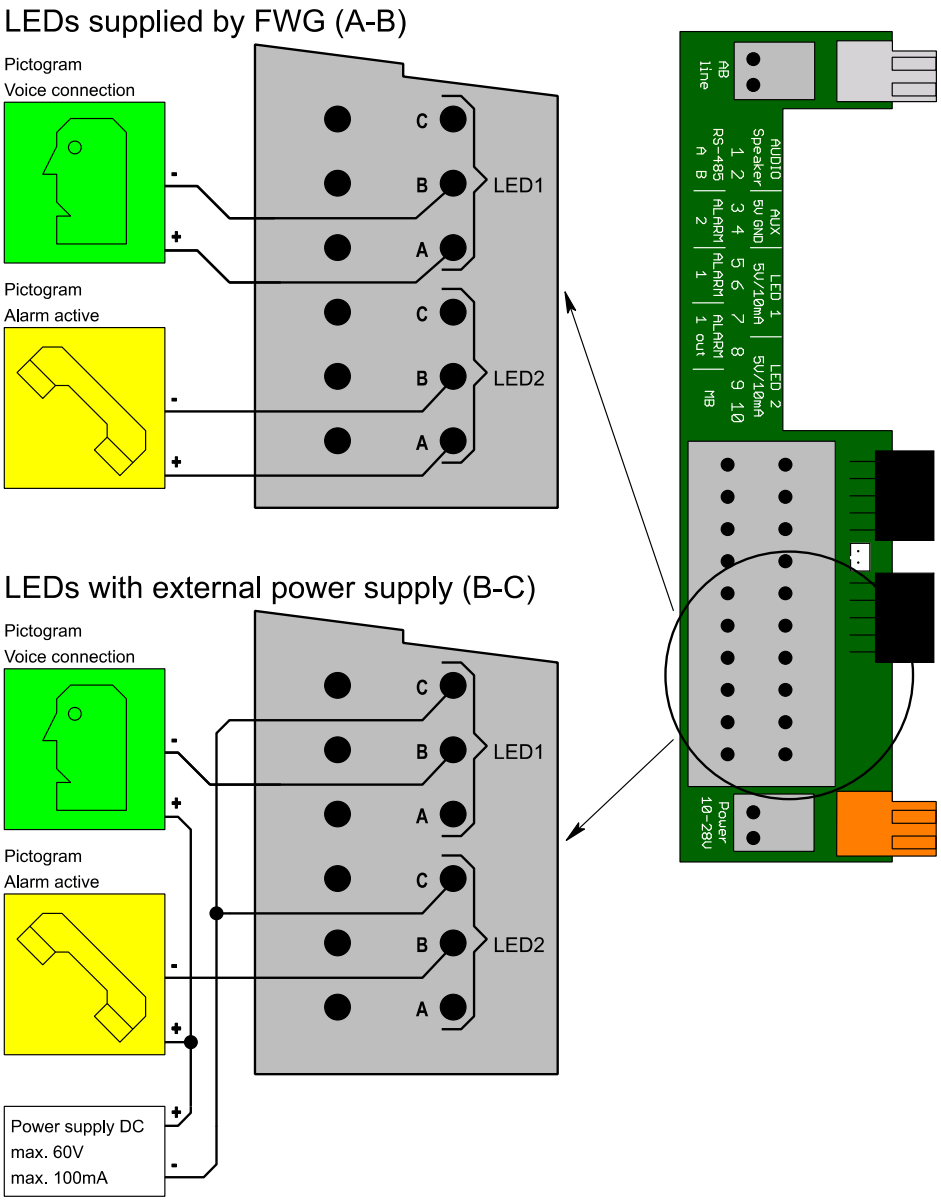
Adapter board

The FWG09 supplies an emergency power supply voltage of 5V (current is limited to 10mA) for the connection of LED pictograms for alarm and voice communication. To do this, the LEDs must be connected in position A-B.

Furthermore, the FWG09 also has a switch output for the pictograms, so that LEDs with higher voltages can be supplied by means of an external power supply. This can be up to 60 volts; the maximum current is 100mA. The switch output lies at position B-C; the negative terminal is always switched. The ground of the power supply of the LEDs must be equal to the ground of the power supply of the unit.

Please pay attention to the correct polarity, as the FWG09 is destroyed if the external power supply is connected incorrectly.

The pictograms start blinking alternately according to EN81-28:2018 if the battery is faulty or the periodic calls can't be sent. The exact cause of the error can then be queried in the service menu.



Direct connection

The FWG09 supplies an emergency power supply voltage of 5V (current is limited to 10mA) for the connection of LED pictograms for alarm and voice communication. To do this, the LEDs must be connected in position A-B.

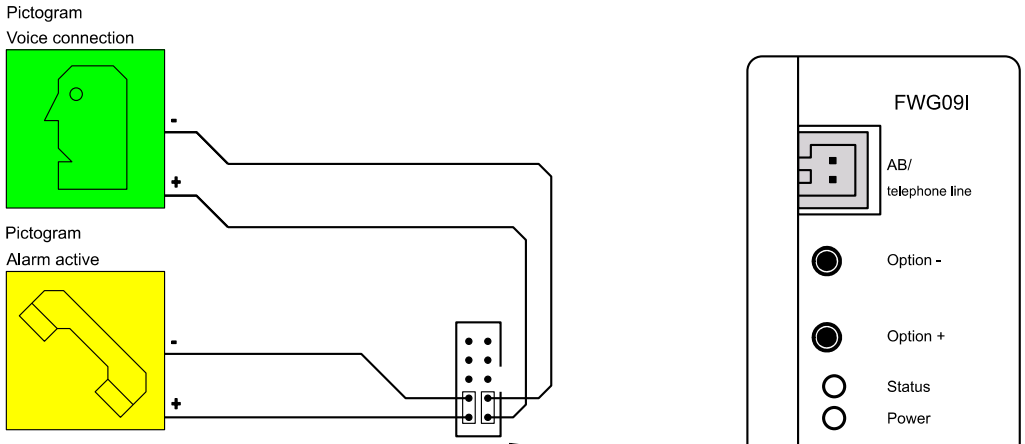
Furthermore, the FWG09 also has a switch output for the pictograms, so that LEDs with higher voltages can be supplied by means of an external power supply. This can be up to 60 volts; the maximum current is 100mA. The switch output lies at position B-D; the negative terminal is always switched. The ground of the power supply of the LEDs must be equal to the ground of the power supply of the unit.

In current devices there is only one pin for ground!

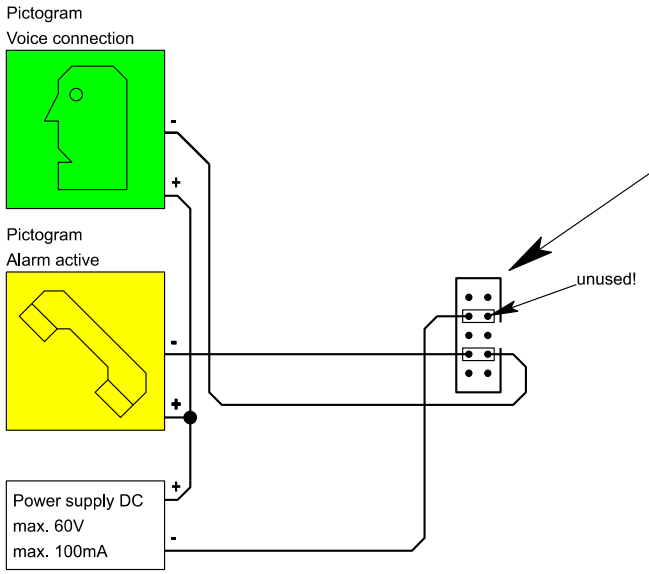
Please do not connect the neighboring pin, as the FWG09 will be destroyed otherwise.

The pictograms start blinking alternately according to EN81-28:2018 if the battery is faulty or the periodic calls can't be sent. The exact cause of the error can then be queried in the service menu.

LEDs supplied by FWG (A-B)



LEDs with external power supply (B-D)



Connecting the alarm buttons

The FWG09 offers the possibility to connect two alarm buttons, alarm button 1 and alarm button 2. Both buttons can be configured independently of each other as NO or NC contact. It is intended that the alarm button in the car is connected to alarm button 1 and one or more buttons on or under the car are connected to alarm button 2. **Only potential-free contacts may be connected.**

In order to monitor the cable up to a button with NO contacts, you can attach a 1K resistor to the button and set the corresponding button to "*cable break monitored*".

Input for misuse signal

Various functions can be triggered via a voltage at the misuse input of 10-48V DC or 10-42V AC. These can be set in the service menu, see page 9.

Misuse

A signal can be connected to indicate that the alarm has been misused. This is only evaluated with the car alarm button 1. A distinction can be made as to whether a "*misuse*" message should be sent to the call center or whether there should be no reaction at all. For the purpose of an emergency call test, an emergency call is triggered in both cases after 30 seconds of continuously pressing the alarm button in the car.

Fire alarm

There is also the possibility of an endless announcement "*Fire alarm, leave cabin immediately*" This feature can also be used during installation to test the misuse signal.

Passing on battery problems

In accordance with EN81-28, the FWG09 indicates faults in its own battery by blinking the pictograms. In order to be able to use this function for the elevator control as well, there is the possibility of triggering the blinking of the pictograms through voltage or lack of voltage.

Malfunction warning

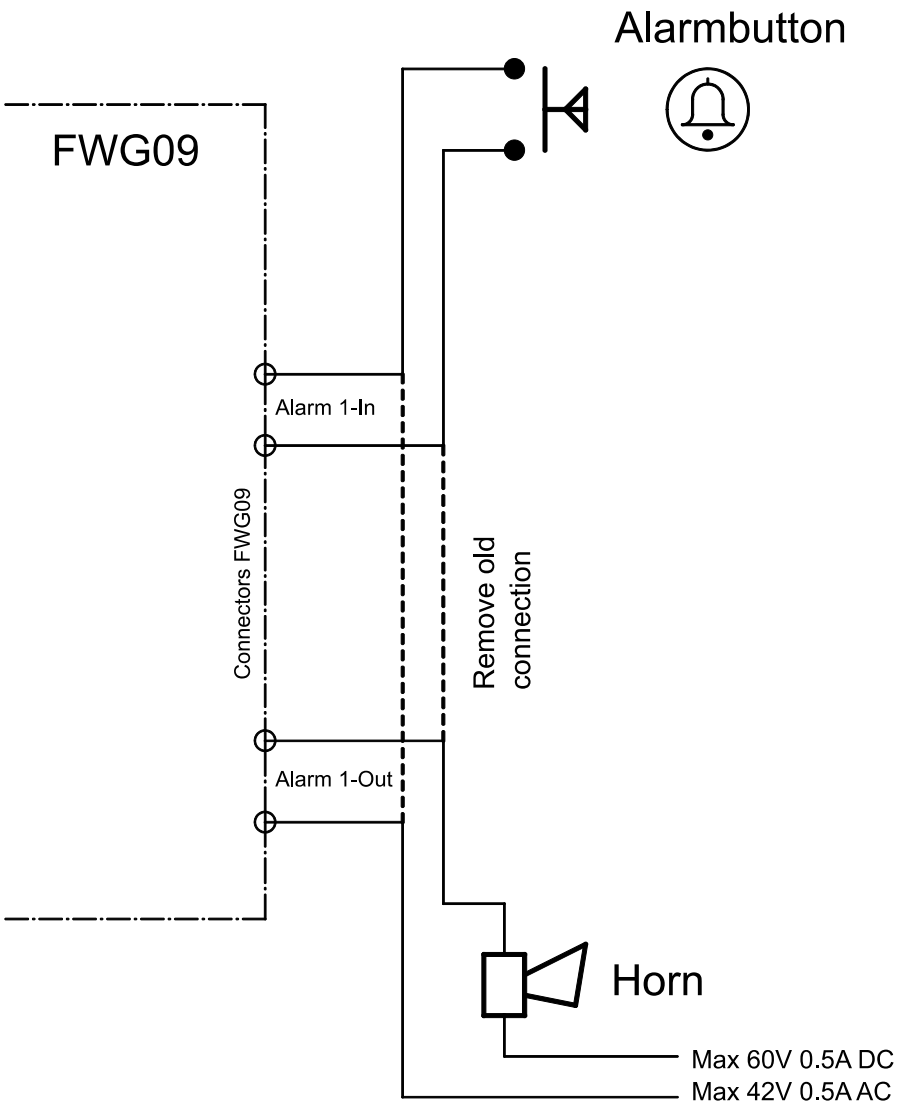
An applied voltage can also be sent to the call center as a general error message.

Alarm button Converter DAUM

If the second switching level of the alarm button is missing, the alarm button converter assumes the function of supplying this potential-free to the emergency call device by outputting a potential-free illustration of the alarm button replacing the missing second level.

The internal circuit of the FWG09 is used to switch the connected alarm button to the recognition circuit of the FWG09, and to mirror the function of the external push-button via a relay to the signaling unit potential-free.

If the FWG is switched off, the car alarm button is directly connected to the output by the internal circuit.



Connecting DAUM

Service menu

Activation

Briefly press the buttons "*Menu*" and "*Option+*" simultaneously ⇒ FWG09 responds "*Service on, object number <Object>, car <Car>*" and refers to some technical information. You can exit the service menu again at any time in the same way.

The "*Menu*" button can be used to browse through the individual menu items. The settings can be changed with the buttons "*Option+*" and "*Option-*".

When you leave the service menu, the unit remembers the settings that were previously selected and responds with "*Service off*".

Menu structure

Alarm button one is…

- NO contact.
- Cable break monitored.
- NC contact.

Alarm button two is…

- NO contact.
- Cable break monitored.
- NC contact.

Misuse is…

- Off (default) – the misused alarm is reported as a normal alarm.
- On – misused alarm is reported as such.
- Suppressed – misused alarm is not reported at all.
- Fire alarm – As long as voltage is supplied, an announcement is played to leave the lift because of a fire.
- Battery broken – If voltage is present the pictograms start blinking according to EN81-28.
- Battery broken inverted – The pictograms start blinking if the misuse input is not active.
- Malfunction warning – A message is sent to the call center.

Volume is…

The volume of the loudspeaker of the reassurance announcement and voice communication when triggered via alarm button 1 can be set here.

Internal Speaker is…

- On (default) – Both speakers are active.
- Off – Only the external speaker is used for alarm.

The internal loudspeaker can be switched off. In the event of an emergency call only the external loudspeaker is used. If no external speaker is connected, the device will remain silent in the event of an alarm!

In the service menu and when the alarm is triggered on the device, both speakers are used, even if “Off” is set here.

Microphone is…

This setting changes the sensitivity of the microphone during voice communication. This setting should only be changed after consultation with base engineering gmbh.

“Press longer announcement” is…

- On (default setting) – An announcement is made if any of the alarm buttons is pressed too briefly.
- Off – A short press on the alarm buttons is ignored.

Trunk line seizure is…

- Automatically (default setting) — The FWG09 automatically detects if it is connected to a public phone line or a private PABX.
- 0 with pause – A “0” is dialed before each telephone number. A pause of 1/2 seconds is inserted after the “0”.
- 0 without pause – A “0” is dialed before each telephone number. The entire number including “0” is dialed in a row without a break.
- Blind dial – All telephone numbers are dialed “blindly”, there is no check whether or not an office is available.
- 9 with pause – A “9” is dialed before each telephone number. A pause of 1/2 seconds is included after the “9”.
- 9 without pause – A “9” is dialed before each telephone number. The entire number including "9" is dialed in a row without a pause.

When dialing blindly, a dial tone is expected after 2 seconds.

This setting should only be changed after consultation with base engineering gmbh. This is only necessary if a correct configuration of the telephone system is not possible.

To use the FWG in gate keeper mode connected to a GSM13 set this to “*Blind dial*”.

International prefix code is…

- Off – All numbers are dialed without prefix.
- On – The call center numbers are dialed with their matching prefix.
- Germany – All dialed numbers are prefixed with 0049 for Germany.
- Austria – All dialed numbers are prefixed with 0043 for Austria.
- Poland – All dialed numbers are prefixed with 0048 for Poland.

This setting allows the use of the FWG09 in a different country than the call center, i.e. a roaming SIM card. In the call center mode, the international prefix code is known to the FWG and is used with "On". In gatekeeper mode this must be selected from the list of countries.

Messages to…

- Call center – The FWG09 sends all messages to the preset call center.

- Gatekeeper program 1

  …

- Gatekeeper program 3B – The FWG09 runs as a gatekeeper intercom PSS09 and sends messages to one or more telephones. See also page 13.

Emergency light is…

- Off – There is no emergency light panel connected to the FWG09.
- On – An emergency light panel is connected to the FWG09.

When the emergency light is “On” the battery lifetime is reduced.

You can get matching emergency light panels from base engineering gmbh:

Name	Item number
Panel 1 with emergency light, pictograms, alarm button and speaker (optional microphone) for On-wall	200400001450
Panel 2 with emergency light, pictograms, alarm button and speaker (optional microphone) for In-wall	200400001480
Panel 3 with emergency light and pictograms for On-wall	200400001460
Panel 4 with emergency light and pictograms for In-wall	200400001490

Listening is…

When listening is activated, the FWG09’s dialing and communication with the call center can be listened to. This allows a simple diagnosis of problems with the telephone line or telephone system.

Service off

The service menu has been exited again.

LEDs on the FWG09

Power LED (green)	Off	FWG09 is powered down
	On	Supplied with power
	Flashing	Power fail, running from battery
	Pulsing	The battery gets charged
Status LED (yellow)	Off	Idle
	1 Flash	Messages needs to be sent
	2 Flashes	FWG is dialing
	3 Flashes	Phone line test
	Blinking	Connected to call center
	On	Voice connection active

Calling the FWG09 via telephone

You can also call the FWG09 with a normal telephone. A few seconds after the FWG has picked up it sends an answer tone. After this tone you can enter commands via DTMF. The commands needed for gate keeper mode are explained there on page 13.

The code transmitter known by FWG 85 and FWG 90 also works.

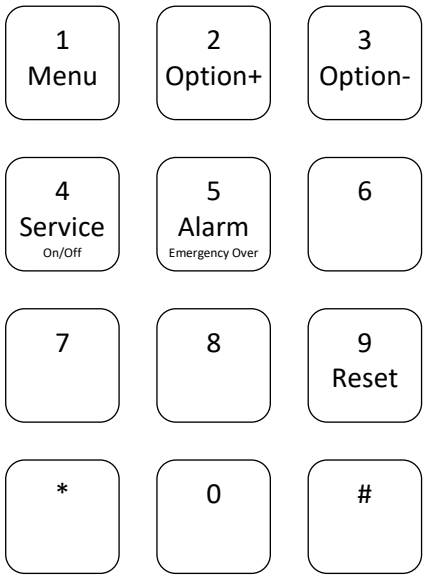
Call and setup of voice communication via telephone

If you know the object number, you can type in "*<*Object*> <*Car*>*" one after another after the answer tone, so for example "*719171*" for the unit with the object number 71917 and car 1. Then you can either terminate the voice communication with "*0#" or switch to the next car with "*<*Car*>#".

Control the service menu with a phone

In order to be able to configure a FWG09 mounted behind the elevator panel without opening the panel, you can also access the service menu via DTMF. To do this, call the device and type in "*<*Object*> <*Car*> 0*" after the answer tone, for example "*7191710*" for the device with object number 71917 and car 1. The FWG09 responds with "*Service car* <*Car*>". Now you can use the service menu with the buttons on the phone:

1 Button Menu
2 Button Option+
3 Button Option-
4 Service menu On/Off
5 Alarm / Emergency Over
9 Reset, the FWG disconnects



base app

The FWG09 can also be configured with tone sequences that are played in the car. There is a base app for smartphones and an audio file that serves as a key. Before using the base app, the audio file must be played in the car. The FWG09 then announces its object number and other information. Now you can start the base app and use it for configuration and testing. For more information please contact base engineering gmbh.

Operation as gatekeeper's intercom PSS09

Introduction

The FWG09 can send its messages not only to a call center but also to a normal telephone. This operating mode is called the gatekeeper's intercom PSS09.

The gatekeeper's intercom is a complete lift emergency call system and also behaves accordingly. This means that messages must be accepted, understood and acknowledged.

If the acknowledgement is not received, the emergency call system will continue to call continuously. This happens automatically regardless of time or telephone costs.

All further messages, such as periodic calls of the unit and technical messages must be accepted and processed with due care.

Acceptance of emergency calls should only be made by appropriately trained employees. For this purpose, it is possible to assign a PIN.

For easier identification in the case of several emergency call systems, a predefined text can be announced instead of the object number. This carries an extra cost. For more information, please contact base engineering gmbh.

The requirements with which lift operators are to comply are outlined in EN81-28.

The software variant 1 complies with EN81-28. Variants 2, 2A, 3, 3A and 3B are not compliant with EN81-28 and are thus to be set at one's own responsibility.

Technical requirements

When choosing, no evaluation is made on the dialing tone or the like. The device dials the programmed telephone numbers in blind dialing mode. A pause of 2 seconds is inserted for the outside line if "0" and "9" are the first digits. This pause can also be turned off by setting the menu item "*Trunk line seizure…*" to "*blind dial*".

If the PSS09 is used in conjunction with a GSM13 the PSS09 must be configured for "*blind dial*".

The following technical parameters are supported:

The dialing mode should be MFV with analog DTMF level. We recommend the setting "variable dialing mode" for PABX.

Call sign detection, 25 or 50Hz: 1000ms on, 4000ms off or 300ms on, 400ms off, 300ms on, 4000ms off.

Program variants

The gatekeeper's intercom supports three program variants, which can be adjusted in the service menu under the item "*Messages to... "* as "*Gatekeeper program One*", "*Gatekeeper program Two*", "*Gatekeeper program Two A*", "*Gatekeeper program Three*", "*Gatekeeper program Three A*", or "*Gatekeeper Program Three B*". These variants differ in the messages that the unit generates.

Program 1 All messages are generated as described from page 18 onwards. This is the default setting upon delivery as PSS09.

Program 2 Only the messages Alarm, Emergency Over, Misuse, Battery broken, Battery missing and Final call are generated. Furthermore, alarms are cancelled when the voice communication is established.

Program 2A In addition to the messages from program 2, the Periodic call is also reported.

Program 3 Only the messages Alarm and Misuse are generated. No acknowledgement is needed as the voice connection is always enabled. PSS09 will terminate the connection after the gatekeeper's intercom has hung up. If there is no busy tone, the device will hang up after 60 or 120 seconds. WARNING: Since a voice connection is always set up and an acknowledgment is not necessary, a second telephone number in Program 3 does not make sense because the alarm is always deleted after dialing the first telephone number.

The call-back is made simply by dialing the unit. After 8-10 seconds the voice connection is enabled without further authentication.

The unit still responds to all sent DTMF commands regardless of this.

Program 3A Same as program 3, the object number is announced twice before establishing the voice connection.

Program 3B Like program 3, but a voice connection to the car is established without any further announcements.

Acknowledgement of messages

There is the possibility to set a four-digit PIN to ensure that only trained personnel can acknowledge the messages. If this is not set, the messages can be acknowledged by "*<Car>#" where <Car> is the respective car number.

DTMF Codes

PIN and Acknowledgment

xxxx	Send four-digit PIN; valid as acknowledgement.
*<Car>#	Acknowledgement if PIN is not set.
xxxxxx	Send the six-digit master PIN in order to program the unit.

Voice communication

*<Car>#	Enable a voice communication to car <Car>.
*0#	Disconnect voice communication or renewed announcement of object number and car if there is no voice communication.

Programming codes (Entry with master PIN necessary)

*9 00 abcd #	Set four-digit PIN.
*9 00 #	Delete PIN
*9 01 … # … *9 05 … #	Set first to fifth telephone number. These numbers are dialed without evaluating the dialing tone in blind dialing mode.
*9 99 00#	All parameters are announced, saved and the device reboots.

Programming

For programming call the PSS09, wait for the answer tone and authenticate yourself using the master PIN. Then the telephone numbers and PIN can then be set via DTMF.

The master PIN is located on the object number sticker of units which are delivered as PSS09.

Units that were delivered as FWG09 must initially be changed to the desired program variant in the service menu under "*Messages to ...*". After switching to PSS09, the master PIN is announced after the object and car number the next time the service menu is switched on. We recommend noting the master PIN on the object number sticker.

Furthermore the master PIN can be requested from base engineering gmbh.

Units in program variants 3, 3A and 3B automatically activate the voice communication when called. Therefore the voice communication must firstly be terminated with "**0#*" before entering the master PIN. Alternatively you can temporarily change the program variant to 2 in the service menu while programming.

If the master PIN is successfully entered, the object number is announced.

Individual units or car 1 for multiple systems

To illustrate this is an example of the programming of the telephone number 1234 as the first telephone number:

1) Dial PSS09.
2) *xxxxxx* – Enter master PIN.
3) Unit announces object number and car.
4) *9011234# – Set the telephone number 1 to 1234.
5) Unit says "Telephone number 1 is 1234".
6) *99900# – Announcement of all parameters.
7) Unit says "Telephone number 1 is 1234"
8) Hang up.

To illustrate this is an example of the programming of the PIN 8888 and the telephone number 5678 as the first telephone number. If you want to acknowledge calls with "*<Car>#" a PIN must **not** be programmed!

9) Dial PSS09.
10) *xxxxxx* – Enter master PIN.
11) Unit announces object number and car.
12) *9008888# – Set PIN to 8888.
13) Unit says "PIN is *8888*".
14) *9015678# – Set the telephone number 1 to 5678.
15) Unit says "Telephone number 1 is 5678".
16) *99900# – Announcement of all parameters.
17) Unit says "PIN is *8888*", "Telephone number 1 is 5678"
18) Hang up.

Multiple systems

For multiple systems the following procedure is necessary in order to program car 2 and further cars.

1) Dial PSS09.
2) *xxxxxx* – Enter master PIN.
3) *<Car># – Dial voice communication car <Car>.
4) *0# – Disconnect voice communication.
5) *xxxxxx* – Enter master PIN.
6) Unit announces object number and car.
7) Continue as for car 1.

Acceptance and receipt of messages in the programs 1, 2, 2A

If a message is pending in the PSS09, all programmed numbers are dialed in sequence. After the call has been accepted, the object number is first announced after a pause of about 5 seconds, so that the messages can be assigned. Afterwards, all pending messages are announced as plain text. There is a recommendation for action depending on the message, e.g. “Please shut down the elevator”.

For technical messages, there is also an advice message accompanying the acknowledgement: “*To clear the notifications please enter PIN.*” or in the case that the PIN has not been set “*To clear the notifications please press *<Car>#*” with car number <Car>.

With alarms, there is an advice message together with the voice communication: “*To accept the alarm please enter PIN*” or if the PIN is deactivated “*To accept the alarm please press *<Car>#*”.

This announcement repeats itself up to 5 times after a short pause. The unit then hangs up and dials the next telephone number until the messages are acknowledged.

If you then enter the PIN (with a * both in front and behind) or “**<Car>#”* the announcement “*Messages cleared*” is made for technical messages. This means that the message has been successfully transmitted for that particular unit.

In the event of an alarm, a voice communication is established in the car after entering the PIN or “**<Car>#*” if the PIN is deactivated. This is followed by the instruction “Voice c*onnection <Car> on. To terminate the voice connection please press *0#*”. Now you can talk to the person who is trapped. In program 1, the voice communication must be terminated with “**0#*”, otherwise the emergency call is not considered finished. This is followed by the announcement “Voice c*onnection <Car> off. Emergency cleared*”. For programs 2 and 2A it suffices to hang up, base engineering gmbh however also recommends “**0#*” here, as otherwise the busy tone will be heard for some time in the car.

Acceptance and receipt of messages in the programs 3, 3A, 3B

In programs 3, 3A and 3B only emergency calls initiate dialing. After the announcement of the object number and the note “*Voice connection <Car> on. Please enter *0# to terminate the voice connection*” the voice connection is directly enabled. Here, too, it is sufficient to hang up at the end of the conversation, but as with program 2 we recommend using “**0#*”.

Callback for programs 1, 2, 2A

A callback to the car is possible at any time. The PSS09 should be called from a telephone for this purpose. After the answer tone you have to authenticate yourself using the PIN, master PIN or ”**1#*”, if no PIN has been set. The unit then announces the object number. Now you can dial the next

required car with "*<Car>#", the PSS09 gives the indication "*Voice connection <Car> on. Please enter*0# to terminate the voice connection*" and you can talk to the car. To end the call use "*0#" as normal. If you want to talk to other cars during the call, you can still dial the next car via "*<Car>#".

Call back for program 3, 3A, 3B

In program 3, the reference "*Voice connection 1 on. Please enter*0# to terminate the voice connection*" follows directly after the answer tone and the voice communication to the 1st car is established. In order to be able to speak to the other cars, you first have to terminate the voice communication to car 1 with "*0#" and then establish a new voice communication with "*<Car>#".

Example emergency call, car 1, program 1, no PIN

For alarms from the car, the sequence is as follows:

1. Alarm is triggered, unit dials programmed telephone number.
2. Call is accepted, then an announcement from the unit is made: "*Object number* <Object>", then the messages:
   - "*Emergency car 1*" – alarm triggered in car 1 or
   - "*Misuse car 1*" – misuse alarm triggered in car 1.

   And the instruction "*Please enter *1# to accept the emergency call*".
3. Establish a voice communication: "*1#". Response from unit: "*Voice connection 1 on. Please enter *0# to terminate the voice connection*".
4. Speak to person who is trapped.
5. Disconnect voice communication: "*0#". Response from unit: "*Voice connection 1 off. Emergency over*".
6. Hang up

Only after disconnecting the voice communication and the response "*Voice connection 1 off. Emergency over*" is the alarm deleted and the unit stops dialing.

Example technical messages, car 2, program 1, no PIN

A final call is made in the event of a power failure shortly before the battery is empty:

1. Unit dials extension.
2. Call is accepted, then an announcement from the unit is made: "*Object number* <Object>", then the messages:

- "*Power failure car 2*" – Unit is running on battery power.
- "*Final call car 2*" – Battery is almost empty.
- "*Please shut down the elevator*" – After this call the PSS09 switches itself off, further emergency calls are no longer possible.
- "*Please enter *2# to clear the notifications*" – Indication of acknowledgement.

3. Delete messages: "*2#". Response from unit: "*Messages cleared*"
4. Hang up
5. The unit switches itself off.

Not until after the answer "*Messages cleared*" is the message considered to be acknowledged and the unit stops dialing.

Example periodic call, car 1, program 1, PIN *4711*

A periodic call takes place every 3 days. In there is no periodic call, the lift system must be shut down, since the emergency call is presumably no longer working:

1. Unit dials extension.
2. Call is accepted, then an announcement from the unit is made: "*Object number <Object>*", then the messages:

- "*Periodic call car 1*"
- "*Please enter PIN to clear the notifications*" – Indication of acknowledgement.

3. Enter PIN: "**4711**". Response from unit: "*Messages cleared*"
4. Hang up

The periodic call must be documented with date and time.

The messages, their reports and recommended measures

Alarms

Emergency car n (All Programs)

An alarm was triggered in the car.

Recommendations for action: Receiving the alarm, establishing the voice communication, ending the voice communication and if necessary freeing persons.

Misuse car n (All Programs)

The alarm button is pressed if the unit is set to "Misuse on" and voltage simultaneously applied at the misuse input.

Recommendations for action: Establish voice communication and respond accordingly.

Emergency over car n (Programs 1, 2, 2A)

An active emergency call has been marked as finished on the emergency call device. It is to be assumed that a technician is on site.

Recommendations for action: Not required as there is a technician on-site.

Periodic calls

Periodic calls are carried out every 72 hours to check whether accepting the emergency call is still possible. For this reason, each periodic call is to be documented with the date and time, and the time of the next expected periodic call is to be set to 72 hours later. If this does not happen or is delayed without any discernible reason, the lift system must be shut down!

After a warm start and cold start, the time until the next periodic call is reset to 72 hours later; therefore the time of the next expected periodic call must also be reset accordingly.

Periodic call car n (Programs 1, 2A)

This is the normal periodic call.

Recommendations for action: Document date and time, set the time of the next expected periodic call to 72 hours from now. If this does not happen, the lift system must be shut down!

Periodic call car n delayed by x minutes (Programs 1, 2A)

This periodic call has taken x minutes to get through, at least 6 minutes. An indication of 99 minutes is to be understood as at least 99 minutes and can also be significantly longer. It is of no importance if the emergency telephone was otherwise in use at the time of the periodic call. Otherwise, the maintenance company must be informed.

Recommendation for action: Document date, time and delay, and if necessary inform the maintenance company.

Technical Reports

Power failure car n (Program 1)

The unit reports a continuous power failure of more than two hours with an incidental call delay.

Recommendations for action: Call the car to identify persons that are possibly trapped. Solve the cause of the power failure.

Final call car n (Programs 1, 2, 2A)

The unit is already running on battery power and the battery is almost empty. The unit switches itself off after this call.

Recommendations for action: Solve the cause of the power failure.

Battery missing car n (Programs 1, 2, 2A)

The battery is actually missing or is inserted incorrectly.

Recommendations for action: Take the lift out of operation.

Battery broken car n (Programs 1, 2, 2A)

The battery can no longer be charged or in its fully charged state will shortly no longer reach its minimum capacity for an hour of emergency power supply.

Recommendations for action: Arrange for the replacement of both cells within one week.

Cold boot car n (Program 1)

Unit receives power after having been off. Normal message at the initial start-up or after a power failure with unit shutdown since the battery was empty.

Recommendations for action: Inform the maintenance company. Document date and time, set the time of the next expected periodic call to 72 hours from now.

Warm boot car n (Program 1)

The unit has been restarted. Either the unit has restarted itself or has been restarted due to a software update or new parameterization by base engineering gmbh.

Recommendations for action: Inform the maintenance company within a short period of time if it occurs frequently. Document date and time, set the time of the next expected periodic call to 72 hours from now.

Wire broken alarm button 1 car n (Program 1)

With the "*cable break monitored*" setting, the unit no longer sees the resistor on the car button.

Recommendations for action: The emergency call no longer works, shut down the lift system.

Wire broken alarm button 2 car n (Program 1)

With the "*cable break monitored*" setting, the unit no longer sees the resistor on the hoistway buttons.

Recommendations for action: The emergency call no longer works, shut down the lift system.

Alarm button 1 jammed car n (Program 1)

The alarm button in the car is being permanently pressed. Either the button is jammed mechanically or there is a fault with the interconnecting cable to the unit.

Recommendations for action: Verify that the emergency call button works, if necessary shut down the lift system.

Alarm button 2 jammed car n (Program 1)

The hoistway button is being permanently pressed. Either the button is jammed mechanically or there is a fault in the interconnecting cable to the unit.

Recommendations for action: The emergency call no longer works, shut down the lift system.

Code transmitter call (Program 1)

Someone called the emergency call system and set up a voice communication to one or more cars using the code transmitter. This is an older method to connect via telephone to units that only support call center communication.

Recommendations for action: Document the message with date and time, no further action required.

Microphone and speaker test failed car n (Program 1)

The self-test of the microphone and loudspeaker has failed.

Recommendations for action: Try to initiate an emergency call and test the voice communication thoroughly in both directions. If problems occur shut down the lift system, otherwise inform the maintenance company.

Malfunction warning car n (Program 1)

The misuse input is set to "*malfunction warning*" and there is a voltage on it.

Recommendations for action: This is a general error message that is fed to the emergency call device from outside. The recommended action therefore depends on what is connected to the PSS09.

Final call GSM (Programs 1, 2, 2A)

The GSM10/GSM13 module is currently running in battery mode and reports a last call for help approximately 20 minutes before switching itself off. This message does not refer to PSS09 itself but to the GSM10/GSM13 module. Please do not confuse with "*Final call car n*"

Recommendations for action: Call the car to detect trapped persons. Solve the cause of the power failure.

Battery missing GSM (Programs 1, 2, 2A)

The battery of the GSM10/GSM13 module is no longer detected. This message does not refer to PSS09 itself but to the GSM10/GSM13 module. Please do not confuse with "*Battery missing car n*".

Recommendations for action: Take the lift out of operation.

Battery broken GSM (Programs 1, 2, 2A)

The battery can no longer be charged or in its fully charged state will shortly no longer reach its minimum capacity for an hour of emergency power supply. This message does not refer to PSS09 itself but to the GSM10/GSM13 module. Please do not confuse with "*Battery broken car n*"

Recommendation for action: Arrange for battery replacement for the GSM10/GSM13 Module within one week.

TÜV Certification

The conformity of FWG09 to EN81-28 has been certified by TÜV Austria.

Technical specifications

Dimensions without tabs (L×W×H)	15cm×8,2cm×4cm
Dimensions with tabs (L×W×H)	17,4cm×10,6cm×4cm
Weight	260g without batteries, 310g with batteries
Degree of protection	IP20
Power supply connection	Spring strip female connector 3.81 mm pitch, 2 poles
Power supply	10-28V DC
Power consumption mains	Max. 600mA
Battery (without emergency light)	NiMH, 2 cells, at least 1500mAh
Battery (with emergency light)	NiMH, 2 cells, at least 2000mAh
Telephone line connection	Spring strip female connector 3.5 mm pitch, 2 poles
Temperature range	0°C to +40°C
Humidity	30% - 90%

EU declaration of conformity

The manufacturer
Base engineering GmbH
Querstücken 5
22851 Norderstedt

hereby declares that the following product:

Product designation:	Emergency call system for elevators FWG09
Revision:	FWG09i 20.18 (200400000210)

fulfills the provisions of the

- EMC-Directive 2014/30/EU
- Elevator- Directive 2014/33/EU

including the changes which applied at the time of the declaration.

The following harmonised standards have been applied:

Electromagnetic Compatibility Directive:

- DIN EN 55032:2016
- DIN EN 61000-6-3:2011

Immunity:

- DIN EN 55024:2016
- DIN EN 61000-6-1:2019
- DIN EN 61000-6-2:2019

Remote alarm on passenger and goods passenger lifts:

- EN 81-28:2018
- EN 81-70:2018

Date: 01.10.2020

(Unterschrift)

Carsten Seemann, CEO

Manufacturer's Declaration

The manufacturer
base engineering GmbH
Querstücken 5
22851 Norderstedt

hereby declares that the following product:

The emergency call system as a combination of an emergency call device (FWG05/FWG09/FWG12) connected to a mobile gateway unit (GSM10/GSM13) or landline connection/converted AB interface via the public telephone network,

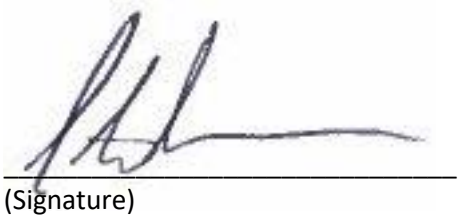
with the proviso that the telephone numbers and object numbers are not publicly known,

corresponds to security level SL-0 and according to the normative Appendix A of DIN EN IEC 62443-3-2 no further measures to protect against cyber threats are to be taken.

Based on Table B.2 and B.3 Appendix B of DIN EN IEC 62443-3-2, the following risk matrix was determined for undiminished cyber risk:

	Severity of the potential impact on operations, financial impact or health								
Likelihood of occurrence	Operations low	Operations middle	Operations high	Financial low	Financial middle	Financial high	Health low	Health middle	Health high
Almost certain (> 10^{-1} per year)	Middle	High	High	Middle	High	High	Middle	High	High
Likely (10^{-1} to 10^{-3} per year)	Middle	High	High	Middle	High	High	Middle	High	High
Possible (10^{-3} to 10^{-4} per year)	Low	Middle	High	Low	Middle	High	Low	Middle	High
Unlikely (10^{-4} to 10^{-5} per year)	Low	Low	Low	Low	Low	Low	Low	Low	Low
Rare (< 10^{-5} per year)	Low	Low	Low	Low	Low	Low	Low	Low	Low

In order to further reduce the residual risk of people being trapped in the event of a successful attack on the emergency call system, the operator can optionally use an automatic shutdown (ASM20) of the elevator system to technically ensure that the elevator is shut down if the emergency call device fails.
Date: 20.06.2023



(Signature)

Carsten Seemann, CEO

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Consultation protocol for the operation of an emergency call system FWG09 as gatekeeper's intercom

Introductory Remarks

The operation of a lift emergency call system is subject to the legal requirements for the operator of a lift system. So for example, compliance with the requirements of the Industrial Safety Regulation, the technical guidelines of the Industrial Safety Regulation and all referenced guidelines such as EN81-28 in its respective valid version or successor regulations. **The operator cannot pass on these obligations and responsibilities to a third party**.

If an emergency call system FWG09 is correctly installed and connected to a call center which is provided for this purpose in the protocol version, these requirements shall be regarded as fulfilled. See also the declaration of conformity by TÜV Austria. The protocol version that has been provided is deactivated for operation in gatekeeper mode.

In this case, the operator is therefore responsible for fulfilling these requirements in full or ensuring similar arrangements. The general principle is that the receiving telephones be permanently manned by appropriately trained staff. This requires different workflows depending on the program version used.

Program version 1 (with corresponding documentation conforming to EN81-28 without additional measures)

The unit generates all messages that it would otherwise also generate. All these messages are reported to the receiving station and must be acknowledged via the DTMF commands on the telephone keypad, because the emergency call system will continue to dial if there is no acknowledgment. The test calls that have been made must be documented and it must be determined whether a test call is made every 72 hours. If the test call is not made, the elevator must be shut down until the emergency call system is working again. In addition, at least two telephone numbers should be dialed, so that they can operate redundantly in the event of a hardware fault.

Program version 2 for parts based on SR 129 from TÜV Austria (possible compromise between safety and usability with emergency call tests compliant with EN81-28)

The majority of the technical messages are no longer generated to enable easier operation. The messages generated must continue to be acknowledged via DTMF commands on the telephone keypad.

Only alarm messages or technical messages about the operating status of the internal emergency power supply are still dialed. For this reason, the messages that are no longer generated must be replaced by an equivalent. This can be achieved if the emergency call is successfully tested every three days until the voice communication phase is reached and this successful test is documented in writing. This form of documentation is simpler than an evaluation of whether certain messages have been taken within the period prescribed. In addition, at least two telephone numbers should be called, so that they can operate redundantly in the event of a hardware fault.

Program version 3 (not recommended)

In this program version, the unit only generates alarms and starts the voice communication blindly and without acknowledgment. Once the voice communication is started, the alarm is cancelled regardless of whether the receiving party might have terminated the telephone connection prematurely and did not understand the alarm. A second telephone number can no longer be dialed since the prerequisite for dialing a second number (missing acknowledgement of the first telephone number) is not given. The status of the internal emergency power supply is no longer known.

For the reasons set out above, this program version is not compatible with the obligations of an operator even with supplementary measures and thus must be set at your own responsibility.

Exclusion of liability

This code of conduct is **explicitly** not a professional recommendation. It does not relieve the operator from his or her own responsibility, rather is to be understood as a more detailed explanation of how the emergency call system works. Please also refer to the FWG09 installation instructions.

Advice given and fully discussed

Mr./Mrs.	For company
……	……
Program version required by operator	Factory number
……	……
Location and Date	Signature
……	……

Advice provided by

Mr./Mrs.	For company
……	……
	Factory number
	……
Location and Date	Signature
……	……