OPERATING INSTRUCTIONS

Intercom Emergency Substation RS-410EC e

Thank you for purchasing TOA's Intercom Station.
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

Note: For operation of the units, refer to the N-8000 series operating instructions.

TOA Electronics Europe GmbH

1. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.

⚠ **WARNING**	Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.
⚠ **CAUTION**	Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

⚠ WARNING

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be constantly splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Install the unit in a matching position. The unit shall neither be installed in a position where the calls can be released accidentially nor in a position which the target group cannot access.
- The station shall be connected to the system's power with a protective earthing connection.
- Mount the unit in a viable mounting plate or wall whose structure is matching with the weight of the substation.
- Fix the unit at the wall so that it can neither be peeled off nor fall off.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the system's power and contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
  - · If you detect smoke or a strange smell coming from the unit.
  - · If water or any metallic object gets into the unit
  - · If the unit falls, or the unit case breaks
  - · If the power supply cord is damaged (exposure of the core, disconnection, etc.)
  - · If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit panel as there are high voltage components inside the unit. Refer all servicing such as modification inside the unit to qualified service personnel.
- Do not touch a plug during thunder and lightning, as this may result in electric shock.

⚠ CAUTION

When Installing the Unit

- When unplugging be sure to grasp the plug; never pull on the cord itself. Operating the unit with a damaged cord may cause a fire or electric shock.
- Avoid installing the unit in dusty locations or in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- To avoid electric shocks, be sure to switch off the system's power while connecting.

When the Unit is in Use

- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.

The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

2. GENERAL DESCRIPTION

The RS-410EC e is an Information-/Emergency-Call Intercom substation, to be connected to the N-8400RS 4-wire Substation Interface Unit.
The substation is designed to be used in public areas under rough environmental conditions. It is impact proof (IK10) and weather resistant (IP65) and therefore vandal proof. The operating temperature ranges from -10°C up to + 50°C.
The front plate is made of brushed aluminum. The red emergency call button (illuminated if pressed) is protected by a pane and can get highest call priority if programmed via Selective Response Mode + Priority 5. The metallic info-call button gets lower priority (1-4) and is intended for informational calls. It features 2 different programable call targets each one individual target per button.
Emergency calls are listed in position one of the call queue on the master station (N-8000MS/N-8600MS) and in addition are signalled by a sound.

3. FEATURES

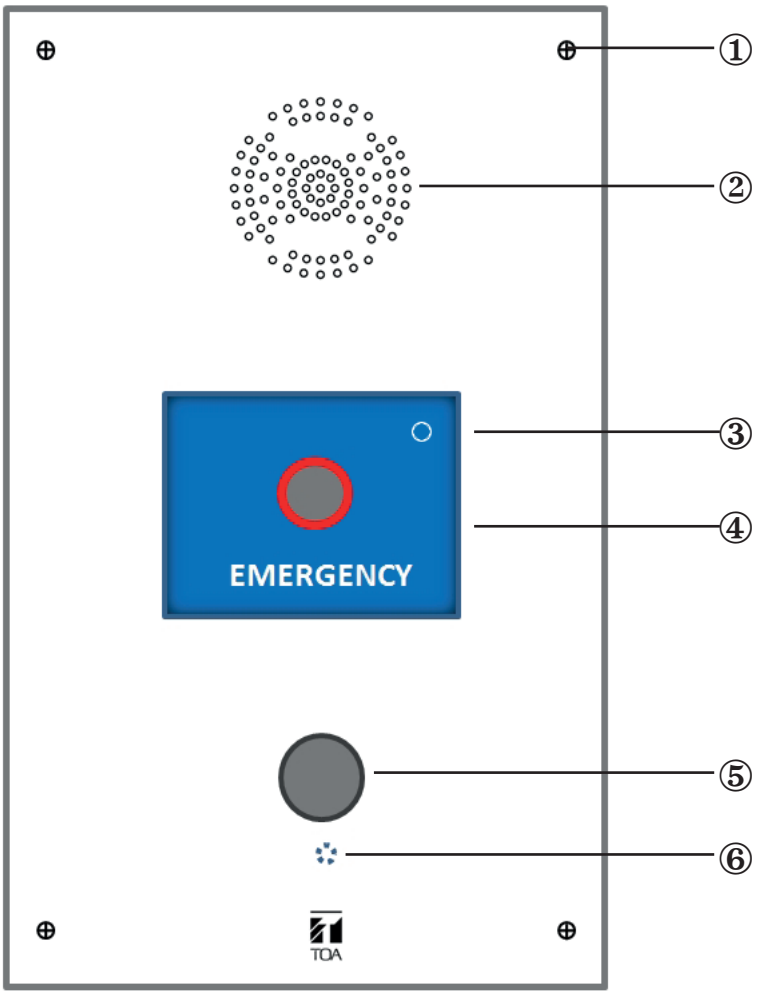
- Two different priotity-levels: Emergency and standard calls.
- Emergency calls can be forwarded to a security post.
- Vandal Proof.
- IK 10 impact tested.
- IP 65 weather resistant.
- Easy to use.

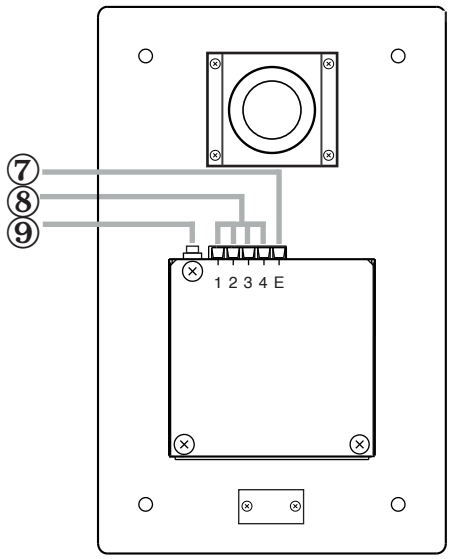
4. HANDLING PRECAUTIONS

- Install the unit in locations where the temperature is between –10 and +50°C and the moisture is less than 90%RH (no dew condensation must be formed).
- To clean wipe with a dry cloth. When the unit gets very dirty, use a cloth damped in a neutral cleanser. Never use benzene, thinner, alcohol, or chemically-treated cleaning cloth because such volatile liquids could deform or discolor the unit.

6. NOMENCLATURE AND FUNCTIONS

[Front] **[Rear]**





1. Torx Screw
Use Torx Screwdriver: Size T10 to screw or to unscrew the substation.

2. Speaker
Outputs call tones and used for hands-free conversations. Protected against attacks by means of wires or fluids.

3. Operation Indicator
Lights as long as the unit is connected to the exchange.

4. Emergency Push Button
The button is protected by a protective pane. In case of emergency this pane has to be smashed.

5. Standard Push button
Used to call the pre-programmed master station. (See p. 8)

6. Microphone
Used for hands-free conversation. For both Emergency and Standard conversation. The microphone will be opened after the call was received.

7. Connection terminal [Earth]
Connects to Earth

8. Connection terminal [1-4]
Connects to the N-8400RS exchange. (Terminal block) (See p. 7)

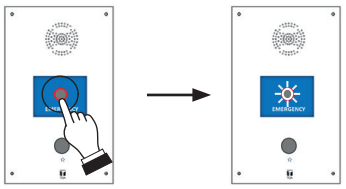
9. Ground terminal
Connects to Ground of OW-101

7. OPERATION

7.1. Calling

7.1.1. Emergency calls

Step 1 Smash the pane.



Push the button

Step 2 Push the red button.
Then the button blinks

Step 3 After the called party responds the push button lights and the emergency conversation can start.

Talk when the button lights

Notes

The RS-410EC e processes one call at a time. Further pressing of a button does not direct the call to another station. After the call has been proceeded and finished a new call can be processed.

A smashed pane is to be replaced by a new pane (spare part).

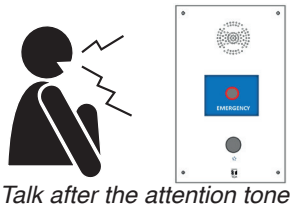
7.1.2. Standard calls

The pre-programmed master station can be called by pressing the lower station's call button.

Push the button

Note

The master station to call to has been programmed (See page 8).
Programming can be performed by the N-8000 software program.



Talk after the attention tone

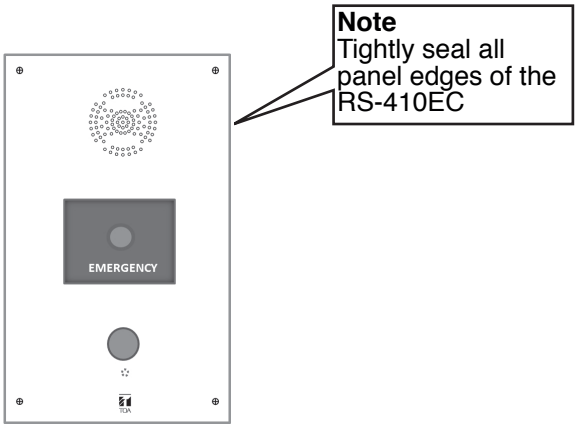
8. Installation

8.1. Back Box

Mount the substation to the **IW-101** electrical box if mounted in the wall.
Mount the substation to the **OW-101** if mounted on the wall.

Note
Tightly seal all panel edges of the OW-101.

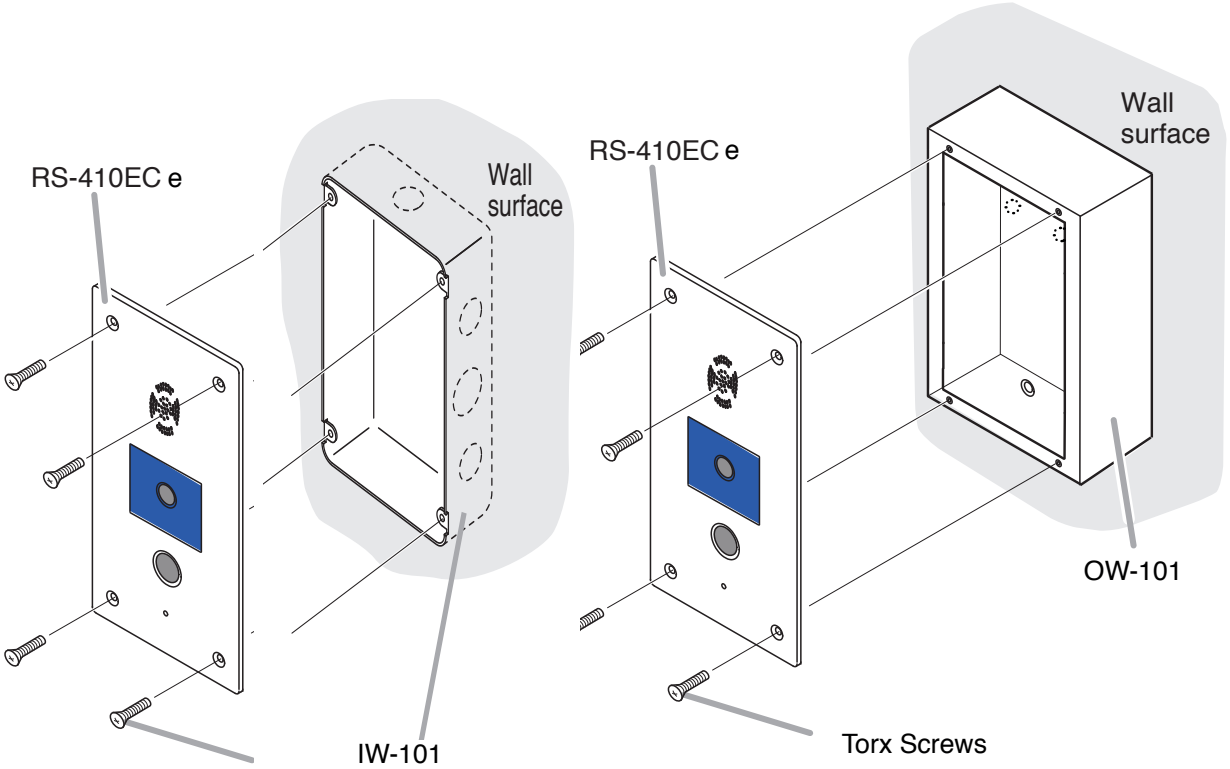
8.2. Installation of the Substation RS-410EC e



Notes
Make sure to seal the edges of both the panel and the box's rear surface when installing the RS-410EC outdoors or in locations where it gets splashed with water.
Recommended Back Boxes for RS-410EC are either for flush-mounting IW-101 or for surface-mounting OW-101
Provide a weep hole at the bottom of the mounting box to permit water to drain off.

To insert cable from top- or bottom-side of the box a cable gland must be installed to avoid damages such as bending or rub through. Consider to use a cable gland that meets the desired water + dust protection. Drill a hole according to the specifications of the cable gland to be used.

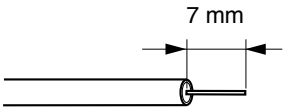
Flush-Mounting:
The front edge of the IW-101 must not be more than 3mm away from the surface of the wall.



9. Connection

9.1. Terminal plug connection

Step 1. Strip a cable jacket of approx. 7 mm from the cable end.



For cables, refer to p. 10, type of cable.

Note
Do not solder plate on exposed inner cables when using a stranded wire.

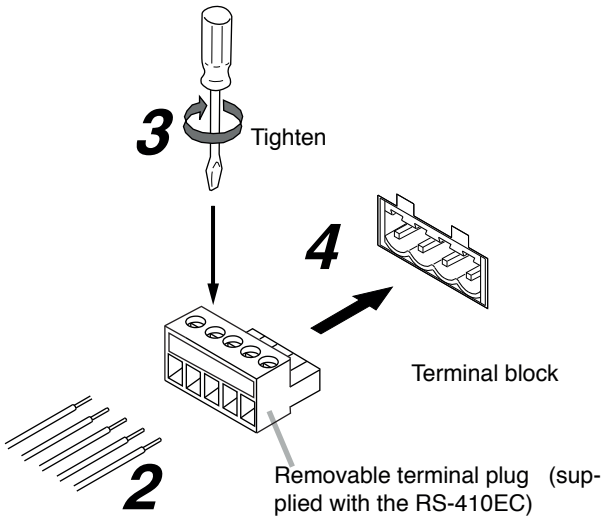
Step 2. Loosen the terminal screws and insert the cables.

Step 3. Tighten the terminal screws securely.

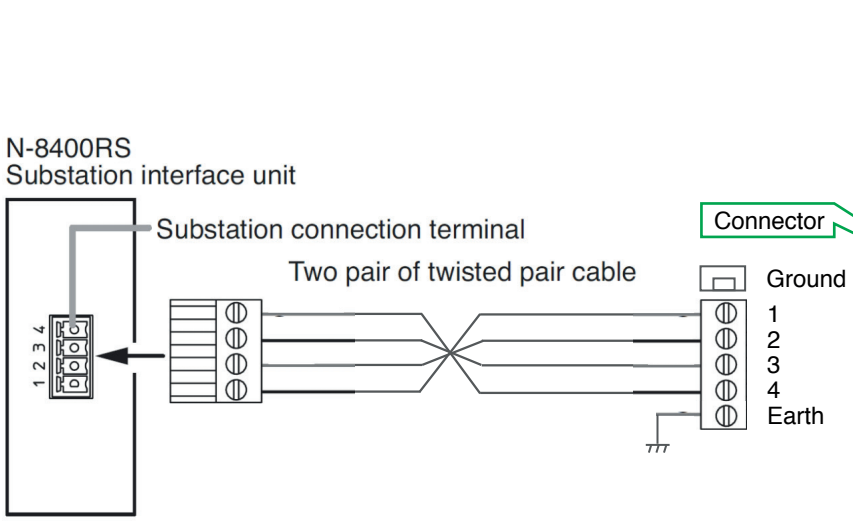
Notes

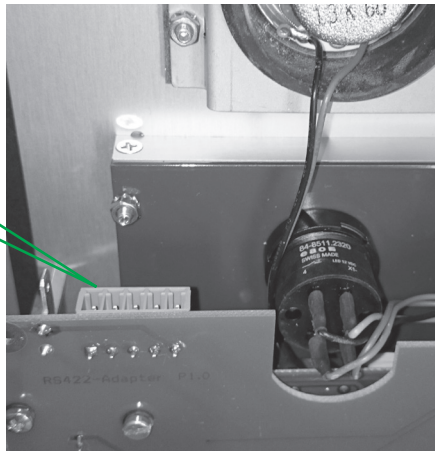
- Tug lightly on the cable to be sure that it does not pull free. If the cable pulls free, loosen the terminal screw again and reconnect from **Step 2**.
- Use the screwdriver appropriate to the screws tightened into the terminal plug.

Step 4. (Removable terminal plug only)
Insert the wired terminal plug into the terminal block or the pin header.



Wiring
Take care that earth terminal "E" will be connected to earth.
Make sure to connect the frame ground terminal at the rear side to ground.



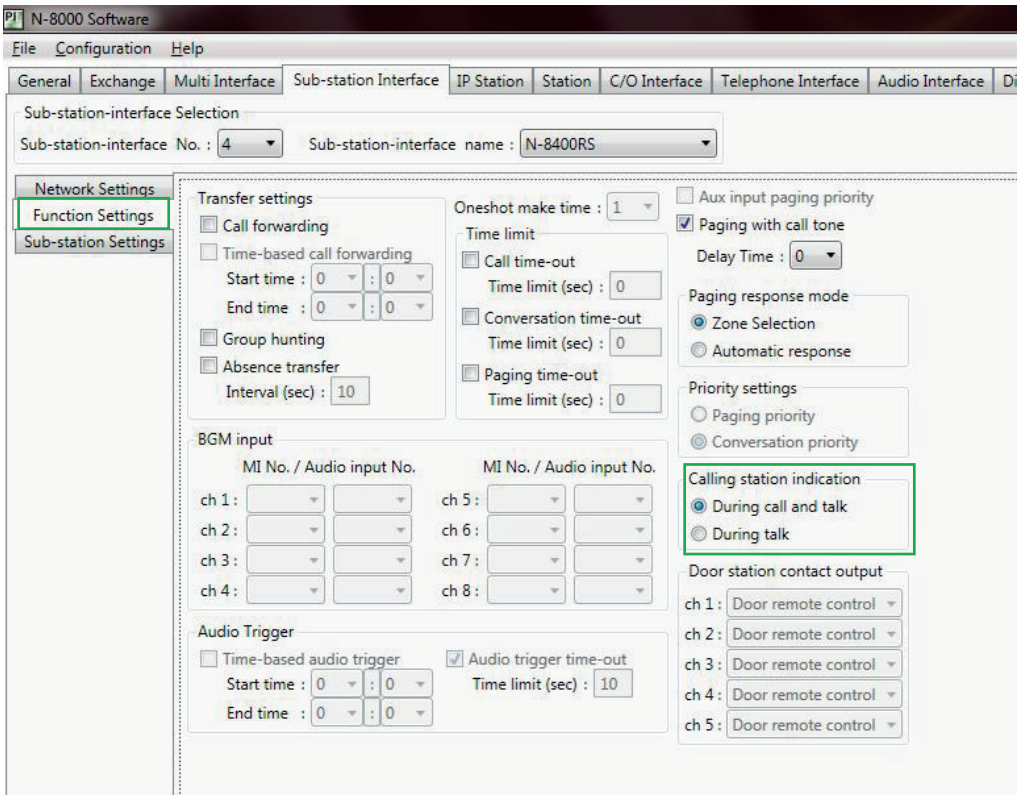


G 1 2 3 4 E

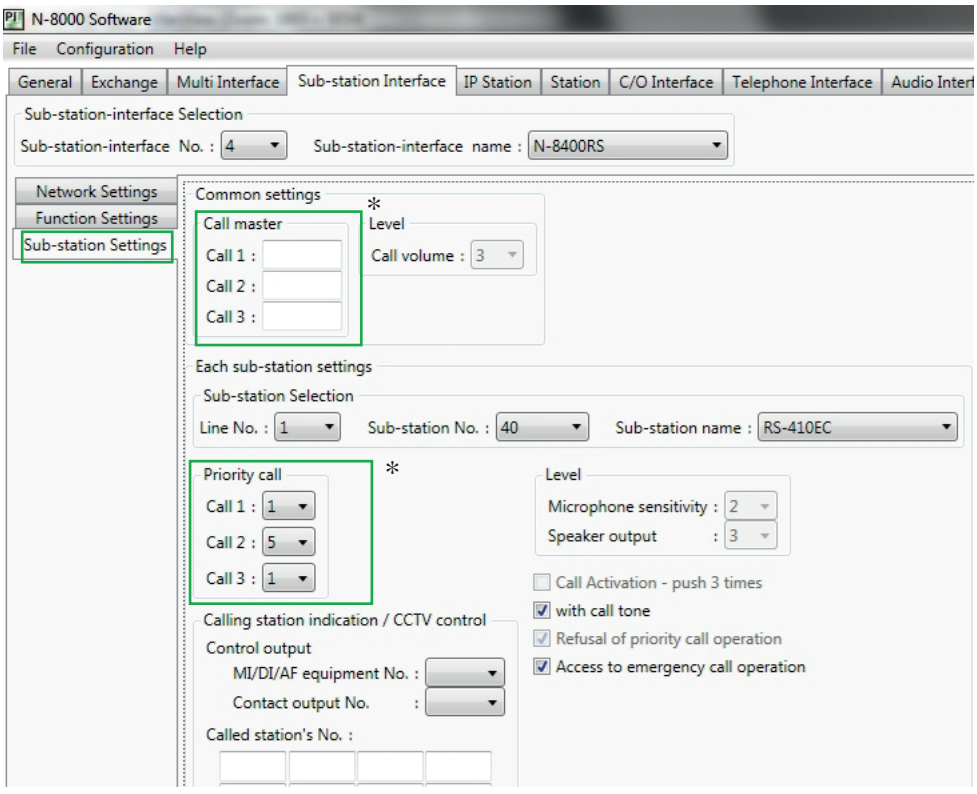
10. PROGRAMMING

The RS-410EC e shall be programmed via latest N-8000 Setting Software and it shall be registered via the Model Name: RS-442.
The system mode shall be “Selective Response”

10.1 Programming the LED of emergency push button (lit if the emergency button was pressed)
Activate Calling Station Indication -> During call and talk



10.2 Programming the Call Targets and Priority Settings



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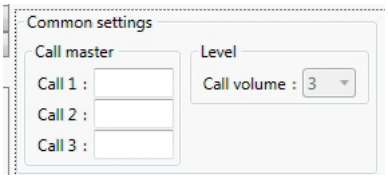
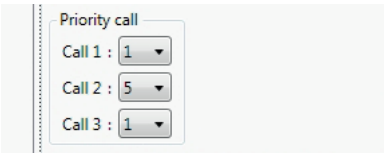




Call Master
Call 1 = Call Target for Standard Push Button
Call 2 = Call Target for Emergency Push Button
Call 3 = Not available

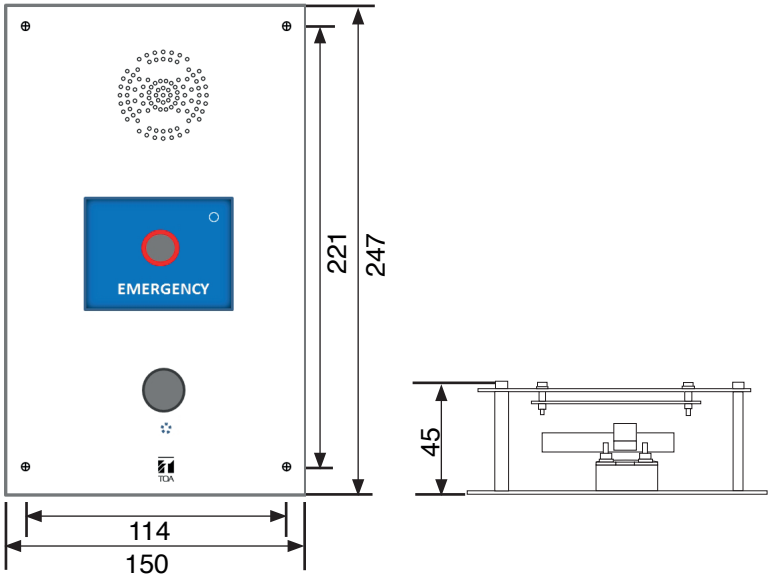
Priority:
Call 1 = 1 (low priority)
Call 2 = 5 (emergency call / high priority)
Call 3 = Not available

11. DIMENSIONAL DIAGRAM

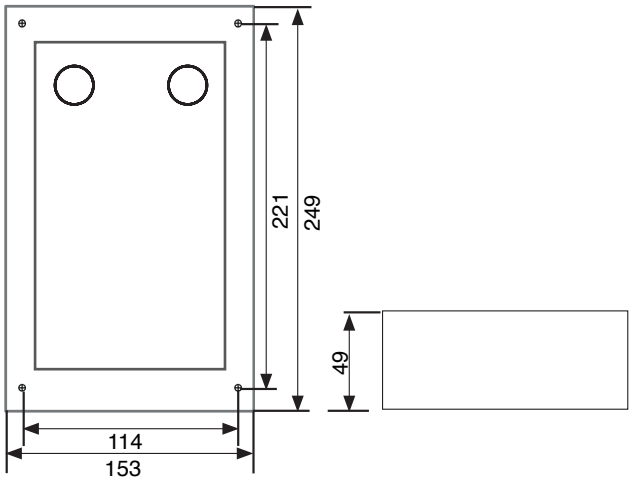
[FRONT VIEW] **[BOTTOM VIEW]**

RS-410EC e

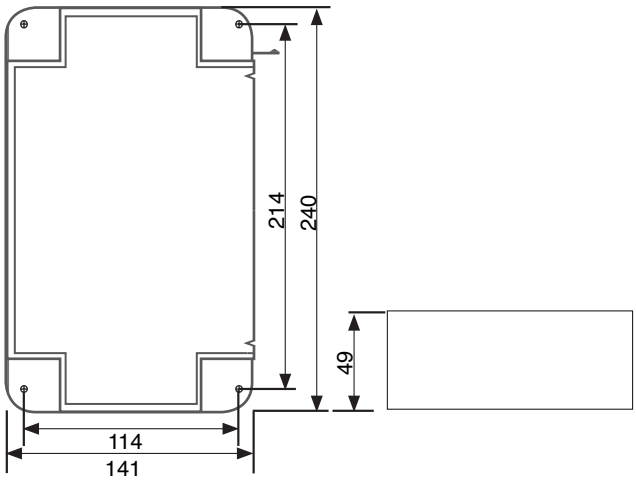
Unit: mm



OW-101



IW-101



12. SPECIFICATIONS

Model	RS-410EC e
Rated Input	1 W
Audio Frequency Range	300Hz – 7kHz
Speech Method	Hands-free conversation
Hands-free	Speaker: 3,5cm (1.38“) cone-type, maximum output 0,5W, 8Ω Microphone: Omni-directional electret condenser microphone
Push-button Standard	Momentary, stainless steel, silver
Push-button Emergency	Momentary, red (blinks red during calling, lights during conversation) Description Emergency Protective pane
Operation Indicator	1 LED
Wiring	Twisted pair cables (2x pair)
Transmission Range	1km / Ø 0,5mm (AWG24) 1,5km / Ø 0,65mm (AWG22) 2km / Ø 0,9mm (AWG19)
Installation Method	Flush-mount / Surface-mount
Housing Protection	IEC 62262: IK10
Dust/ Water Protection	EN 60529: IP 65. (panel edges must be sealed at installation)
Operating Temperature	-10°C to 50 °C
Operating Humidity	Under 90 % RH (condensation free)
Finish	Front plate: Aluminum Call-buttons: Steel
Dimensions	150 (W) x 247 (H) x 45 (D) mm
Weight	0.6 kg

Note: Change of design and specifications without prior notice possible.

• Options

Surface-mount box: OW-101 1
Flush-mount box: IW-101 1

Traceability Information for Europe (EMC directive 2004/108/EC)

Manufacturer:
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