Intercom Station with Touch Screen TS 8110V

The IP Intercom Station with a special touch

Audio + Functionality

16 kHz
*e*HD Voice

Control Desk functionality

Intuitive operation

User interaction with effortless simplicity

Touch screen equipped Intercom stations by Commend are suitable for any type of application requiring intuitive, yet precise user interaction. While offering standard menus for features such as subscriber lists, the graphical user interface can be adjusted to suit the user's requirements. The options range from creating custom menus to adding interactive on-screen elements such as video feeds.

Highlights from more than 150 features

– **Highly intuitive operation through flexible support of individual user interface needs**

– **Bi-directional video**

– **Visitor guidance with plans**

– **Easy adaptable to corporate designs**

– **Key touch features**

– **Control desk functions**

– **Functional monitoring** of microphone, loudspeaker and Intercom Station lines

– **Control functions** (video, doors & gates, ...)

– **Pre-recorded voice messages** for customised announcements (waiting/information/alarm messages)

– **Audio Monitoring** for automated call triggering, e.g. by a scream or shout

– **Audio recording**

– and many more...

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Key benefits at a glance

The following sample layouts show some of the flexible customisation capabilities of the user interface. Licence details for the individual control elements and functions can be found in Datasheet "Intercom Client for Android".

Typical applications

– Communication terminals for reception areas
– Terminals for visitor guidance and information
– Convenient Door Call Stations for inside and outside use
– Interactive Lift Call Stations
– Compact Control Desks

Bi-directional video via built-in 2 MP video camera

16 kHz speech quality and OpenDuplex® for naturhands-free communication with high volume capacity

Robust, daylight suitable, capacitive 10.1" multi-touch display

Vandal-resistant design IK 07– Front plate made up of 3 mm stainless steel steel; Flush- and Surface mount kit with locking mechanism

16 GB flash memory to save images and video files

1.2 GHz Dual Core Processor with embedded hardware security

Ambient light sensor for automatic display brightness control

Tile Layout – Custom configurable user interface for intuitive interaction with optimised user guidance.

Public Mode for user interaction based on a restricted set of functions – ideal for publicly accessible solutions

Integrated web browser

State-of-the-art Control Desk - well arranged and easy to use

Two relays for control functions or for use as attendant contacts

Outdoor capable (dust, water, temperatures, etc.) – IP 65 rating

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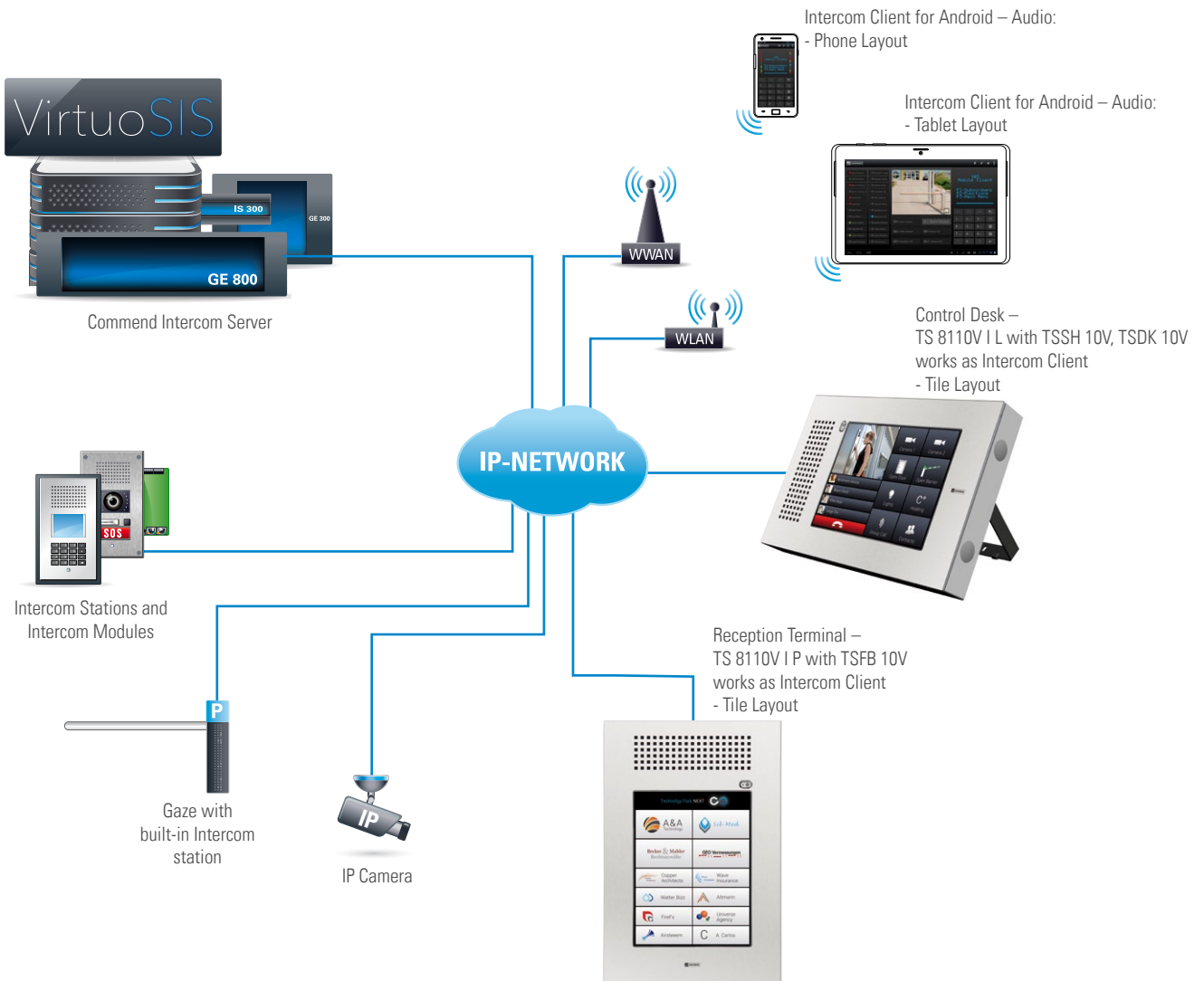
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The Commend Intercom Station with Touch Screen

Fully adjustable

You define the features and functions that are most important to you, and the configurable tile layout adjusts perfectly to all your requirements. It's this commitment to usability that makes Intercom Touch a pleasure to use. The entire range of powerful Commend Intercom functions is never more than a simple tap of the finger away. What is more, built-in powerful 16 kHz technology ensures brilliant speech quality and crystal clear intelligibility at the highest level.

NEW! Bi-directional Video

Intercom Touch is the first Commend device to transfer the principle of OpenDuplex® audio transmission to video connections, enabling users to see and be seen at the same time. In combination with clear 16 kHz speech transmission, this function makes Intercom Touch the ideal all-round communication terminal for entrance areas, doors and gates.

Intercom Client for Android – Audio:
- Phone Layout

Intercom Client for Android – Audio:
- Tablet Layout

Commend Intercom Server

WWAN

WLAN

IP-NETWORK

Control Desk –
TS 8110V I L with TSSH 10V, TSDK 10V
works as Intercom Client
- Tile Layout

Intercom Stations and
Intercom Modules

Reception Terminal –
TS 8110V I P with TSFB 10V
works as Intercom Client
- Tile Layout

Gaze with
built-in Intercom
station

IP Camera

Passion for Audio
by Commend

Ultimate speech intelligibility in any situation

OpenDuplex® with enhanced HD Voice by Commend enables natural, hands-free talking and listening – as crystal clear and natural as a face-to-face conversation.

The ORIGINAL OpenDuplex® since 2003	16 kHz eHD Voice	High volume	Background noise suppression	Loudspeaker-Microphone monitoring
Natural communication	enhanced HD Voice	High volume	Background noise suppression	Loudspeaker-Microphone monitoring

Audio // Basics

eHD Voice	Enhanced HD Voice by Commend transfers the audio signal at a bandwidth of **16,000 Hz**, thus capturing the entire frequency spectrum of the human voice.
STI	Speech Transmission Index **0.96** – measured under acoustic laboratory conditions; STI is a standard measure for speech intelligibility. It has a possible maximum value of 1.00, which corresponds to perfect intelligibility.
Sound pressure	**High volume** up to **99 dB** SPL
Amplifier	High efficient class "D" amplifier with 2.5 W
Microphone	Omnidirectional electret microphone for max. 7 m (23 ft) speaking distance
Loudspeaker	2 x 8 Ω loudspeaker with humidity-resistant special membrane type for optimum sound quality
Handset / Headset	EM sensitivity: 14 mVeff EM impedance: 3.3 kΩ / EM supply: 2.5V EP level: 850 mVeff at 0 dBm0 / EP impedance: 200 Ω
Line-Output	Connection of loudspeaker module, induction loop amplifier, ...

Learn more
audio.commend.com

Audio // Functions

– Dynamic **background noise suppression** virtually eliminates all ambient noise

– **Automatic volume adjustment** to ambient noise conditions

– **Loudspeaker/microphone monitoring** – ensures the availability of the Intercom station while reducing the need for manual verification of its functionality

– **Audio Monitoring** – Fully automated emergency calls triggered by shouting/screaming or predefined distress sounds – i.e., more security for users

– **Peer2Peer Audio** reduces network and server load to ensure efficient use of resources

– **Public Address functions**

– **Audio recording** and lip synchronous Audio/Video recording of conversations for documentation and evidence keeping purposes

– **Conference Call function** for simultaneous talking with multiple conversation partners

– **Speech activity detection** senses when calls are finished (no microphone signal) and terminates the connection automatically

– **Simplex-Modus** for applications requiring controlled communication – e.g., security solutions based on the 'push-to-talk/release-to-listen' method

– **Equalizer** for fine-tuning to ambient acoustic conditions

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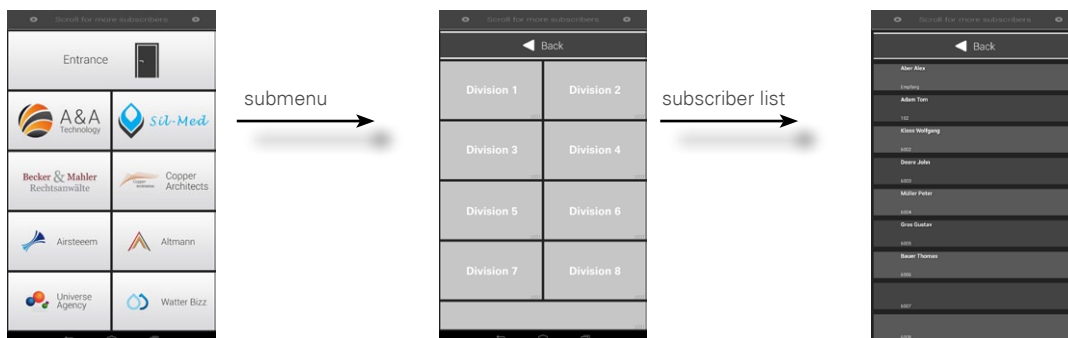
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Examples of use

Example Description - Buildings

People work in buildings. This means that buildings must provide protection and safety, both everyday and in case of emergency. For large buildings, reception terminals will be more important in the future.

For reception terminals, it is possible to use the Tile-Layout template "Entrance". The combination of Intercom Touchscreen Terminal and Tile-Layout provides the following features:

– Hands-free Intercom stations with excellent 16 kHz eHD Voice speech quality

– Intercom Terminal for access control

– Door opening function available for each Intercom Station in the system

– Highly intuitive operation via main menu, submenu (if required) and a subscriber list.

Demand components

Hardware components

– Intercom Touchscreen Terminal: TS 8110V I P

– Flush-Mount Kit to mount the Terminal: TSFB 10V

– IP Intercom Server with free slot

Licenses

– Non-Audio Licence to run the Intercom Client for Android: L-ICCNAA1
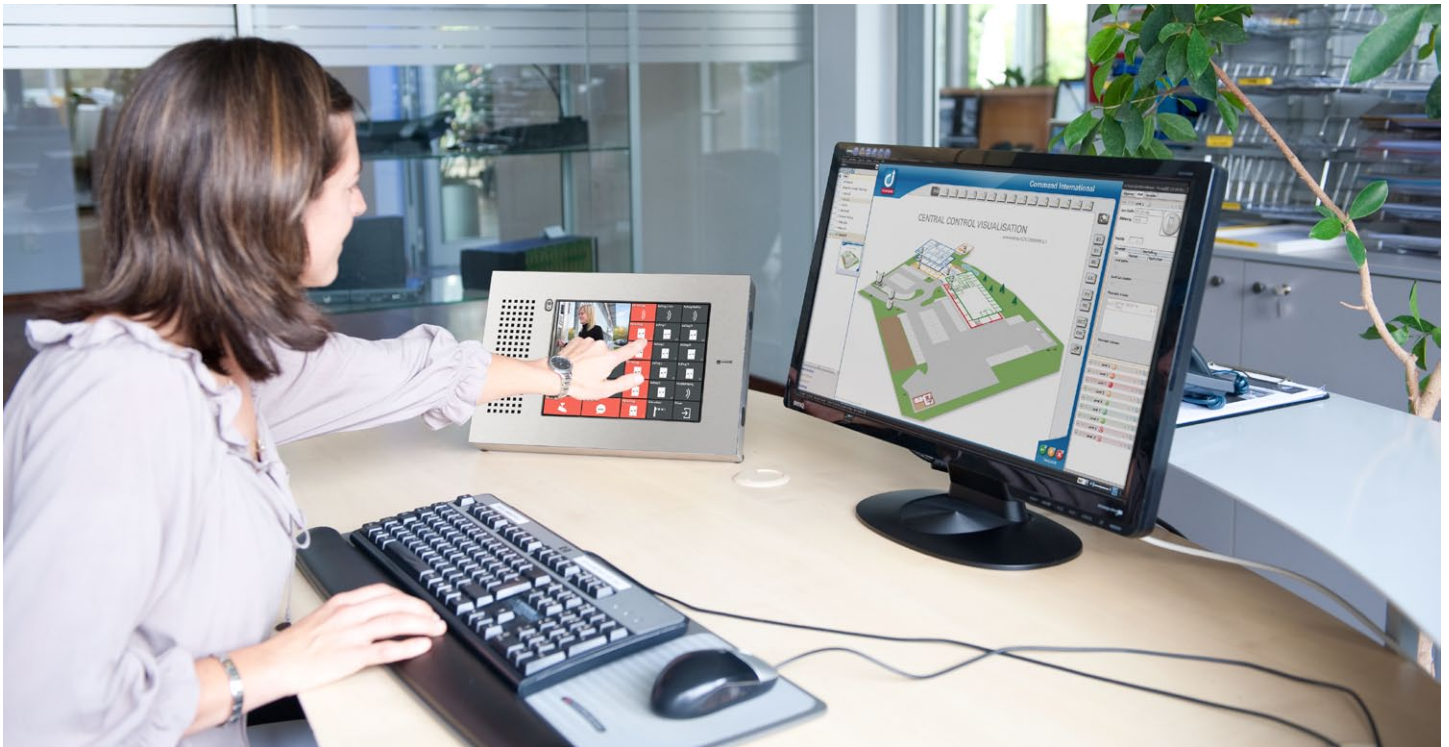
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Examples of use

Example Description - Buildings

People work in buildings. This means that buildings must provide protection and safety, both everyday and in an emergency. The core element of the system is the central, multi-functional control room, which keeps every part of the building and associated premises in view, guaranteeing the required high level of security discreetly and unobtrusively with a well-chosen set of additional functions.

For using the Intercom Touchscreen Terminal as control desk, it is possible to use the Tile-Layout template "Control Desk". The combination of Intercom Touchscreen Terminal and Tile-Layout provides the following features:

– Hands-free Intercom stations with excellent 16 kHz eHD Voice speech quality

– Integrated audio, video, monitoring and control functions

– Well arranged and easy to use User interface

– Interface building management systems and 3rd Party Systems (e.g.: elevator)

– Control and communicate to up to 3 elevators separately

– Emergency system (communication, video, elevator control)

– Separate entrance control (communication as well as control of camera, door and barrier)

– Test run via push a button

Demand components

Hardware components

– Intercom Touchscreen Terminal: TS 8110V I L

– Surface-Mount Kit to mount the Terminal: TSSH 10V

– Desk Kit TSDK 10V

– IP Intercom Server with free slot

Licenses

– 2x direct dialling licences to control and visualise calls, barrier and door states and the lift position: L-ICCDDA

– Video licence for the Intercom Client Android: L-ICCVA

– Intercom licences for the desired feature levels

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Examples of use

Example Description - Light Industry

Factories, warehouses, distribution centres, laboratories and pharmacies: they all need Intercom systems for operational and security purposes. Commend provides tailored solutions for loading bays, communication with loading vehicles such as fork lift trucks, handsfree Intercom for clean areas, access control points, door airlocks, and much more.

For light industry, it is possible to use the Tile-Layout template "Infrastructure". The combination of Intercom Touchscreen Terminal and Tile-Layout provides the following features:

– Hands-free Intercom stations with excellent 16 kHz eHD Voice speech quality

– PA announcement via push of a button

– Communication between office and factory

– Access control for up to 6 barriers, doors or gates

– 2 available Intercom terminals per barrier, door or gate

– Easiest handling of all functions via touchscreen

– Control of an separate room with door opener, call and control of the building service engineering (e.g. lights)

– Anonymity during calls by using a camera cover

Demand components

Hardware components

– Intercom Touchscreen Terminal: TS 8110V I L

– Surface-Mount Kit to mount the Terminal: TSSH 10V

– IP Intercom Server with free slot

Licenses

– Non-Audio Licence to run Intercom Client for Android: L-ICCNAA1

– Direct dialling licence for call visualisation: L-ICCDDA

– Intercom licences for the desired feature levels

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Vandal-Resistant Touchscreen Intercom Station

Technical Data

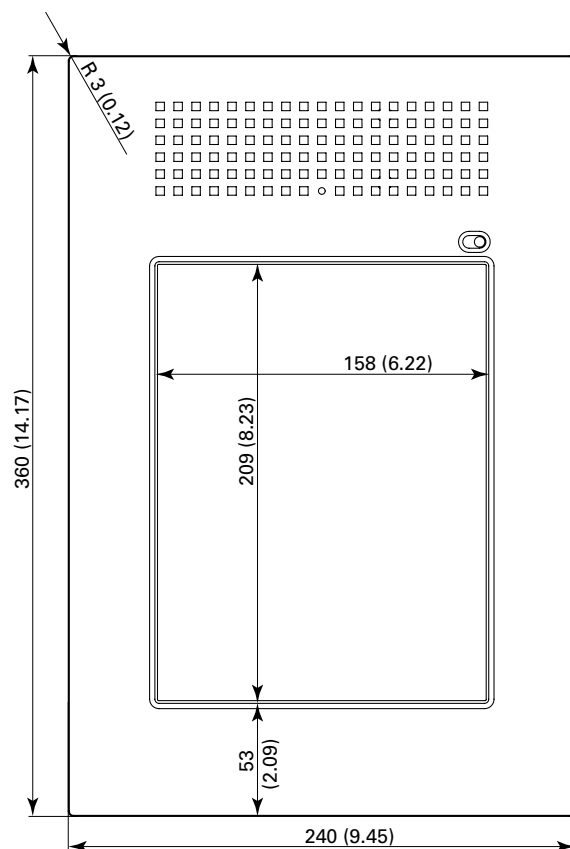|	
IP rating acc. EN 60529:	IP 65*
* only with flush mount kit TSFB 10V or surface mount kit TSSH 10V	
Mechanical impact resistance acc. EN 62262:	IK 07
Front panel:	stainless steel, 3 mm (0.12 in)
Microphone:	Omnidirectional electret microphone for max. 7 m (23 ft) speaking distance
Loudspeaker:	Special membrane type for optimal sound quality, $2 \times 8\ \Omega$
Amplifier:	integrated class "D" amplifier with 2.5 W
Sound pressure:	max. 99 dB
Input:	3 inputs for floating contacts (detection of 5 input states)
Output:	2 relay outputs (switch-over contacts) 30 V / 1 A: 100,000 make-and-break cycles
Line input:	for feed-in of audio (e.g. music, radio conference) Line-Input: nominal level 0 dBu 0.775 V at 10 kΩ
Call indication:	LED (red / green)
Display:	Capacitive 10.1" XGA LED touch sensitive display, with up to 500 cd/m², 1024 x 768 pixel resolution.
CPU:	Marvell® 1,2 GHz Dual-Core Processor
RAM:	1 GB SDRAM
Internal memory:	16 GB flash
Camera:	2 MP
Transmission bandwidth:	16000 Hz
Operating temperature range:	−20°C to 50°C (−4°F to 122°F)
Storage temperature range:	−20°C to 50°C (−4°F to 122°F)
Relative humidity:	up to 80% not condensing
Connection:	- pluggable terminals - IP Uplink: shielded RJ 45 modular jacks
Power supply:	External power supply** 12 VDC, min. 2.5A (10 - 16 VDC)
** not in the extent of supply!	
Cabling:	min. Cat. 5
Protocol:	IoIP-Protocol based on UDP/IP
Data rate:	10/100 MBit/s (Full/Half Duplex)
Mounting:	flush mount kit TSFB 10V surface mount kit TSSH 10V table mount kit TSDK 10V
Weight incl. package:	3500 g (7.7 lbs)

Extent of supply

– Intercom Terminal
– Microfibre cleaning cloth
– Snap ferrite
– Tool WSDM P
– Unlocking Tool
– Camera Cover
– Short Reference

Line length in LAN

The maximum line length of Cat. 5 cabling in a LAN is 100 m (328 ft) – e.g. from switch to Intercom station.

Measurements
Measurements in mm (inch), not scale!

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Vandal-Resistant Touchscreen Intercom Station

Requirements Commend System

Intercom Server	– GE800 with G8-IP or G8-IP-32 – GE300 with G3-IP – IS300 – SIS
Hardware	– external power supply: 12 VDC, min. 2,5A (10-16 VDC)
Intercom Server Software	– CCT 800 3.0 – PRO 800 3.0
Software Licence	– desired licence for the required function range

Requirements to the network

IP-Addresses and Ports

- For the TS 8110V I the DHCP functionality is available.
  If DHCP is not used, the TS 8110V I must have a fixed IP-address.
- In case of a changing public IP-address, dynamic registration of a TS 8110V I is possible.
- Communication from the program IPStationConfig is done via Port 16399 (can not be configured).
- Communication from the TS 8110V I to the Intercom Server (UDP protocol) is done via port 16400 (configurable).

QoS Requirements

- Maximum One-Way-Delay 100 ms
- Delay-Jitter not above 50 ms
- 0 % packet loss for perfect audio quality

Bandwidth

- The required bandwidth depends on the desired number of speech links:
  - Bandwidth incl. protocol overhead per IP-Intercom terminal, for upload and download:

	3.5 kHz	7 kHz	16 kHz
Bandwidth (speech and date):	96 kBit/s	96 kBit/s	143 kBit/s
Speech is compressed to:	G.711 standard	G.722 standard	G.722 standard

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Accessories for Touchscreen Intercom Stations

Flush Mount Kit TSFB 10V

Flush Mount Kit made from 1.25 mm stainless steel, black powder-coated, suitable for flush-mounting touch screen Intercom stations TS 8110V I.
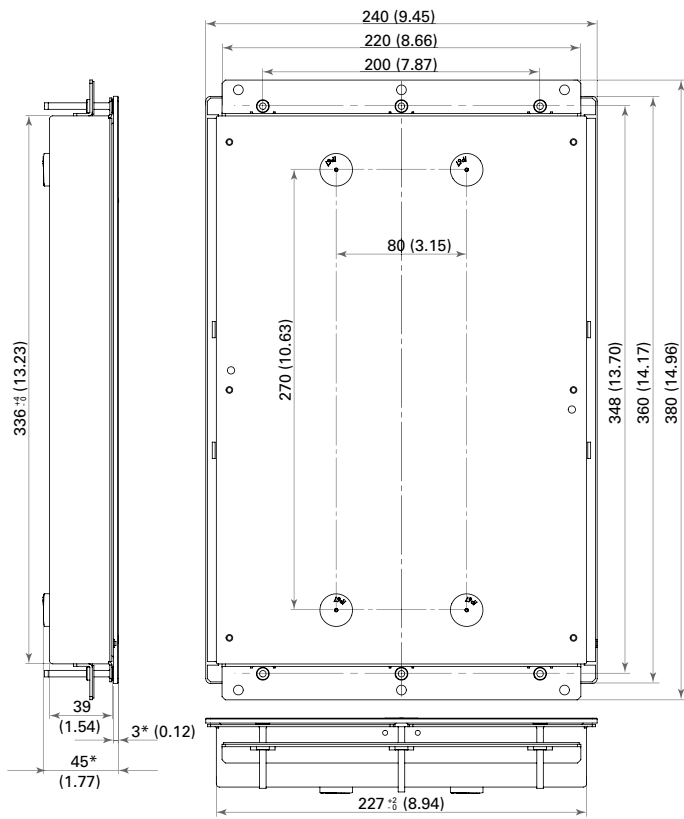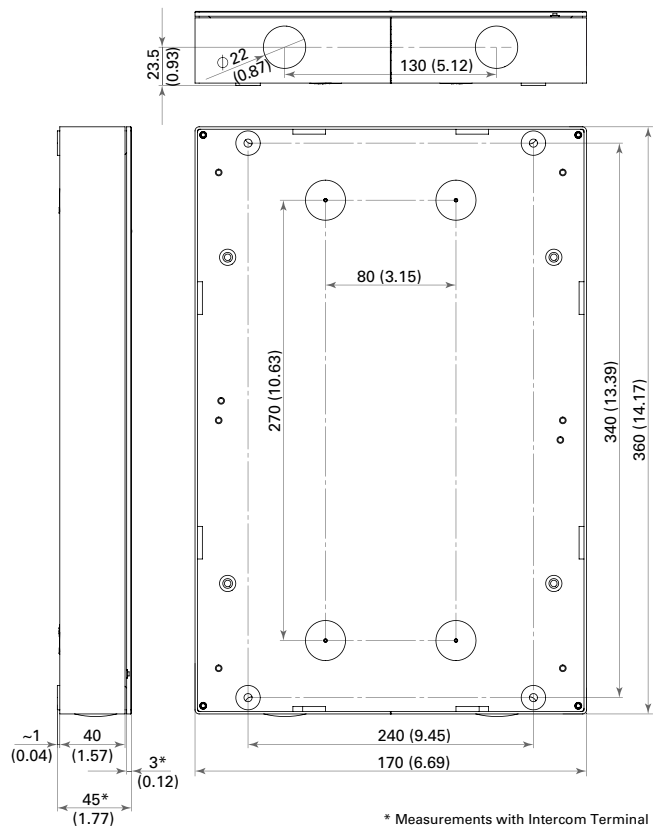
Weight incl. package: 1735 g (3.8 lbs)

Surface-Mount Kit TSSH 10V

Surface-Mount Kit made from 1.5 mm stainless steel, suitable for surfacing touch screen Intercom stations TS 8110V I.

Weight incl. package: 1900 g (4.2 lbs)

* Measurements with Intercom Terminal

* Measurements with Intercom Terminal

Desktop Kit TSDK 10V

This kit allows for using touch screen Intercom station TS 8110V I as a desktop device. Note that this also requires a TSSH 10V Surface-Mount Kit. Material: powder-coated steel.

Weight incl. package: 766 g (1.7 lbs)

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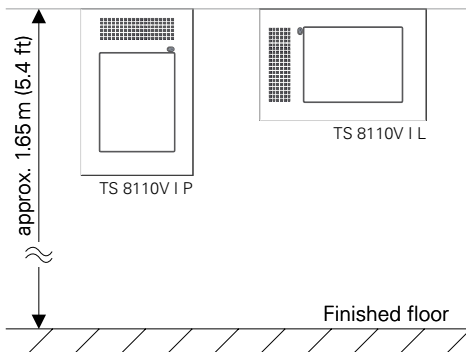
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Installation

Precautions

- When opening the stations ESD precautions must be observed.
- The stations may only be opened by authorised service engineers.
- The station may only be cleaned with cleaning agents for stainless steel – in NO case with cleaning agents containing chlorine or isopropanol!

Mounting Instructions

- Do not expose the station to extreme temperature (below –20° C or above +50° C / –4° F to 122° F).
- For flush mounting a flush mount kit TSFB 10V (available separately) is required.
- For surface mounting a surface mount kit TSSH 10V (available separately) is required.
- Please take care of the correct mounting direction: The microphone has to be located at the bottom edge of the terminal and it may not be covered. For the position of the microphone, please see chapter "connection" on page 15.
- To observe the CE- guidelines, the snap ferrite (in the extent of supply) has to be snapped on to the LAN cable.
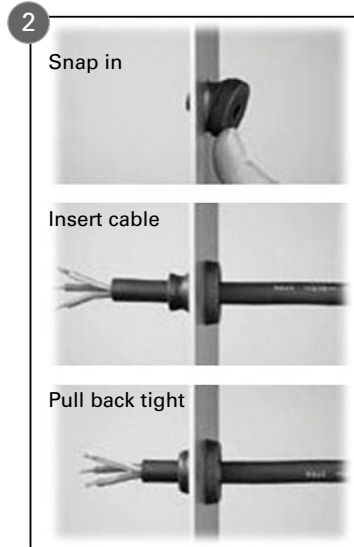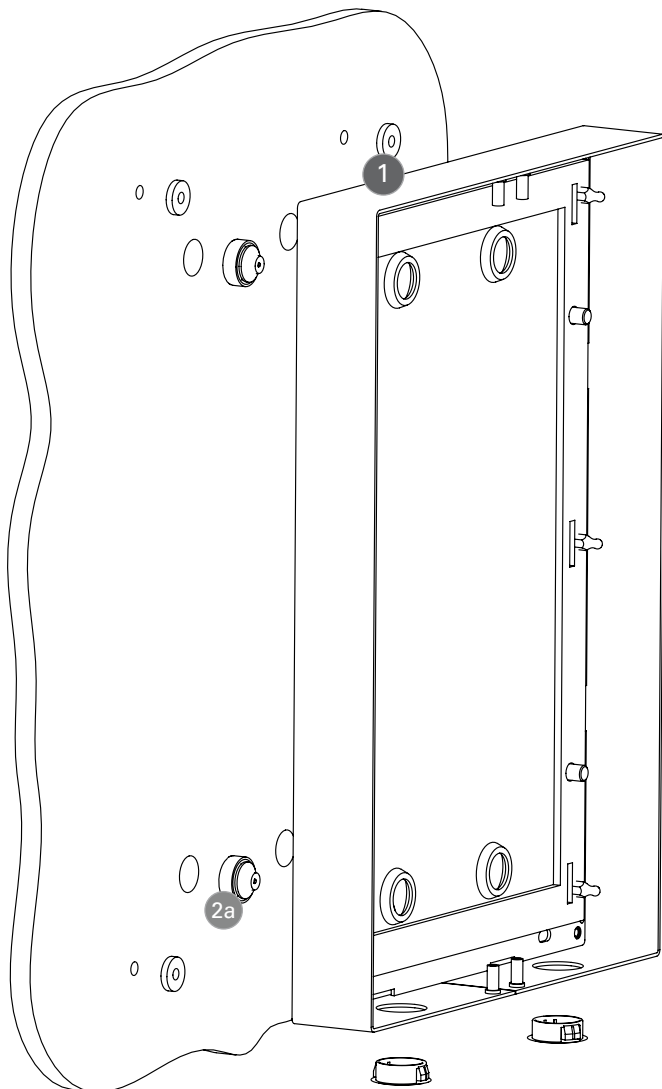
Recommended Mounting height
The upper edge of the station approx. 1.65 m (5.4 feet) from the finished floor. Please adapt the mounting height to the individual needs.

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Installation

Mounting Surface-Mount Kit TSSH 10V

Snap in

Insert cable

Pull back tight

1 ..... **Surface mount box (Metal)**
→ Mounting via mounting kit
Note: - The cable inlet must be on the bottom of the surface mount box.
- Please take care of the correct mounting direction: The microphone has to be located at the bottom edge of the terminal and it may not be covered.
For the position of the microphone, please see chapter "connection" on page 15.

2 ..... **IP 65 cable feed through**
→ Installation cable feed through see picture to the right.
Note: - Per cable one cable feed through has to be used!

2a If the **cable inlet** on the **backside** of the surface mount box is used, the cable must be inserted in the cable feed through before mounting the surface mount box.

2b If the **cable inlet** on the **bottom** of the surface mount box is used, the cable feed through from the front panel box must be used (not pictured).
**Note:** - Cable feed throughs for the surface mount box have to be ordered separately!

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Installation

Mounting Flush-Mount Kit TSFB 10V

Cavity-mounting
It is possible to carry out the cavity-mounting for walls with a thickness of up to 35 mm (1.38 inch).
In case of thicker walls, it is recommended to mount the flush-mount box with RAWL® spring toggles M3x50 (not in the extent of supply).

2

Einsetzen

Kabel einführen

Dicht ziehen
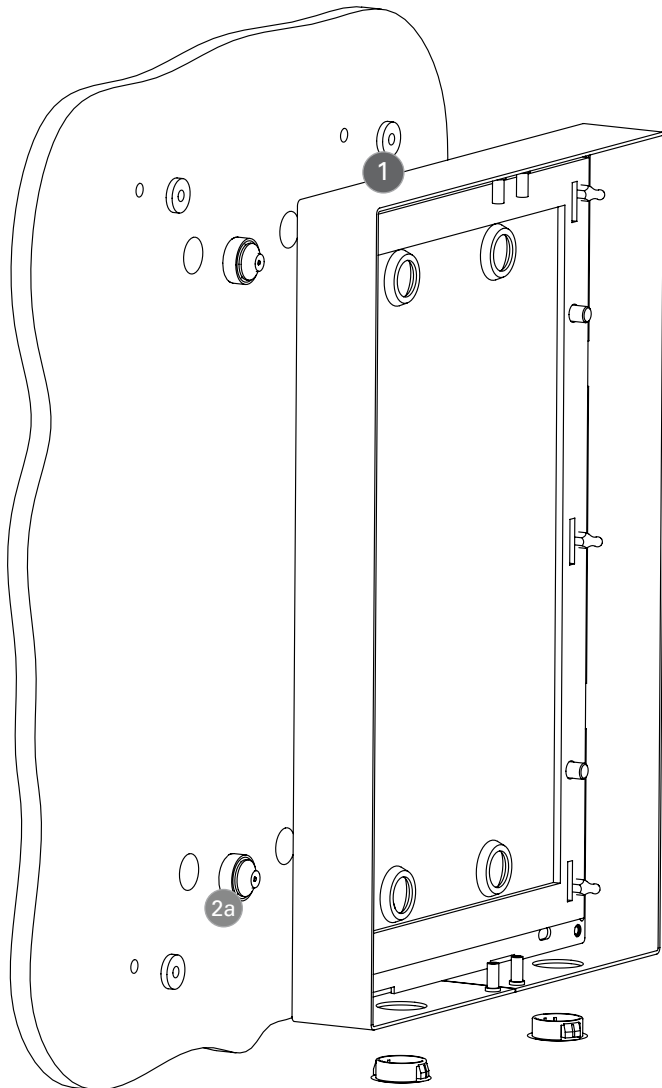
1 **..... Aufputzdose Metall**
→ Montage mit Montagekit
   Hinweis: - Bei Montage müssen sich die Kabeleinlässe auf der Unterseite befinden
                 - Bitte achten Sie darauf, dass das Mikrofon des Touch Terminals nach
                   unten ausgerichtet ist und nicht abgedeckt wird.
                   Die Position des Mikrofons entnehmen Sie bitte dem Kapitel „Anschluss" auf Seite 15.

2 **..... IP 65 Kabeldurchführung**
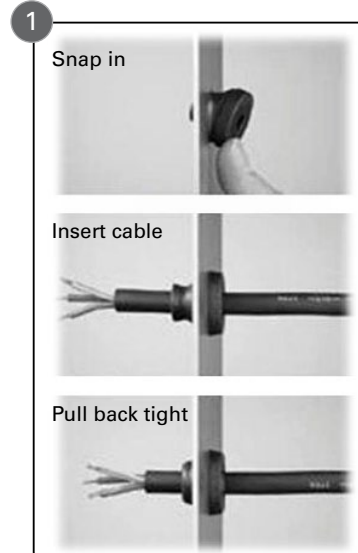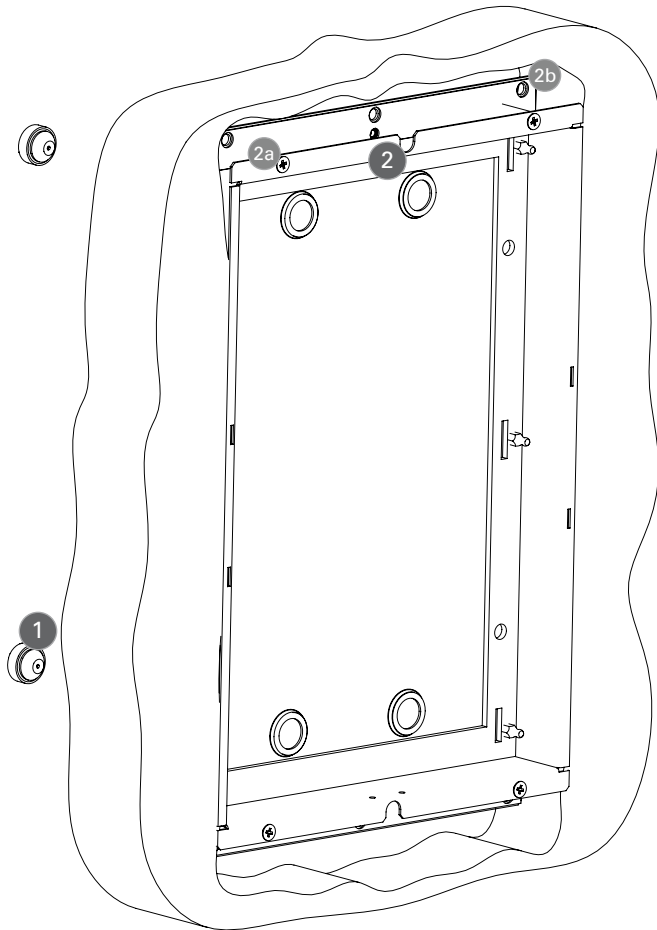→ Montage Kabeldurchführung siehe rechts.
   Hinweis: - Pro Kabel muss eine Kabeldurchführung verwendet werden!

   2a   Wird der **Kabeleinlass** auf der **Rückseite** der Aufputzdose verwendet,
              muss vor der Montage der Aufputzdose das Kabel in die
              Kabeldurchführung eingeführt werden.

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Installation

Mounting Flush-Mount Kit TSFB 10V

Wall-mounting

1	
Snap in	
Insert cable	
Pull back tight	

1 ..... **IP 65 cable feed through**
→ Installation cable feed through see picture to the right.
  Note: - Per cable one cable feed through has to be used!

2 ..... **Flush mount box**
→ Mounting via mounting kit
  Note: - The flush mount box has to be mounted flush with the wall.
    - Please take care of the correct mounting direction: The microphone has to be located at
      the bottom edge of the terminal and it may not be covered.
      For the position of the microphone, please see chapter "connection" on page 15..
    - Watertight material to be placed between wall and flush mount box (if required) has to be
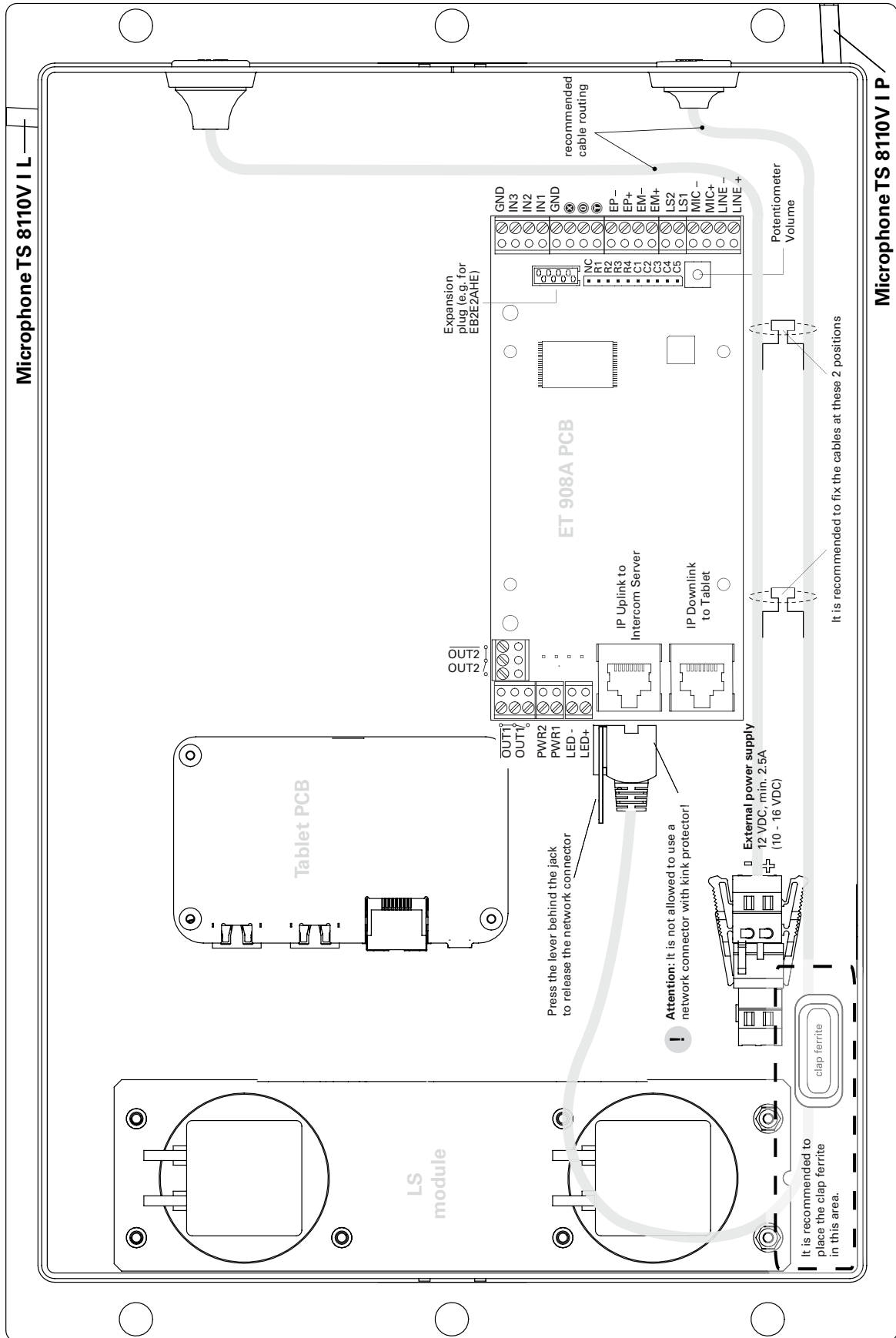   ordered separately from other manufacturers.

2a The flush mount box, the spacers and the mounting brackets have to be screwed together.

2b To prepare for pastering, it is recommended to fix the flush mount box to
the wall via the mounting openings of the mounting brackets.

2c Before plastering, insert the flush-mount cover (not pictured).

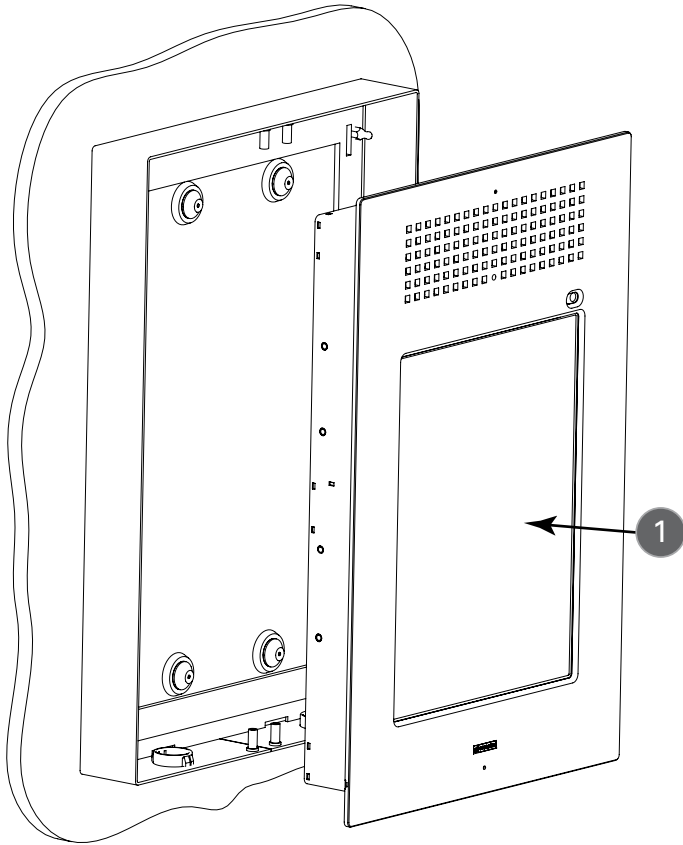TS 8110V I: Data Sheet V1.0/1113
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Installation

Connection

Microphone TS 8110V I L

Microphone TS 8110V I P

recommended cable routing

Potentiometer Volume

GND
IN3
IN2
IN1
GND
EP –
EP+
EM–
EM+
LS2
LS1
MIC –
MIC+
LINE –
LINE +

NC
R1
R2
R3
R4
C1
C2
C3
C4
C5

Expansion plug (e.g. for EB2E2AHE)

ET 908A PCB

It is recommended to fix the cables at these 2 positions

IP Uplink to Intercom Server

IP Downlink to Tablet

OUT2
OUT2

OUT1
OUT1
PWR2
PWR1
LED –
LED+

Tablet PCB

Press the lever behind the jack to release the network connector

Attention: it is not allowed to use a network connector with kink protector!

External power supply
12 VDC, min. 2.5A
(10 - 16 VDC)

LS module

clap ferrite

It is recommended to place the clap ferrite in this area.

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Installation
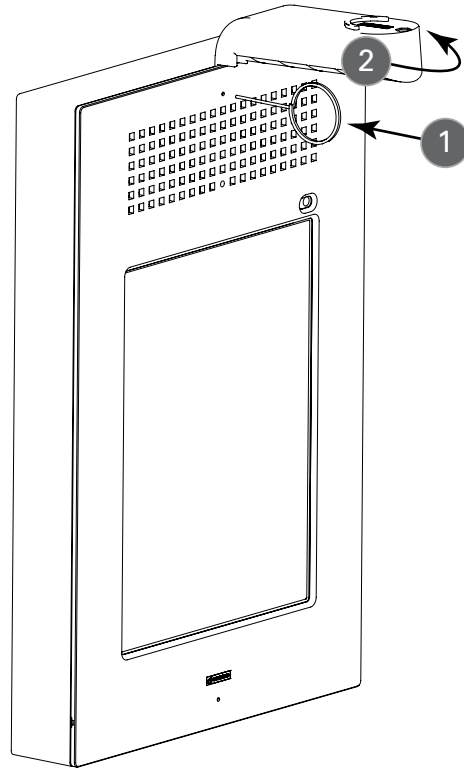
Frontplate TS8110V I

Mounting

1. Press the front panel onto the mounting box.

Attention!
Please take care of the correct mounting direction: The microphone has to be located at the bottom edge of the terminal and it may not be covered. For the position of the microphone, please see "Connection" on page 15.

Demounting

1. Press the unlock tool into the opening to unlock the Intercom Terminal.
2. Insert tool WSDM P in the gap between front panel and mounting box and take off the front panel.

Quality tested. Reliable. Smart.

COMMEND products are developed and manufactured by Commend International in Salzburg, Austria.

The development and manufacturing processes are certified in accordance with **EN ISO 9001:2008**.

A strong worldwide network

COMMEND is represented the world over by local Commend Partners and helps to improve security and communication with tailored Intercom solutions.

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