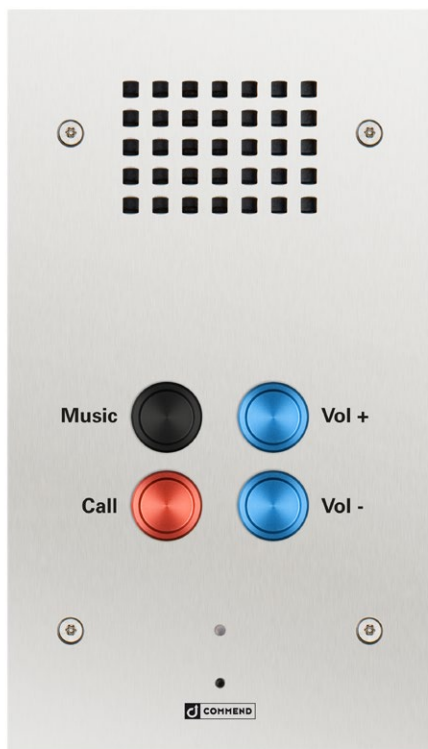


# Series Y-100094-x

Compact vandal resistant IP Intercom stations



Vandal  
resistant

16 kHz  
eHD Voice

Ultimate  
Usability

Fully  
IP-based

## Instant help in emergency situations

The Intercom station series Y-100094-x is easy to operate and provides clear intelligibility under all ambient conditions.

The stations are connected directly to the Ethernet (LAN/WAN) and in this manner are connected to the Intercom Server via the IP network. The built-in switch with downlink function allows direct connection of an additional IP device (e.g. an IP camera).

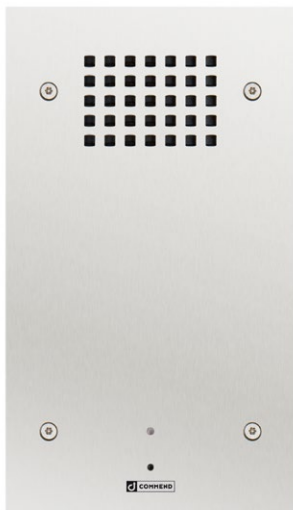
Permanent function monitoring ensures in-service status of the system. The 3 mm stainless steel front panel with poke protection and special screws offers optimal protection against vandalism. Therefore the stations are perfectly suited for use as emergency stations in e.g. prisons.

The Intercom station series Y-100094-x is designed especially for mounting in "2-Gang" boxes.

## Features and highlights

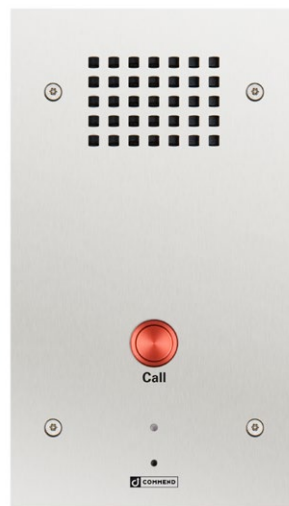
- Poke protection for optimal protection against vandalism
- Communication via data networks – no additional cabling required
- Crystal clear 16 kHz speech quality for optimum intelligibility
- Inputs and outputs for control and indication functions e.g. control of barriers
- External power supply or Power over Ethernet
- In case of a changing public IP address, dynamic registration is possible
- DHCP functionality
- Supports DSP features such as OpenDuplex®, audio monitoring, loudspeaker-/microphone surveillance, etc.
- Option boards offer additional powerful features
- Line input for feed-in of audio
- Configurable Ethernet parameters
- Easy administration via central parametrization

## Station versions



**Y-100094-1 Padded Cell Station**

IP Intercom station without buttons



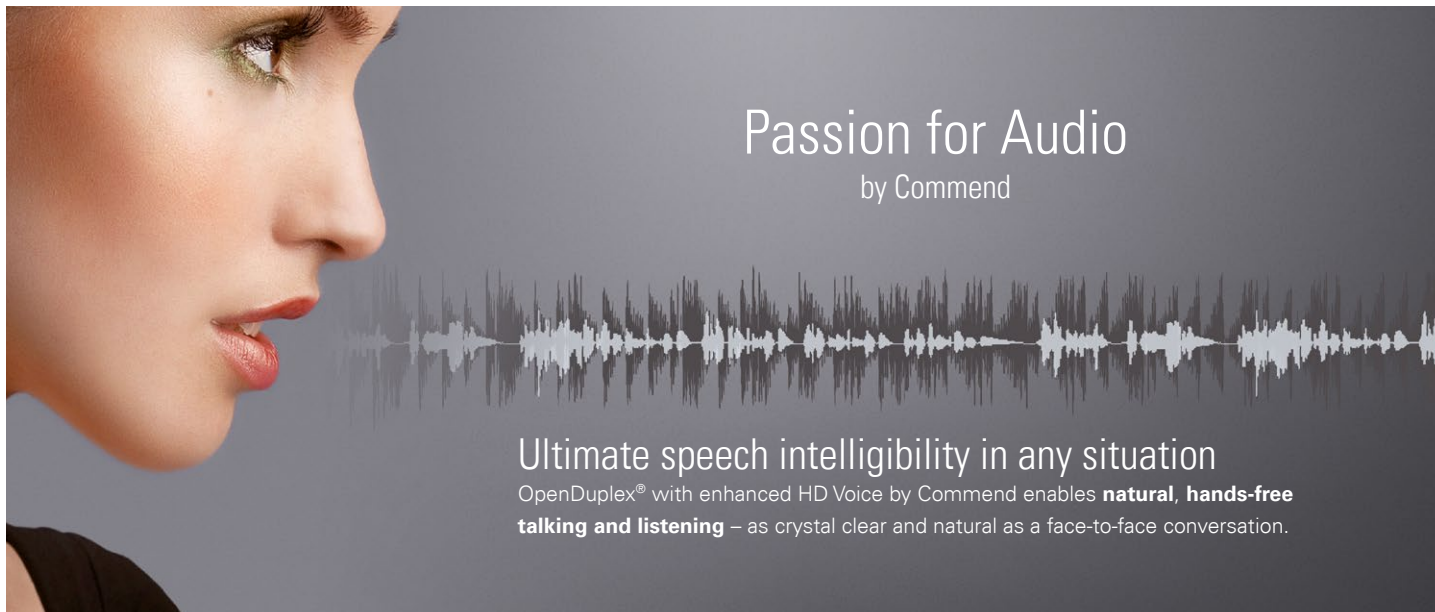
**Y-100094-2 Door Station**

IP Intercom station with one red call button



**Y-100094-3 Cell Station**

IP Intercom station with one black music button, one red call button and two blue volume buttons

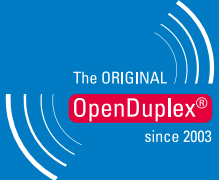





## Passion for Audio

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.

 <p>Natural communication</p>	 <p>enhanced HD Voice</p>	 <p>High volume</p>	<p>IVC</p> <p>Intelligent Volume Control</p>	 <p>Loudspeaker/microphone surveillance</p>
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## Audio // Basics

<b>eHD Voice</b>	Enhanced HD Voice by Commend transfers the audio signal at a bandwidth of <b>16 kHz</b> , thus capturing the entire frequency spectrum of the human voice.
<b>STI</b>	Speech Transmission Index <b>0.96</b> – 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)
<b>Sound pressure level</b>	<b>High volume</b> up to <b>99 dB</b>
<b>Amplifier</b>	High efficient class-D amplifier with 2.5 W
<b>Microphone</b>	Omnidirectional electret condenser microphone for max. 7 m (23 ft) speaking distance
<b>Loudspeaker</b>	8 Ω loudspeaker with humidity-resistant special membrane type for optimum sound quality

Learn more

[audio.commend.com](http://audio.commend.com)

## Audio // Functions

**Loudspeaker/microphone surveillance** – 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 defined noise levels for more security

**Peer-to-peer audio** – reduces network and server load to ensure efficient use of resources

**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 mode** for applications requiring controlled communication – e.g. for security solutions based on the “push-to-talk/release-to-listen” method

**OpenDuplex®** for natural, hands-free communication

**IVC** (Intelligent Volume Control) automatically adjusts the device's volume setting to the ambient noise level

**Public address functions**

# Series Y-100094-x

## Technical Specifications

### Technical data

<b>Front panel:</b>	stainless steel, 3 mm (0.12 in)
<b>Operating temperature range:</b>	–20 °C to +60 °C (–4 °F to 140 °F)
<b>Storage temperature range:</b>	–20 °C to +60 °C (–4 °F to 140 °F)
<b>Relative humidity:</b>	up to 95%, not condensing
<b>Call button:</b>	Y-100094-1: without buttons Y-100094-2: one red piezo button Y-100094-3: four piezo buttons
<b>Microphone:</b>	electret condenser microphone polar pattern: omnidirectional speaking distance: max. 7 m (23 ft)
<b>Loudspeaker:</b>	special membrane type for optimal sound quality, sound pressure level: 85 dB/ 1 W/ 1 m (3.28 ft), 8 Ω
<b>Line input:</b>	for feed-in of audio (e.g. music, radio conference) nominal level 0 dBu 0.775 V at 10 kΩ
<b>Amplifier:</b>	integrated class-D amplifier with 2.5 W
<b>Status indication:</b>	red operation LED 6 mA
<b>Outputs:</b>	2 relay outputs (switch-over contacts) max. 60 VDC, 2 A, 60 W <sup>1)</sup> expected life: min. 5 x 10 <sup>4</sup> (2 A), 10 <sup>5</sup> (1 A)
<b>Inputs:</b>	3 inputs for floating contacts
<b>Transmission bandwidth:</b>	16 kHz
<b>Connection:</b>	pluggable screw terminals expansion jack e.g. for EB2E2AHE IP uplink/downlink: shielded RJ45 modular jacks
<b>Cabling:</b>	min. Cat. 5
<b>Power supply:</b>	12 – 24 VAC or 15 – 35 VDC, 500 mA or PoE
<b>PoE (Power over Ethernet):</b>	following IEEE 802.3af power consumption of the terminal device: class 0 (0.44 W to 12.95 W)
<b>Ethernet:</b>	2 x 10/100 MBit/s (Full/Half Duplex) Auto MDIX
<b>Dimensions (W x H x D):</b>	120 x 210 x 41,8 mm (4.72 x 8.27 x 1.65 in)
<b>Weight incl. package:</b>	approx. 990 g (2.2 lbs)

<sup>1)</sup> The relay output may only be connected to a SELV circuit! A SELV circuit as per IEC/EN 60950-1 must be separated safely from a dangerous electrical circuit (e.g. 230 V or 110 V mains power), e.g. by means of double insulation. The SELV circuit must not exceed 60 VDC or 42.4 VAC<sub>peak</sub> (30 VAC<sub>eff</sub>)!



### 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 the Intercom station.

### Extent of supply

- Front panel with Intercom station electronics
- Short reference

### System requirements

#### GE 800 / GE 300 / GE 700-UPG

- Intercom Server software min. PRO 800 1.0C
- IP subscriber card G8-IP / G3-IP
- Configuration software min. CCT 800 1.0C

### Network requirements

#### IP-Addresses and Ports

- For the Intercom station the DHCP functionality is available. If DHCP is not used, the Intercom station must have a fixed IP address.
- In case of a changing public IP address, dynamic registration of an Intercom station is possible.
- Communication from the program IP Station Config is done via Port 16399 (can not be configured).
- Communication from the Intercom station 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

- Required bandwidth incl. protocol overhead per Intercom station, for upload/download each: speech and data 96 kBit/s
- Speech is compressed according to G.722 standard

# Series Y-100094-x

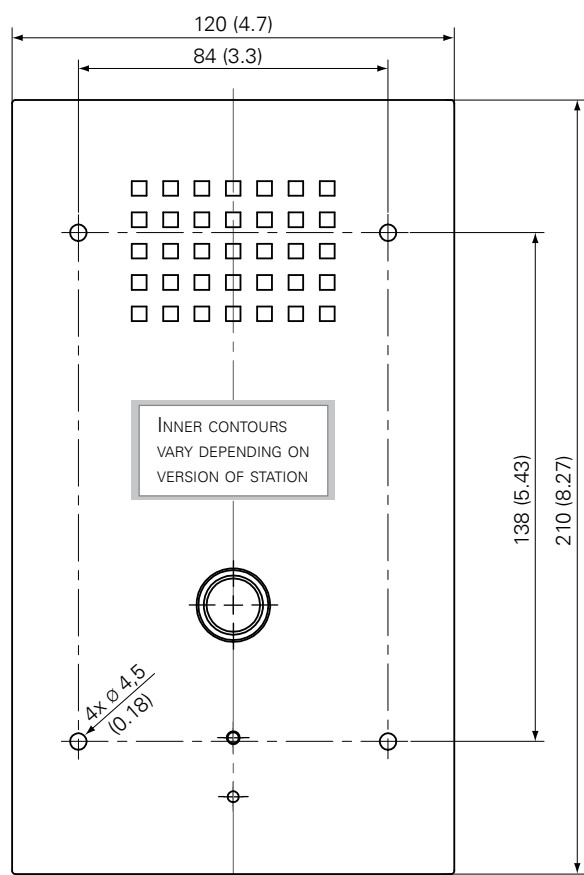
## Installation Instructions

### Precautions

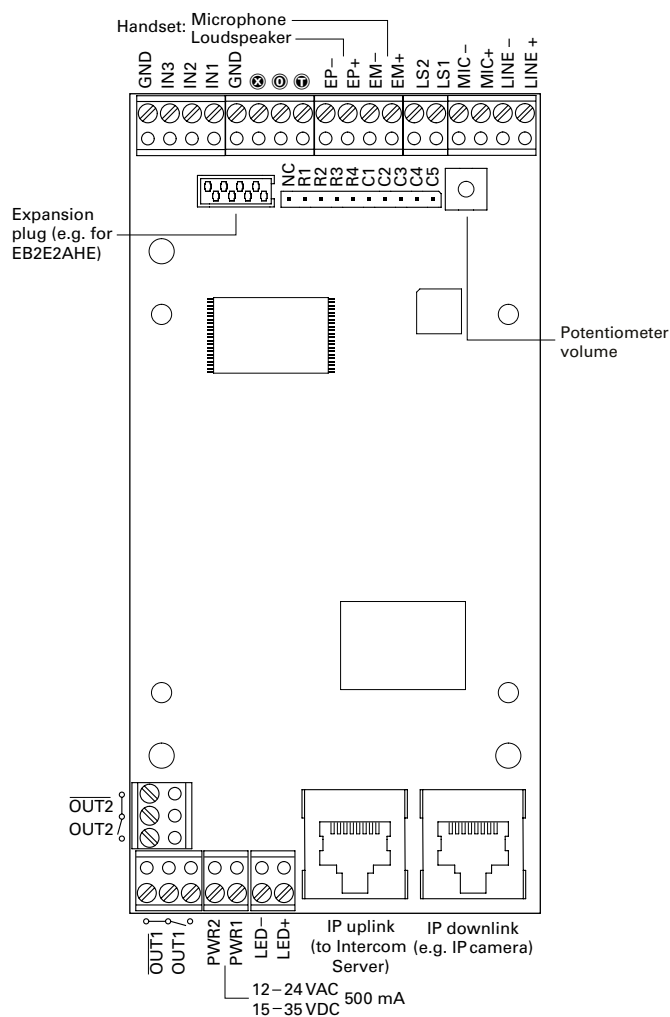
- Observe the precautions for handling of electrostatic sensitive devices!
- The stations may only be installed by authorised service engineers.

### Dimensions front panel

Measuring units in mm (in), not to scale!

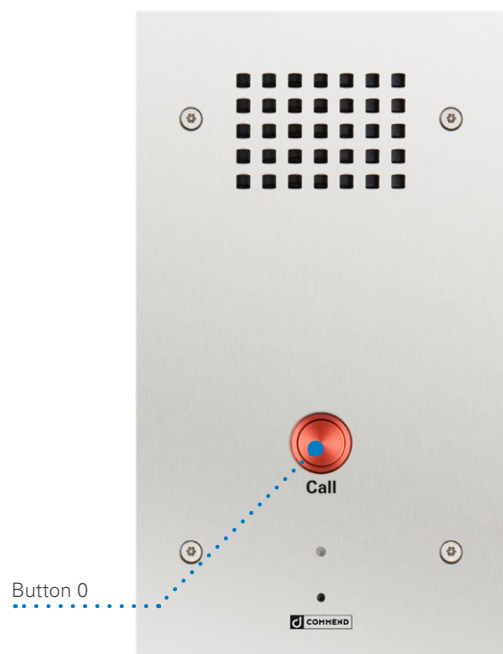


### Connection

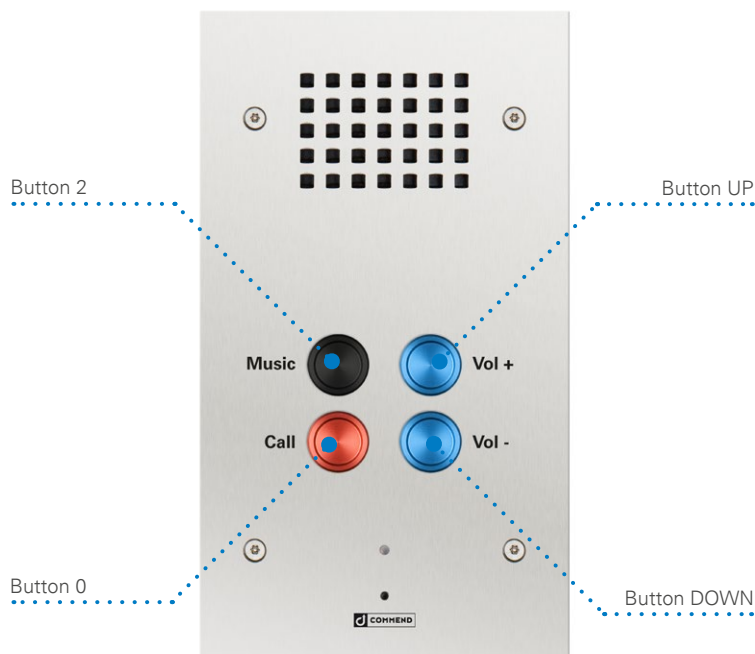


## Button configuration

The following illustrations show the configuration of the buttons from the series Y-100094-x on the Intercom Server.



**Y-100094-2 Door Station**



**Y-100094-3 Cell Station**

## 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**.



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## A strong worldwide network

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

[www.commend.com](http://www.commend.com)