

Conductor[®]

by Commend

Simplicity in concert with power

Control desk solution by Commend

Ultimate
availability16kHz
eHD VoiceVideo
integrationFully
IP-basedScalable
modular
system

Everything under control

Like the harmonious interplay between orchestral instruments, the reliable, well-coordinated interplay of the components in a communication and security solution is absolutely vital. Using different hardware and software technologies requires central coordination and control – the essential star quality of all Commend control desk solutions. This allows you to keep even the most complex of Intercom infrastructures and integrated external systems under easy, fast and reliable control from a central point.

Comprehensive control desk solutions

Good conductors can get in tune with the audience, too. Thanks to its modular design, the CONDUCTOR can be fine-tuned in accordance with individual user requirements. As with all Commend systems, the CONDUCTOR's technology and design have been carefully developed with the users and their environment in mind. Crystal clear 16 kHz eHD voice speech quality and an extra-high volume capacity are just as important to Commend's comprehensive control desk concept as full mobile system access.

Style and ergonomics in perfect harmony

Design symphony in three movements: Stylish. High-quality. Innovative.



Superior speech intelligibility

- 100 dB volume capacity – unique in the industry
- 16 kHz eHD voice speech quality
- OpenDuplex® for hands-free talking in rooms with high ambient noise levels

Full overview

- Various display versions with optimised user guidance
- Customisable button illumination colours and flashing rhythms to indicate operating status
- Acoustic notification using custom sounds

Security meets durability

- Software routines continuously monitor the functionality of the device
- IP50 rating
- High resistance against chemicals and physical impact
- Suitable for extreme ambient conditions and temperatures up to +70 °C

Investment protection

- Upwards compatible
- High product life cycle combined with long-term availability

CCTV integration

- Display of video camera images on Intercom system – for identifying persons, detecting critical situations and assessing activities correctly as they happen
- Optional integration of recording systems

Scalable to any need

- Modular system
- Quick and easy to expand
- Fast and easy to install, either as desktop unit or fitted control desk console

User-friendliness included

- Large buttons and label areas
- Fast, targeted access to specific Intercom stations, automated announcements with pre-recorded messages, RF conference calls, door and gate controls
- Console unit can be tilted to adjust to ambient seating and viewing conditions

Components of the control desk solution

Base terminals CD 810P I/CD 800P I

With the high-quality, timeless design of the CONDUCTOR control desk, what you see is not all you get. Whether as a durable desktop console or custom-fitted solution, the CONDUCTOR installs presto and is just as quick and easy to use. What is more, the entire unit can be tilted to suit your individual ergonomic needs by adjusting to your ambient light and seating conditions.



Gooseneck microphone module CDMI 50P HD

Gooseneck microphone module with headset jack. The module can be mounted next to a base terminal.



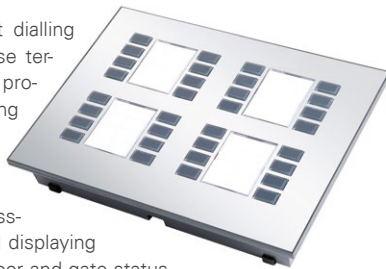
Headset module CDHD 50P

Control desk module with headset jack. The module can be mounted next to a base terminal.



Direct dialling button module CDDD 32P

Up to 3 modules with 32 direct dialling buttons can be attached to a base terminal. The dialling buttons can be programmed as needed: direct dialling with call indication (conversation, call and emergency call), output functions (e.g. for switching lighting fixtures, triggering processes, opening doors and gates) and displaying system status information (e.g. door and gate status details).



Handset module CDHS 50P

Handset in modern design with push-to-talk button and magnet fastening. The module can be mounted next to a base terminal.



Accessories

Accessories

Desktop kit for base terminal and direct dialling button module.

Tilting angle: 20° to 65°; colour: black



W 190 mm, H 80 mm, D 50 mm  560 g

Plug-in power adapter PA30W24V

30 W switched-mode power supply adapter with high-efficiency output.

Primary: 90–264 VAC/secondary: 24 VDC

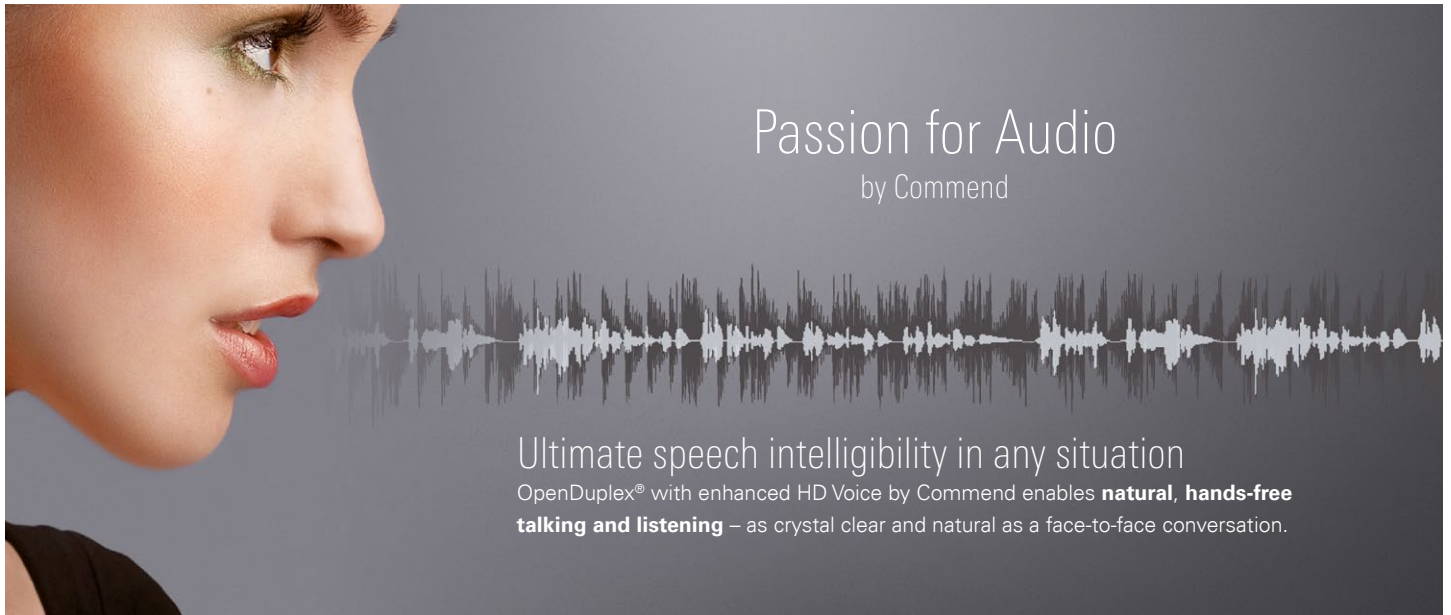
PA30W24V-EU

Version for Europe

PA30W24V-CA

Version for UK, USA and Australia



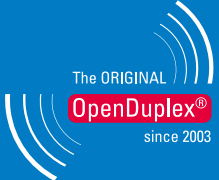





Passion for Audio

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

eHD Voice	Enhanced HD Voice by Commend transfers the audio signal at a bandwidth of 16 kHz , 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 level	High volume up to 99 dB
Amplifier	Highly efficient Class D amplifier with 2.5 W
Microphone	Omnidirectional electret condenser 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 mV _{eff} EM impedance: 3.3 kΩ/EM supply: 2.5 V EP level: 850 mV _{eff} at 0 dBm0/EP impedance: 200 Ω
Line output	Connection of loudspeaker module, induction loop amplifier etc.

Audio // Functions

- Dynamic **background noise suppression** virtually eliminates all ambient noise
- Automatic volume adjustment** to ambient noise conditions
- 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
- 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 mode** for applications requiring controlled communication – e.g. for security solutions based on the “push-to-talk/release-to-listen” method
 - Equalizer** for fine-tuning to ambient acoustic conditions

Learn more

audio.commend.com

Base terminal CD 810P I

Technical specifications



Technical data

IP rating:	IP50 (acc. EN 60529)
Front panel:	polycarbonate
Microphone:	electret condenser microphone polar pattern: omnidirectional speaking distance: max. 7 m (23 ft)
Loudspeaker:	special membrane type for optimal sound quality sound pressure level: 85 dB/1 W/1 m (3.28 ft), 2 x 8 Ω
Amplifier:	integrated class-D amplifier with 2.5 W
Sound pressure level:	max. 99 dB
Handset, headset:	EM sensitivity: 14 mV _{eff} EM impedance: 3.3 kΩ/EM supply: 2.5 V EP level: 850 mV _{eff} at 0 dBm0/EP impedance: 200 Ω
Input:	3 inputs for floating contacts (detection of 5 input states)
Output:	2 relay outputs (switch-over contacts), 30 VDC, 1 A
Line output:	for connection of loudspeaker module
Call indication:	multifunction LED (colours: red, green, blue)
Keypad:	full keypad, white backlight activation force: 3 N, 1.5 x 10 ⁶ cycles 8 direct dialling buttons with 3-colour LEDs
Display:	3,5" colour TFT display, graphical menu navigation display of IP video streams (MJPEG) 320 x 240 pixels, 65,000 colours
Transmission bandwidth:	16 kHz
Operating temperature range:	0 °C to +60 °C (+32 °F to +140 °F)
Storage temperature range:	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity:	up to 80%, non-condensing
Connection:	pluggable screw terminals, expansion plug for direct dialling module (CDDD 32D), handset module (CDHS 50P), gooseneck microphone module (CDMI 50P HD) and headset module (CDHD 50P) IP uplink: shielded RJ45 modular jack
Power supply:	PoE or external supply ¹⁾ (20–30 VDC) power consumption: max. 9 W recommended power supply: PA30W24V
Cabling:	min. Cat. 5
PoE (Power over Ethernet):	IEEE 802.3af power consumption of the base terminal: class 0 (0.44 W to 12.95 W)
Protocol:	VoIP protocol based on UDP/IP
Data rate:	10/100 MBit/s (Full/Half Duplex)
Mounting:	with included rear housing, can be installed in control desks or as desktop version
Dimensions (W x H x D):	with included rear housing: 262 x 196 x 45 mm (10.32 x 7.72 x 1.77 in)
Weight incl. package:	approx. 920 g (2 lbs)
Colour:	front panel: white-aluminium (like RAL 9006) rear housing: graphite-grey (like RAL 7024)

¹⁾ For supplying the direct dialling modules CDDD 32P, a separate power supply is required.

Benefits

- Modular control desk system – can be installed in control desks or as desktop version
- 3,5" colour TFT display with integrated web interface (<http://<IPaddress>>)
- Display of IP video streams (MJPEG) or static graphics (JPEG)
- Back-lit full keypad and function buttons
- 8 direct dialling buttons with 3-colour LEDs
- Expandable to up to 104 direct dialling buttons with three CDDD 32P direct dialling modules
- Expansion modules for handset, gooseneck microphone and headset
- Protection classification IP50
- Supports DSP features such as OpenDuplex[®], audio monitoring and microphone/loudspeaker surveillance

Extent of supply

- Base terminal
- Rear housing
- Connection cable Cat. 5 (3 m/9.8 ft)
- Short reference

Base terminal CD 800P I

Technical specifications



Technical data

IP rating:	IP50 (acc. EN 60529)
Front panel:	polycarbonate
Microphone:	electret condenser microphone polar pattern: omnidirectional speaking distance: max. 7 m (23 ft)
Loudspeaker:	special membrane type for optimal sound quality sound pressure level: 85 dB/1 W/1 m (3.28 ft), 2 x 8 Ω
Amplifier:	integrated class-D amplifier with 2.5 W
Sound pressure level:	max. 99 dB
Handset, headset:	EM sensitivity: 14 mV _{eff} EM impedance: 3.3 kΩ/EM supply: 2.5 V EP level: 850 mV _{eff} at 0 dBm0/EP impedance: 200 Ω
Input:	3 inputs for floating contacts (detection of 5 input states)
Output:	2 relay outputs (switch-over contacts), 30 VDC, 1 A
Line output:	for connection of loudspeaker module
Call indication:	multifunction LED (colours: red, green, blue)
Keypad:	full keypad, white backlight activation force: 3 N, 1.5 x 10 ⁶ cycles 8 direct dialling buttons with 3-colour LEDs
Display:	monochrome LCD display, 128 x 64 pixel, white backlight
Transmission bandwidth:	16 kHz
Operating temperature range:	0 °C to +60 °C (+32 °F to +140 °F)
Storage temperature range:	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity:	up to 80%, non-condensing
Connection:	pluggable screw terminals, expansion plug for direct dialling module (CDDD 32D), handset module (CDHS 50P), gooseneck microphone module (CDMI 50P HD) and headset module (CDHD 50P) IP uplink: shielded RJ45 modular jack
Power supply:	PoE or external supply ¹⁾ (20–30 VDC) power consumption: max. 9 W recommended power supply: PA30W24V
Cabling:	min. Cat. 5
PoE (Power over Ethernet):	IEEE 802.3af power consumption of the base terminal: class 0 (0.44 W to 12.95 W)
Protocol:	VoIP protocol based on UDP/IP
Data rate:	10/100 MBit/s (Full/Half Duplex)
Mounting:	with included rear housing, can be installed in control desks or as desktop version
Dimensions (W x H x D):	with included rear housing: 262 x 196 x 45 mm (10.32 x 7.72 x 1.77 in)
Weight incl. package:	approx. 920 g (2 lbs)
Colour:	front panel: white-aluminium (like RAL 9006) rear housing: graphite-grey (like RAL 7024)

¹⁾ For supplying the direct dialling modules CDDD 32P, a separate power supply is required.

Benefits

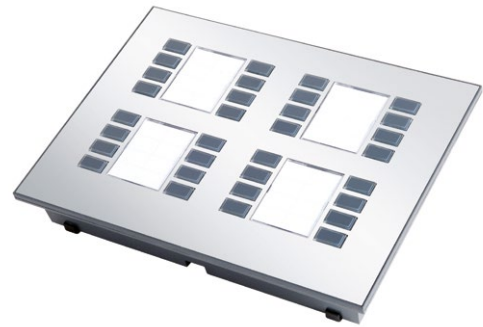
- Modular control desk system – can be installed in control desks or as desktop version
- Monochrome LCD display
- Back-lit full keypad and function buttons
- 8 direct dialling buttons with 3-colour LEDs
- Expandable to up to 104 direct dialling buttons with three CDDD 32P direct dialling modules
- Expansion modules for handset, gooseneck microphone and headset
- Protection classification IP50
- Supports DSP features such as OpenDuplex®, audio monitoring and microphone/loudspeaker surveillance

Extent of supply

- Base terminal
- Rear housing
- Connection cable Cat. 5 (3 m/9.8 ft)
- Short reference

Direct dialling button module CDDD 32P

Technical specifications



Technical data

IP rating:	IP50 (acc. EN 60529)
Front panel:	polycarbonate
Buttons:	32 direct dialling buttons with 3-colour LEDs activation force: 3 N, 1.5 x 10 ⁶ cycles
Operating temperature range:	0 °C to +70 °C (+32 °F to +158 °F)
Storage temperature range:	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity:	up to 80%, non-condensing
Connection:	ribbon cable (35 cm/13.8 in) to base terminal or to next CDDD 32P module ¹⁾
Power supply:	20–30 VDC ²⁾ recommended power supply unit: PA30W24V
Mounting:	with included rear housing, can be installed in control desks or as desktop version
Dimensions (W x H x D):	with included rear housing: 262 x 196 x 45 mm (10.32 x 7.72 x 1.77 in)
Weight incl. package:	approx. 850 g (1.9 lbs)
Colour:	front panel: white-aluminium (like RAL 9006) rear housing: graphite-grey (like RAL 7024)

¹⁾ The first direct dialling module supplies all further direct dialling modules.

²⁾ The direct dialling module may not be powered with the same power supply as the base terminal. A separate floating power supply must be used for galvanic separation of the power supplies.

Benefits

All buttons of the direct dialling button module can be assigned to the following functions:

- Indication of conversations, call requests, input messages and output conditions
- Acknowledgement of call requests and input messages
- Dialling of a single button as long as pressed: "0" to "9", "T", "X" and function buttons "F4" to "F6" (up, down and enter)
- Direct dialling 1 to 6 digits when pressed, with optional deletion ("X") before pressing (toggle) and optional deletion after releasing
- Control of outputs: ON, OFF, toggle and ON as long as button is pressed
- Simulation of input conditions with a predefined level when pressed and released (and all possible functions such as ICX messages)

Extent of supply

- Direct dialling button module
- Rear housing incl. connection module and mounting material
- Ribbon cable (35 cm/13.8 in)
- Short reference

System requirements

- Base terminal CD 810P I/CD 800P I and a subscriber on subscriber card with feature level "D" (configured as control desk)

Gooseneck microphone module CDMI 50P HD

Technical specifications



Technical data

IP rating (with connected headset):	IP50 (acc. EN 60529)
Front panel:	polycarbonate
Gooseneck:	black coated brass
Microphone:	electret noise cancelling microphone polar pattern: cardioid speaking distance: 3–10 cm (1–4 in)
Frequency range:	200 Hz to 16 kHz
Operating temperature range:	0 °C to +70 °C (+32 °F to +158 °F)
Storage temperature range:	–20 °C to +70 °C (–4 °F to +158 °F)
Relative humidity:	up to 80%, non-condensing
Connection:	3 x connection cables to base terminal (50 cm) ¹⁾ , 4P4C jack for a headset
Power supply:	via base terminal
Mounting:	with included rear housing, can be installed in control desks or as desktop version
Dimensions (W x H x D):	55 x 196 x 43 mm (2.17 x 7.72 x 1.69 in) gooseneck microphone: 365 mm (14.4 in)
Weight incl. package:	approx. 600 g (1.3 lbs)
Colour:	front panel: white-aluminium (like RAL 9006) rear housing: graphite-grey (like RAL 7024)

¹⁾ The gooseneck module is connected to the base terminal at "GND" (screw terminal "external loudspeaker module") and the jacks "Gooseneck" and "Headset".

NOTE:

- In order to avoid over stretching and premature wear, the gooseneck may only be bent to 90 degrees.

Benefits

- Gooseneck microphone for conversation indication
- Headset jack
- Polycarbonate construction

Extent of supply

- Gooseneck microphone module
- Rear housing incl. connection module and mounting material
- Short reference

System requirements

- Base terminal CD 810P I/CD 800P I

Headset module CDHD 50P

Technical specifications

Technical data

IP rating (with connected headset):	IP50 (acc. EN 60529)
Front panel:	polycarbonate
Operating temperature range:	0 °C to +70 °C (+32 °F to +158 °F)
Storage temperature range:	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity:	up to 80%, non-condensing
Connection:	connection cable to base terminal (50 cm) ¹⁾ , 4P4C jack for a headset
Power supply:	from base terminal
Mounting:	with included rear housing, can be installed in control desks or as desktop version
Dimensions (W x H x D):	55 x 196 x 43 mm (2.17 x 7.72 x 1.69 in)
Weight incl. package:	approx. 420 g (0.9 lbs)
Colour:	front panel: white-aluminium (like RAL 9006) rear housing: graphite-grey (like RAL 7024)

¹⁾ The headset module is connected to the base terminal at the jack "Headset".



Benefits

- Headset jack for the connection of various headsets
- Polycarbonate construction

Extent of supply

- Headset module
- Rear housing incl. connection module and mounting material
- Short reference

System requirements

- Base terminal CD 810P I/CD 800P I

Handset module CDHS 50P

Technical specifications

Technical data

IP rating:	IP40 (acc. EN 60529)
Front panel:	polycarbonate
Microphone:	electret condenser microphone polar pattern: omnidirectional
Loudspeaker:	50 Ω
Button:	push-to-talk button
Frequency range:	200 Hz to 16 kHz
Operating temperature range:	0 °C to +70 °C (+32 °F to +158 °F)
Storage temperature range:	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity:	up to 80%, not condensing
Connection:	4-way connection cable with connector (50 cm) ¹⁾
Power supply:	from base terminal
Mounting:	with included rear housing, can be installed in control desks or as desktop version
Dimensions (W x H x D):	with included rear housing: 55 x 238.5 x 74 mm (2.17 x 9.39 x 2.91 in)
Weight incl. package:	approx. 420 g (0.9 lbs)
Colour:	handset: graphite-grey (like RAL 7024) front panel: white-aluminium (like RAL 9006) graphite-grey (like RAL 7024)

¹⁾ The handset module is connected to the base terminal at the jack "Handset".

ATTENTION: Magnetically sensitive devices

The magnets contained in the handset CDHS 50P can affect operation of certain medical devices and electronic systems under certain circumstances. Insure that the magnet (and the handset containing the magnet) keeps a distance of at least 30 cm (12 in) to credit cards and any other magnetically sensitive devices. For people carrying hearing aids or pacemakers, pay attention to the safety warnings of these devices.



Benefits

- Polycarbonate construction
- Push-to-talk button
- Magnet fastening

Extent of supply

- Handset module with spiral cable
- Rear housing incl. connection module and mounting material
- Short reference

System requirements

- Intercom station with handset connection, e.g. base terminal CD 810P I/ CD 800P I

Configuration CCT 800

- **Subscriber > DSP-Features > tab General**
- Activate the checkbox **Handset installed** (to activate general handset functions).

NOTE: Further information

For further information on configuration, see manual "Intercom Server Configuration".

System requirements

Intercom Server

- GE 800 (min. PRO 800 2.1, min. licence L8-PRO2x) with G8-IP/G8-IP-32 (min. G3-8-IP 4.0b01) and feature level “D” ¹⁾ or
- GE 300 (min. PRO 800 2.1, min. licence L3-PRO2x) with G3-IP (min. G3-8-IP 4.0b01) and feature level “D” ¹⁾ or
- S3/S6/VirtuoSIS (min. version 3.0, min. licence L-SIS-PRO3) and feature level “D” ¹⁾

Configuration software

- Min. CCT 800 2.1
- IP Station Config (included in setup of CCT 800 2.1)

¹⁾ NOTE: Control desk configuration

Base terminals are automatically recognised in the system as “control desks.” If no direct dialling modules CDDD 32P are connected and no control desk function is required, feature level “B” or “C” of the subscriber card is sufficient.

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.

Network requirements

IP addresses and ports

- For the CONDUCTOR, the DHCP functionality is available. If DHCP is not used, the CONDUCTOR must have a fixed IP address.
- In case of a changing public IP address, dynamic registration of a CONDUCTOR is possible.
- Communication from the software IP Station Config is done via port 16399 (cannot be configured).
- Communication from the CONDUCTOR to the Intercom Server (UDP protocol) is done via port 16400 (configurable).

QoS requirements

- One-way delay max. 100 ms
- Delay Jitter max. 50 ms
- 0% packet loss for perfect audio quality

Bandwidth

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

	3.5 kHz	7 kHz	16 kHz
Bandwidth (speech and data without video):	96 kBit/s	96 kBit/s	143 kBit/s
Speech is compressed to:	G.711 standard	G.722 standard	G.722 standard

Required bandwidth for video transmission

The following tables show the required bandwidth in Mbit/s depending on the configured “Quality” and “Max. frame rate” per IP stream.

QVGA

		Max. frame rate							
		1 fps	2 fps	5 fps	10 fps	15 fps	20 fps	25 fps	30 fps
Quality	20%	0.06 Mbit/s	0.12 Mbit/s	0.29 Mbit/s	0.58 Mbit/s	0.87 Mbit/s	1.16 Mbit/s	1.46 Mbit/s	1.75 Mbit/s
	40%	0.08 Mbit/s	0.17 Mbit/s	0.42 Mbit/s	0.84 Mbit/s	1.26 Mbit/s	1.68 Mbit/s	2.10 Mbit/s	2.52 Mbit/s
	60%	0.11 Mbit/s	0.22 Mbit/s	0.55 Mbit/s	1.09 Mbit/s	1.64 Mbit/s	2.18 Mbit/s	2.73 Mbit/s	3.28 Mbit/s
	80%	0.13 Mbit/s	0.25 Mbit/s	0.63 Mbit/s	1.26 Mbit/s	1.89 Mbit/s	2.51 Mbit/s	3.14 Mbit/s	3.77 Mbit/s
	100%	0.16 Mbit/s	0.32 Mbit/s	0.80 Mbit/s	1.60 Mbit/s	2.39 Mbit/s	3.19 Mbit/s	3.99 Mbit/s	4.79 Mbit/s

VGA

		Max. frame rate							
		1 fps	2 fps	5 fps	10 fps	15 fps	20 fps	25 fps	30 fps
Quality	20%	0.15 Mbit/s	0.31 Mbit/s	0.77 Mbit/s	1.54 Mbit/s	2.31 Mbit/s	3.08 Mbit/s	3.86 Mbit/s	4.63 Mbit/s
	40%	0.23 Mbit/s	0.46 Mbit/s	1.15 Mbit/s	2.30 Mbit/s	3.46 Mbit/s	4.61 Mbit/s	5.76 Mbit/s	6.91 Mbit/s
	60%	0.31 Mbit/s	0.62 Mbit/s	1.54 Mbit/s	3.08 Mbit/s	4.62 Mbit/s	6.16 Mbit/s	7.70 Mbit/s	9.24 Mbit/s
	80%	0.36 Mbit/s	0.71 Mbit/s	1.78 Mbit/s	3.56 Mbit/s	5.34 Mbit/s	7.12 Mbit/s	8.90 Mbit/s	10.69 Mbit/s
	100%	0.45 Mbit/s	0.90 Mbit/s	2.24 Mbit/s	4.48 Mbit/s	6.72 Mbit/s	8.97 Mbit/s	11.21 Mbit/s	13.45 Mbit/s

Base terminal CD 810P I

Installation instructions

ATTENTION: Safety and mounting instructions

– For safety and mounting instructions, see page IN | 4.

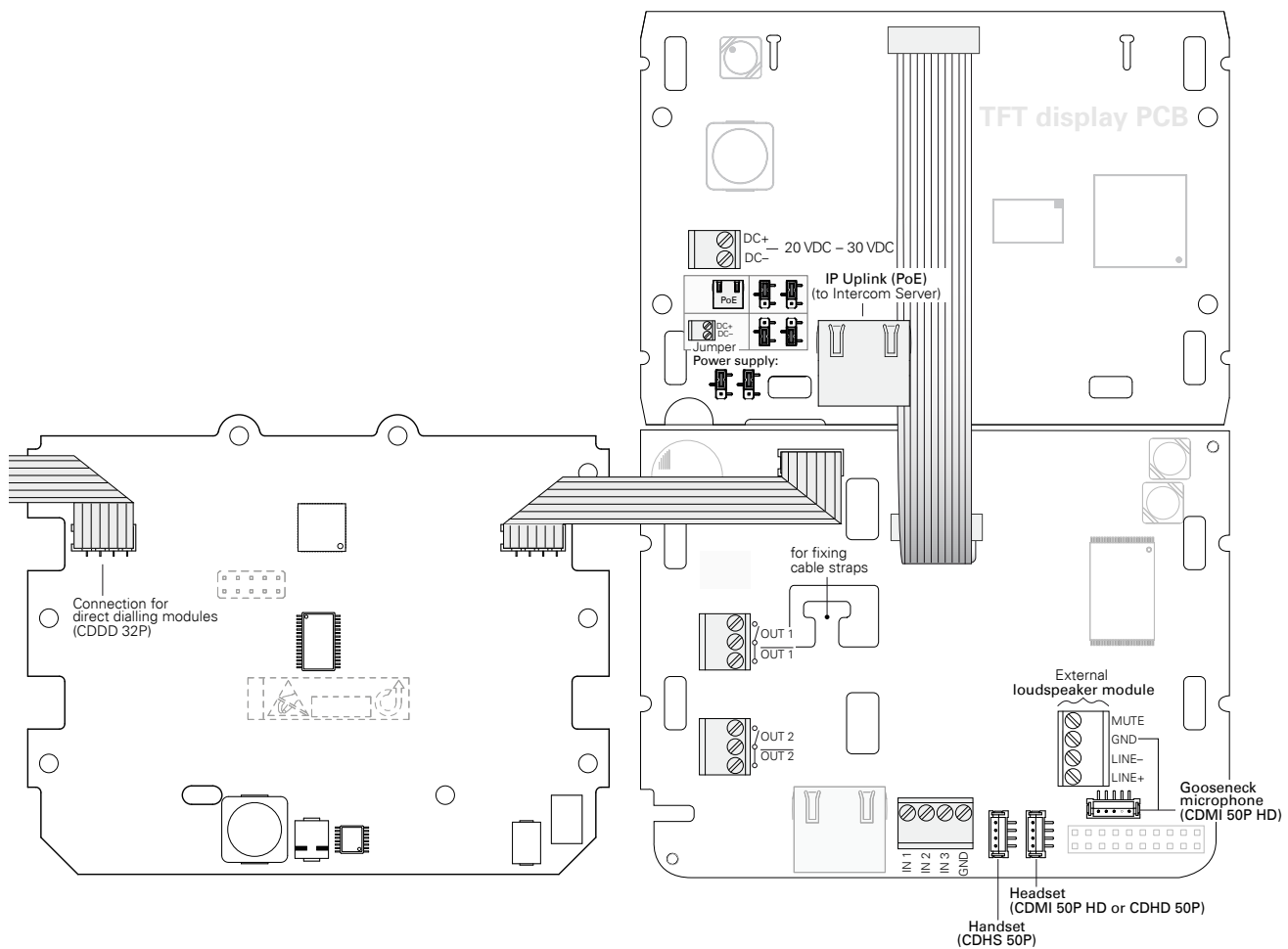
ATTENTION: Video restrictions

Video cannot be switched over WAN networking via G8-WAN or G3-WAN.

NOTE: Power supply

- The power supply must be connected to TFT display PCB (for supply via PoE and external supply).
- The device cannot be supplied with PoE and external power supply simultaneously. But if such a supply is needed, an appropriate configuration of the switch is required (Ethernet port may not be blocked).

Connection



NOTE: Ethernet connection

The RJ45 jack on the TFT display PCB must be used.

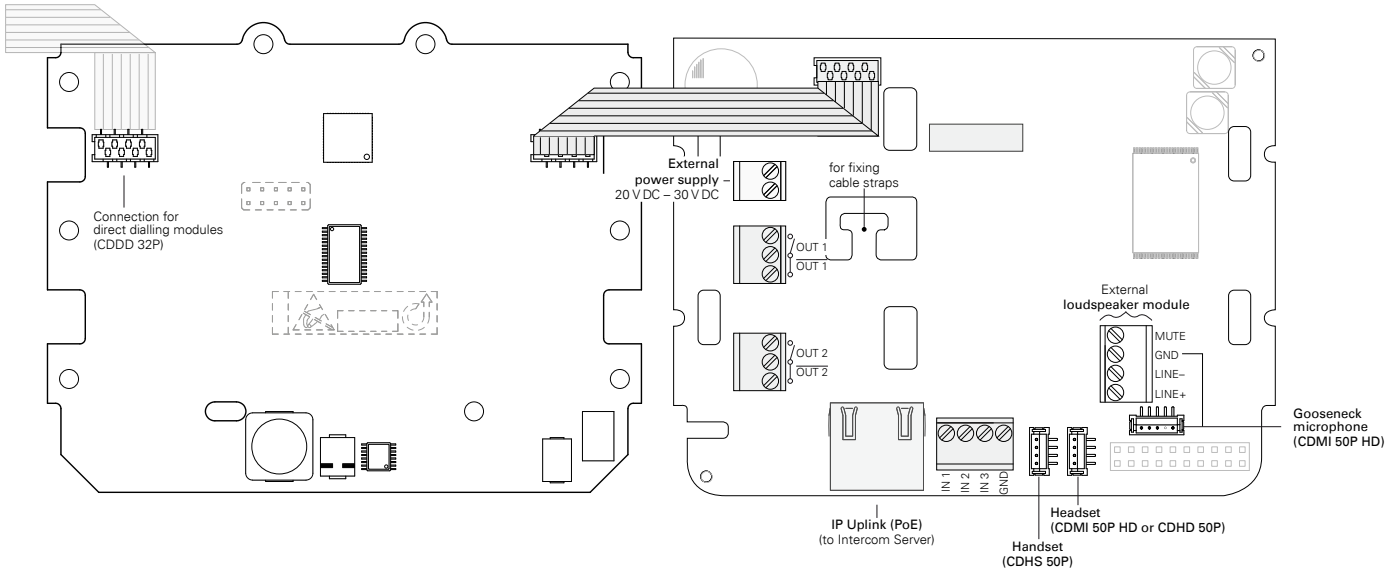
Base terminal CD 800P I

Installation instructions

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Connection



Direct dialling button module CDDD 32P

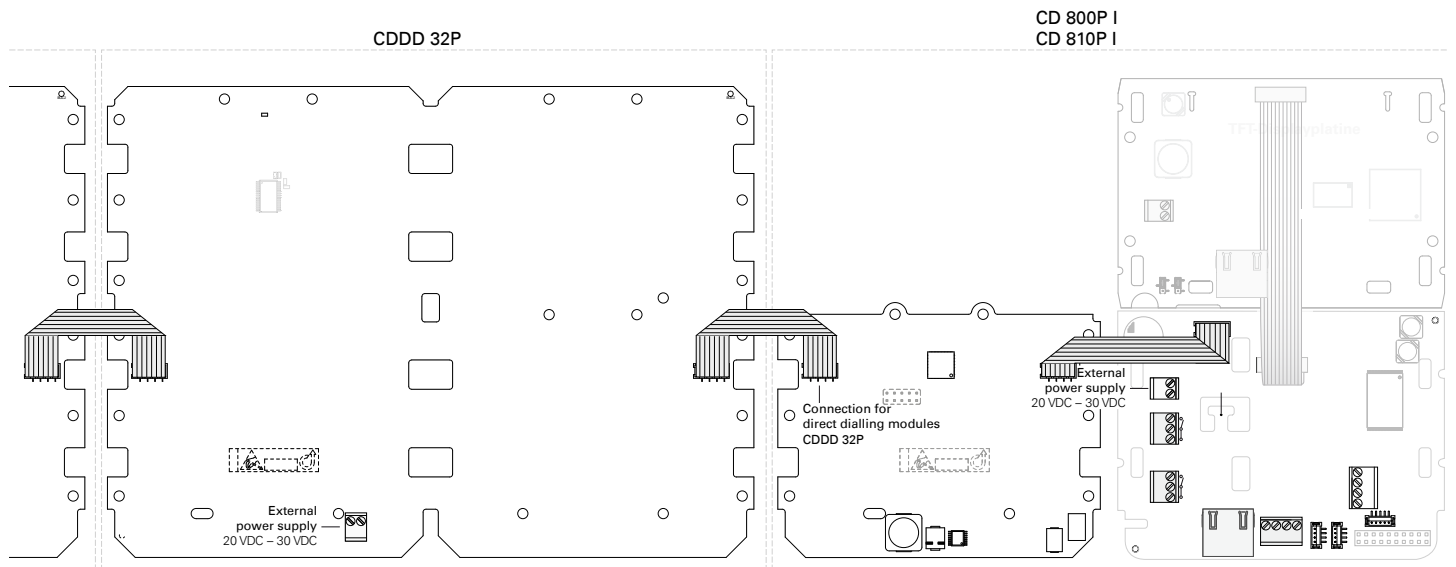
Installation instructions

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Connection

- The first direct dialling module must be connected to the base terminal with the ribbon cable included in extent of supply.
- All further direct dialling modules must be connected to the previous direct dialling module.



CONDUCTOR

Installation instructions

Safety instructions

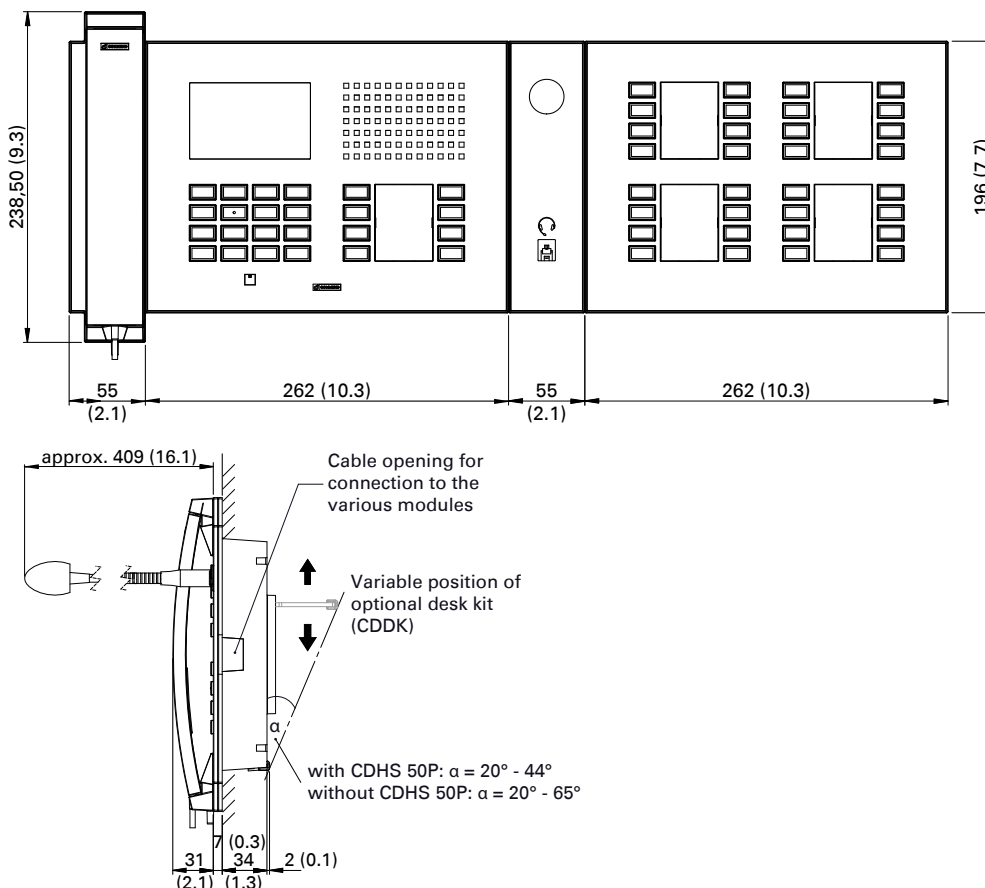
- This device shall be installed or replaced by trained and qualified personnel only.
- All connected circuits shall fulfil the following requirements:
 - Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN 60950-1 or
 - ES1, PS2 circuits and Annex Q (Limited Power Source) according to IEC/EN/UL 62368-1
- Only accessories that comply with the device's technical specifications shall be used.
- Before using the device, ensure all cables are connected correctly and not damaged.
- Do not make any unauthorised modifications to the device.

Mounting instructions

- Only use recommended tools when installing the device.
- Observe the country-specific standards for installation, mounting and configuration.
- Do not place the device in locations where it may be wet or damp. Also avoid locations with increased dust formation, high humidity or high ambient temperature.
- The front panel is fastened to the rear housing via screws from behind. Therefore, the control desk surface must be accessible from the rear.
- Before mounting in desk, break out the mounting openings from the rear housing.
- The extent of supply includes screws for sheet metal (6 pcs. 3.5 mm x 9.5 mm Tx10) and wood screws (6 pcs. 3.5 mm x 30 mm Tx10) for mounting in desks.
- For placing on desks the desk kit CDDK is available. Per base station / direct dialling module one CDDK is required.

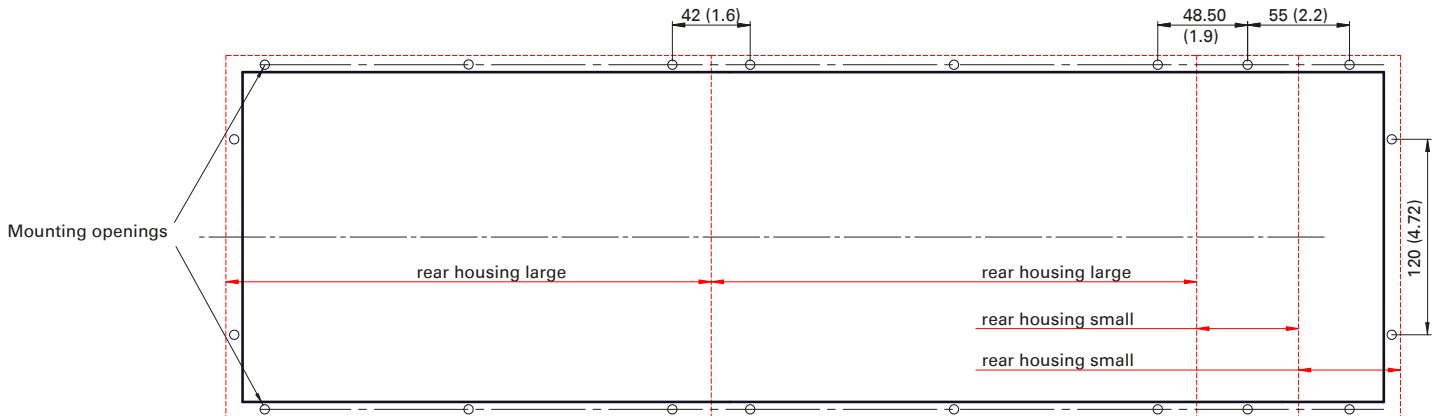
Dimensions front panel

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

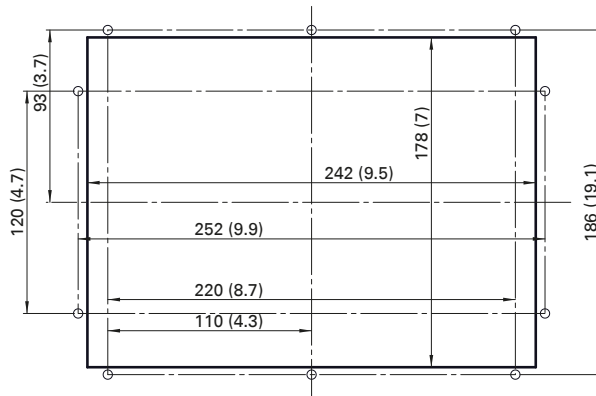


Dimensions flush mounting in desk

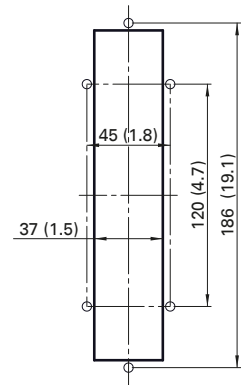
Measuring units in mm (in), not to scale!



Cut-out + hole pattern rear housing large



Cut-out + hole pattern rear housing small



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