



UCL ESTATES

FACILITIES & INFRASTRUCTURE
ENGINEERING, MAINTENANCE & INFRASTRUCTURE



UCL BENTHAM HOUSE (UGC: 56) SECURITY UPGRADE WORKS

PLANNING REPORT

**UCL BENTHAM HOUSE, 4-8 ENDSLEIGH GARDENS,
LONDON, WC1H 0EG**

14TH JULY 2023



CONTENTS

1. Introduction
2. Bentham House Intercom Installation Photographic Images
 - 2.1 – Existing Photographs
 - 2.2 – Proposed mock-up Photographs
3. Bentham House Intercom Installation Layout Plan
4. Commend Intercom Product Data Sheet



1 – INTRODUCTION

The aim of this project is to install a new intercom system at UCL Bentham House to improve communication between staff and students.

The new intercom will provide instant two-way handsfree communication between the building users and central UCL security.

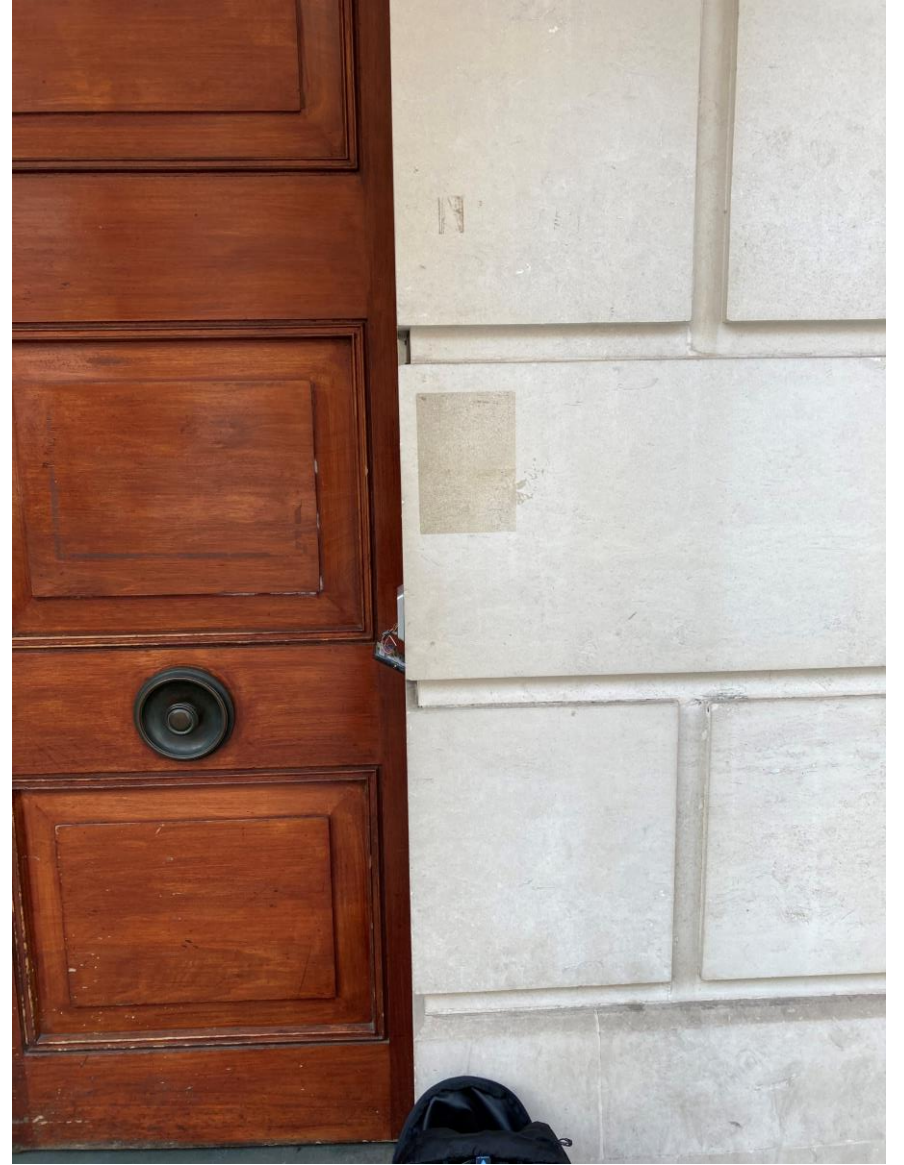
This will greatly benefit and provide the students with a greater educational experience by making it easier to get help when needed and to provide safe and secure access to the building.

There are already intercom systems in place at various buildings around the UCL campus.



2.1 – Bentham House Intercom Installation Existing Photographs

EXISTING





2.2 – Bentham House Intercom Installation Proposed Mock-Up Photographs

PROPOSED



SMALL HOLE TO BE DRILLED FROM THE BACK OF CARD READER TO THE BACK OF THE NEW INTERCOM.

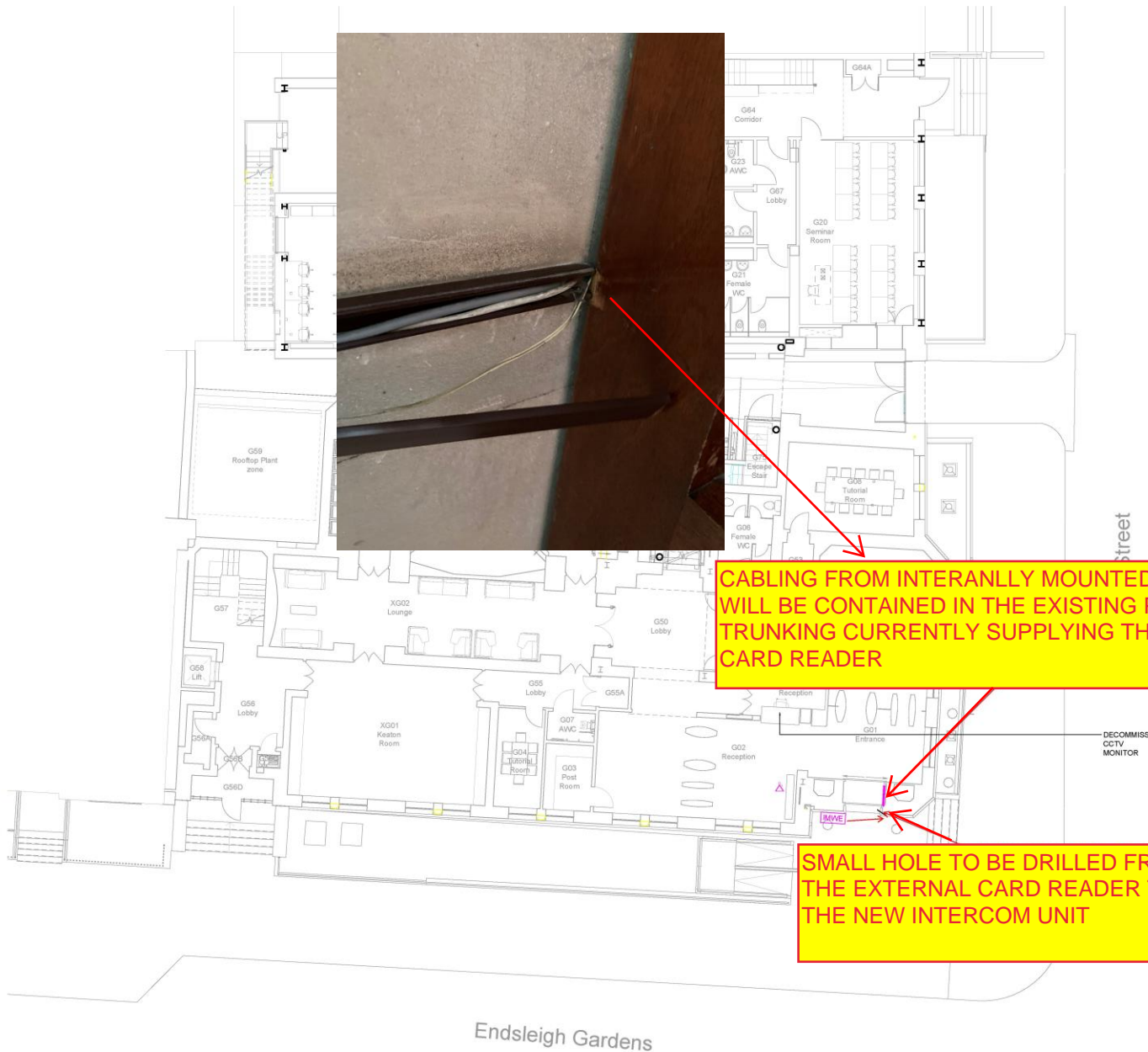
THIS WILL NEGATE THE NEED FOR ANY SURFACE MOUNTED CONTAINMENT



NEW INTERCOM TO BE SCREWED AND FIXED TO THE WALL USING RED PLUGS AND 1 1/2" X 8 POZI SCREWS.
NOTE: THESE WILL NOT BE VISABLE ONCE THE FRONT COVER OF THE INTERCOM HAS BEEN INSTALLED



3 – Bentham House Intercom Installation Layout Plan



CABLING FROM INTERANLLY MOUNTED DATA POINT
WILL BE CONTAINED IN THE EXISTING PVC
TRUNKING CURRENTLY SUPPLYING THE SECURITY
CARD READER

SMALL HOLE TO BE DRILLED FROM THE BACK OF
THE EXTERNAL CARD READER TO THE BACK OF
THE NEW INTERCOM UNIT

NOTES:

THIS DOCUMENT HAS FULL RESTRICTED STATUS AND MUST ONLY BE RELEASED IN ACCORDANCE WITH APPLICABLE SECURITY PROCEDURES

RELIANCEHIGH-TECH LTD IS THE OWNER OF ALL INTELLECTUAL PROPERTY RIGHTS OF THIS DRAWING. THIS DRAWING MAY NOT BE ALTERED, REPRODUCED OR USED OTHER THAN FOR THE CONTRACT WORKS FOR WHICH IT IS ISSUED WITHOUT THE WRITTEN PERMISSION OF RELIANCEHIGH-TECH LTD.

THIS IS A COLOURED DRAWING AND SHOULD BE TREATED AS MASTER IF THIS TEXT IS RED.

EXISTING EQUIPMENT

INTERCOM

1x DATA OUTLET (BY OTHERS)

UCL SECURITY MANAGEMENT					
UCL FIRE OFFICER					
4					
3					
2					
1	ISSUED FOR COMMENT	DLB	SL	28.04.23	
REV	AMENDMENTS	DRN	APP	DATE	



Site: University College London
Bentham House

Ground Floor
Security Layout

24534-056-00

1	of	1			
Drawn By	DATE	SCALE	PAPERSIZE	REV	
DLB	28/04/2023	NTS	A1	1.0	

Do not scale off this drawing. Check all dimensions on site.

Drawn 15mm 100mm

Original Scale 1:1



4 – Bentham House Intercom Installation Commend Intercom Product Data Sheet

OD10 TD CM

High-end outdoor Intercom station, suitable for wall mounting



Weather-
proof
IP65

Impact-
proof
IK07

Modular
solution

10.1"
touch display

Future-proof
system

Powerful solution for outdoor areas

Touch display 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. Options range from creating custom menus to integrating interactive on-screen elements such as video feeds.

High-performance processors turn the OD10 TD CM into a communication powerhouse. With a dedicated emergency mode feature-set, the Intercom station transforms from everyday use into an emergency station for managing crises events. This also means you will be perfectly prepared to meet the upcoming standards – such as EN 62820-2 – the standard for Advanced Security Building Intercom Systems (ASBIS).

These high-end Intercom stations are crafted using high-quality materials, including glass and anodised aluminium. Thanks to their timeless look, they are ideally suited for use as multi-functional Intercom stations with advanced security mode for modern office buildings.

Features and highlights

- Suitable for indoor and outdoor use
- High protection against vandalism (mechanical impact resistance IK07)
- Tamper detection (in combination with the surface mount kit OD10 SH or with the drywall/panel kit OD10 FB)
- 3 mm thick, tampered front glass
- Innovative sound concept with two lateral loudspeakers and two digital MEMS microphones
- Crystal-clear sound with up to 20 kHz speech quality and high volume
- Durable and resistant to wind and weather thanks to high-quality components and IP65 rating
- Robust, daylight-ready 10.1" touch display with brilliant colour reproduction
- High-resolution wide view angle video camera
- Sophisticated housing concept for simple, safe installation
- Surface and flush mount kits with locking mechanism
- OpenDuplex® for natural, hands-free communication with high-volume
- Permanent line and function testing
- Easy to extend with add-on equipment via USB interface
- 3 digital inputs for floating contacts and 2 relay outputs
- Motion detection for triggering action sequences

Key benefits at a glance

Its megapixel video camera ensures a picture-perfect viewing angle – both day and night. It can even capture persons who are not at eye-level with the camera unit

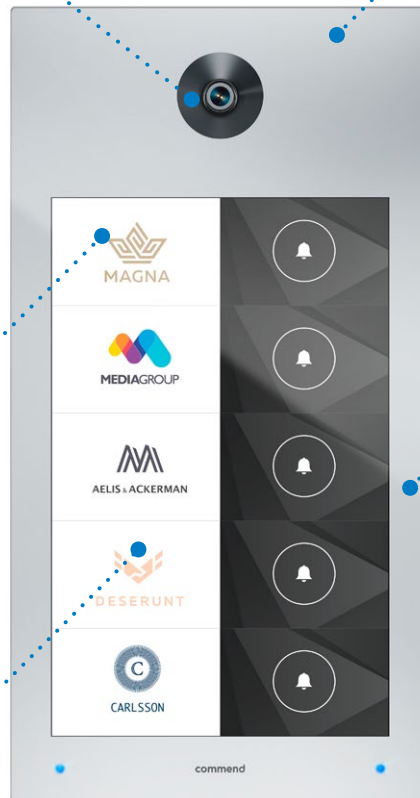
The Intercom stations are optimally protected against vandalism (IK07 rating, sabotage detection, ...).

The robust and very bright 10.1" touch display provides a clean overview and looks good from any position, thanks to its excellent viewing angle.

Up to 20 kHz speech quality and OpenDuplex® for natural hands-free communication with high volume capacity.

A real power pack with extensive feature set, the OD10 TD CM comes well prepared for future solutions centered around Advanced Security Building Intercom (ASBIS) as per EN 62820.

The robust design, together with the high-quality technical components and IP65 rating ensure a long product life under outdoor conditions.



In addition to the two loudspeakers, two concealed digital MEMS microphones ensure high audio quality and perfectly clear speech intelligibility.

Accessories

Drywall/panel kit OD10 FB

With the drywall/panel mount kit OD10 FB, a base module can be installed e.g. to a gypsum wallboard. The OD10 FB is designed for wall mounting during the construction or renovation phase.

In combination with this drywall/panel mount kit, tamper detection is possible with an OD10 TD CM.



Flush mount box OD10 FBS

With the flush mount box OD10 FBS, a base module can be installed e.g. to a brick wall. The OD10 FBS is designed for wall mounting during the construction or renovation phase. To mount the Intercom station, the drywall/panel kit OD10 FB is required. With this flush mount box, a plaster compensation is possible.



Surface mount kit OD10 SH

With the surface mount kit OD10 SH, a base module can be installed to any wall. The OD10 SH is especially designed for subsequent mounting to a wall or for mounting to thin walls.

The surface mount kit OD10 SH can be mounted to a 2-fold flush-mounted wall box (acc. EN 60670-1; 60 mm/2.36 in screw distance).

In combination with this surface mount kit, tamper detection is possible with an OD10 TD CM.



Safety switch box IP Secure Connector

The IP Secure Connector provides high performance and high, absolute security, even if the connected Intercom station is located outdoors: If an unauthorised attempt is made to remove the Intercom station, e.g. to access the connected Ethernet cable, the IP Secure Connector interrupts the connection to Intercom station and LAN. This ensures that it is neither possible to access the network nor to open a door or gate.



Induction loop kit AFIL-USB

With the AFIL-USB, an Intercom station can easily and quickly be equipped with an induction loop amplifier module. For this, only a free USB jack is required at the station. Thanks to its compact size, the AFIL-USB fits easily into a flush or surface mounting box.



Expansion module EB3E2A-AUD

The EB3E2A-AUD expansion module provides an easy way to expand the I/O and audio capabilities of an Intercom station. The expansion module is suitable for any applications where inputs and outputs are required. It has three inputs, two output relays and ports for direct connection of an external loudspeaker, external microphones and handset. Line-in and line-out connectors provide additional flexibility. The board can be connected to the station PCB through a USB cable and is immediately available in the system.



USB output module EB1A

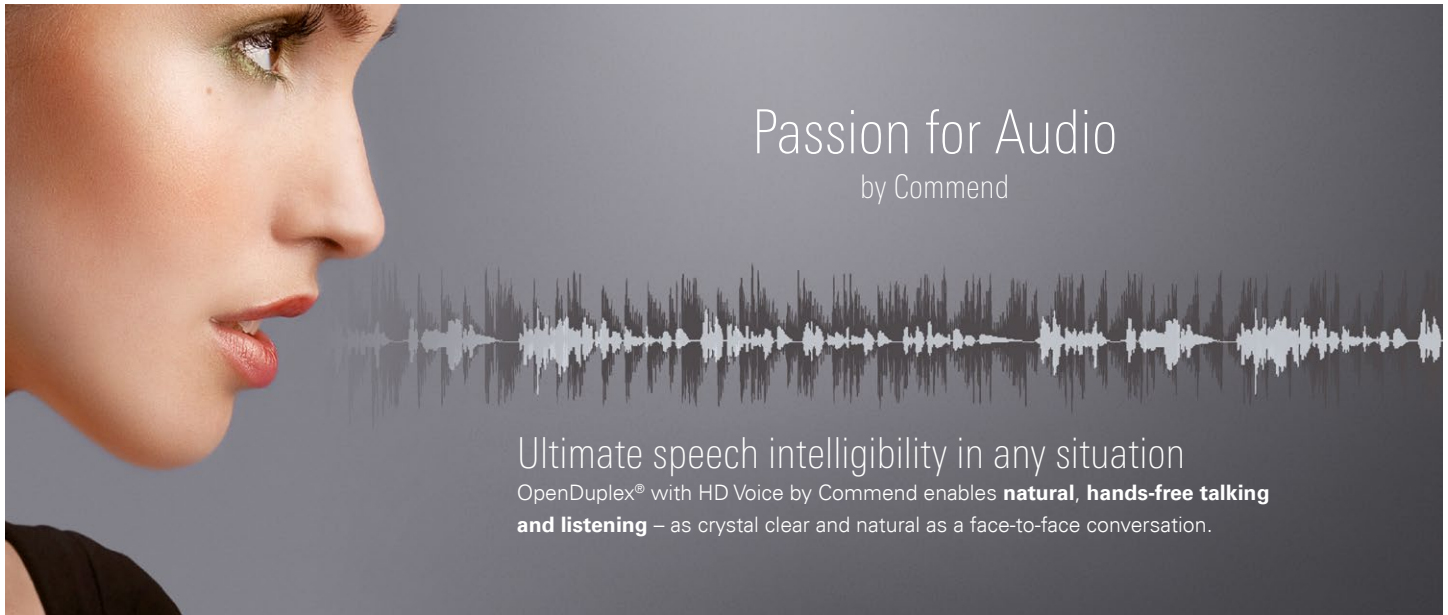
With the USB output module EB1A, a base module can be expanded with a relay output (normally open contact). The EB1A can be connected to a free USB port. By doing this, a floating, galvanically-isolated output contact is available immediately – e.g. for use with a door opener.



Power injector PA 25W POE-DC

In applications where PoE sourcing equipment is not available, the optional power injector PA 25W POE-DC offers a compact, convenient solution. It supports a wide DC input range (24–48 V) and is IEEE 802.3af/at compliant. The power injector connects easily and conveniently to an Intercom station through an Ethernet cable.



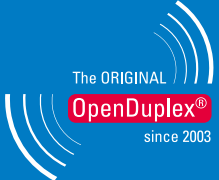






Passion for Audio

by Commend

Ultimate speech intelligibility in any situation

OpenDuplex® with 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>Crystal clear audio</p>	 <p>High volume</p>	 <p>Background noise suppression</p>	 <p>Loudspeaker/microphone surveillance</p>
--	--	--	---	--

Audio // Basics

uHD Voice	ultra HD Voice by Commend transfers the audio signal at a bandwidth of 20 kHz
Amplifier	Highly efficient class-D amplifier with 10 W
Microphone	Two digital MEMS microphones
Loudspeaker	2 x 8 Ω loudspeaker with humidity-resistant special membrane type for optimum sound quality

Learn more

audio.commend.com

Audio // Functions

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

Beamforming for best intelligibility and ambient noise suppression

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

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

Conference call function for simultaneous talking with multiple conversation partners

OpenDuplex® for natural, hands-free communication

Switched Duplex for situations with extreme ambient noise

OD10 TD CM

Technical specifications

Technical data

IP rating:	IP65 (acc. EN 60529)
Mechanical impact resistance:	IK07 (acc. EN 62262)
Front panel:	hardened glass, AG85, 3 mm (0.12 in)
Microphone:	two digital MEMS microphones
Loudspeaker:	special membrane type for optimal sound quality, 2 x 8 Ω
Amplifier:	integrated class-D amplifier with 10 W
Sound pressure level:	max. 99 dB
Display:	10.1" touch display (IPS-TFT) resolution: 800 x 1280 pixels luminance: typ. 1000 cd/m ²
Inputs:	3 digital inputs for floating contacts (switches, push buttons, relay outputs etc.) ¹⁾
Outputs:	2 relay outputs max. switching voltage: 60 VDC, 42 VAC max. switching current (per output): 2 A max. switching power (per output): 60 W (DC), 37.5 (VA AC) electrical expected life: min. 5 x 10 ⁴ (30 VDC/2 A), min. 10 ⁵ (30 VDC/1 A)
Audio bandwidth:	up to 20 kHz
Audio codecs:	Opus, G.722, G.711 a-law and G.711 u-law
Video features:	codecs: H.264 (SIP video and ONVIF), MJPEG (HTTP video and ONVIF) and RTSP ONVIF specification: ONVIF Profile S
IT security:	SIP via TLS, SRTP, IEEE 802.1X, MJPEG via HTTPS, HTTPS for accessing the web interface and interfaces
Operating temperature range:	-25 °C to +55 °C (-13 °F to +131 °F)
Storage temperature range:	-25 °C to +65 °C (-13 °F to +149 °F)
Relative humidity:	up to 95%, not condensing
Connection:	RJ45 jack for Ethernet and PoE (10/100 Mbit/s) 2 x 2.0 USB (Type A) for external devices ²⁾
Power supply ³⁾:	PoE+: IEEE 802.3at/Class 4
Cabling:	min. Cat. 5, shielded ⁴⁾
Wall mounting:	drywall/panel mount kit OD10 FB flush mount box OD10 FBS (requires OD10 FB) surface mount kit OD10 SH
Dimensions (H x W x D):	with flush mount kit: 326 x 174 x 20 mm (12.83 x 6.85 x 0.79 in) with surface mount kit: 326 x 174 x 43 mm (12.83 x 6.85 x 1.69 in)
Weight incl. packaging:	approx. 3,000 g (6.61 lbs)
Optional accessories:	AFIL-USB (induction loop kit) EB1A (USB output module) EB3E2A-AUD (expansion module) IP Secure Connector (safety switch box) PA 25W POE-DC (power injector)



Technical data camera

Image sensor:	1/3" RGB CMOS
Lens:	F1.9, fixed aperture, 150° diagonal angle, 145° horizontal angle, 135° vertical angle
Lighting conditions:	min. 5 lux (below the video image is shown in black and white)
Resolution (W x H):	1280 x 960 pixels
Frame rate:	up to 30 fps
Video streaming:	up to 6 HTTP video streams simultaneously

Extent of supply

- Intercom station
- Cleaning cloth
- I/O plug
- Cat. 6 patch cable (0.3 m/12 in)
- Short reference

System requirements

- Compatible SIP server or
- VirtuoSIS (min. PRO 800 5.0, min. base licence PRO 3) or
- GE 800 with G8-VOIPSERV or
- Serverless operation

Fallback IP address

Fallback IPv4 address within a network without DHCP server:
192.168.1.150 (subnet mask: 255.255.255.0)

¹⁾ For the switching positing "ON", the switch resistance has to be less than 1 kΩ.

²⁾ The USB connections are only intended for use with Commend devices. Do not use the USB jacks e.g. to charge mobile phones.
If a USB device should be installed separately using a USB extension cable, the USB cable length must not exceed 3 m. In addition to that, it is recommended to attach a ferrite to a USB cable with a length of 1 m or more.

³⁾ For power supply, a PoE switch or PoE injector is required (not included in extent of supply), e.g. IP Secure Connector.

⁴⁾ The maximum line length of Cat. cabling in a LAN is 100 m (328 ft) – e.g. from switch to Intercom station.

OD10 TD CM

Installation instructions

Mounting instructions

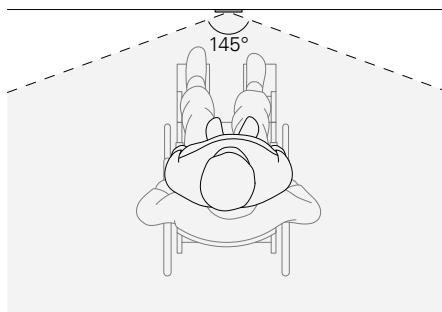
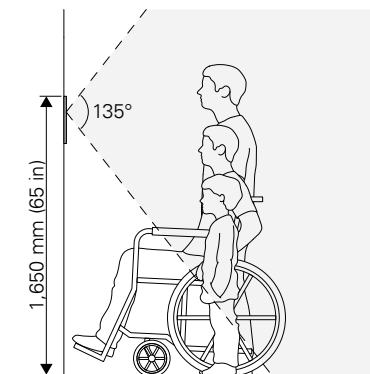
- Avoid direct sunlight.
- Install the Intercom station with a distance of min. 100 mm (4 in) to walls and other objects to enable access to the locking screws and to not mask the loud-speaker openings on the sides.
- For surface mounting, a surface mount kit OD10 SH is required (available separately).
- For flush mounting, a flush mount kit OD10 FB is required (available separately).
- For brick wall mounting, a flush mount kit OD10 FB and a flush mount box OD10 FBS are required (available separately).
- For mounting details, see corresponding short reference of the mounting kit.
- Do not install the Intercom station on unstable walls or on surfaces which cannot support the device's weight.
- Make sure the surface mount kit OD10 SH is not subject to torsional forces (e.g. on uneven walls).
- No water may penetrate into the surface mount kit OD10 SH or the flush mount kit OD10 FB.
- All connected circuits shall fulfil the requirements for Electrical Energy Source Class 1 (ES1) and Limited Power Source (LPS) according to IEC/EN 62368-1.
- Use shielded Ethernet cables only.
- Before using the device, ensure all cables are correctly connected and not damaged.
- Use moistened microfibre cloths for cleaning the Intercom station.

Safety instructions

- This Intercom station shall be installed or replaced by trained and qualified personnel only.
- Observe the country-specific standards for installation, mounting and configuration.
- Only use Commend accessories that comply with the Intercom station's technical specifications.
- The front of the Intercom station is made of glass. Do not use the Intercom station when the glass is damaged.
- Disconnect the Ethernet cable for any maintenance of the device.
- Do not make any modifications to the Intercom station.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

Recommended mounting height

The upper edge of the Intercom station shall be mounted approx. 1,650 mm (65 in) above the finished floor. Adapt the mounting height to the individual needs.



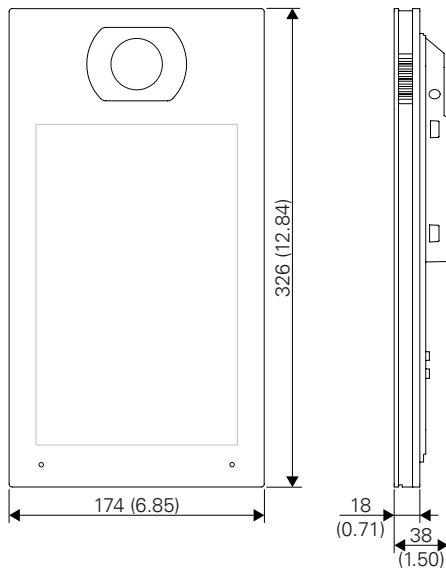
NOTE: Accessibility

- To provide barrier-free accessibility, it is recommended to mount the Intercom station with sufficient distance to walls or corners.
- When mounting the Intercom station OD10 TD CM, pay attention to the correct camera angle in terms of accessibility, so that wheelchair users and children can be detected by the camera: 135° (vertical) x 145° (horizontal)

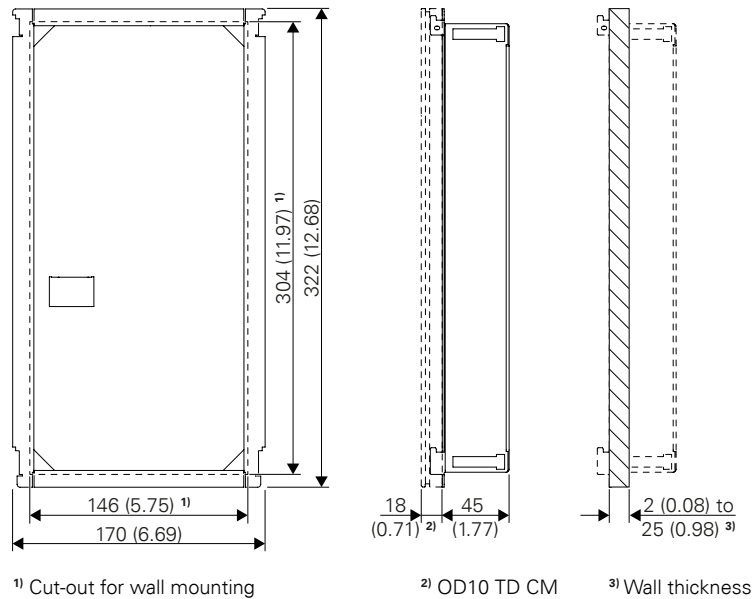
Dimensions

OD10 TD CM

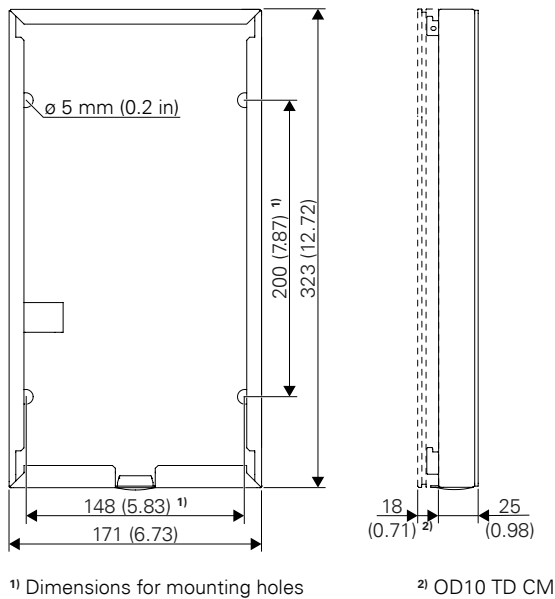
Measuring units in mm (in), not to scale!

**Drywall/panel mount kit OD10 FB**

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

**Surface mount kit OD10 SH**

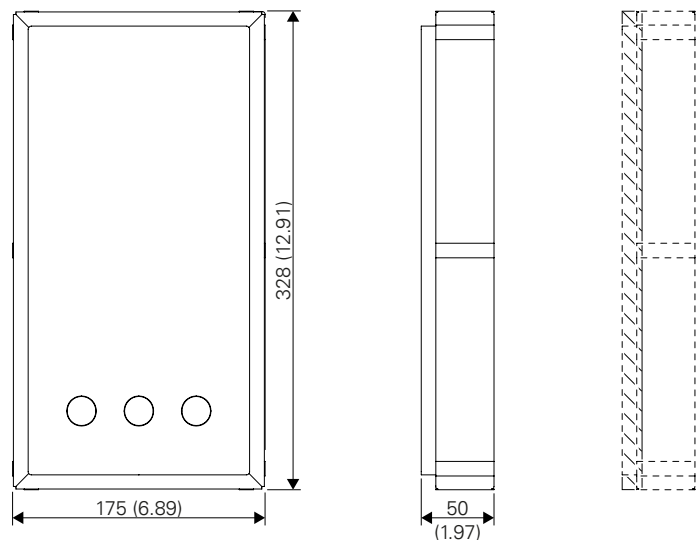
Measuring units in mm (in), not to scale!

**NOTE: Mounting on brick walls**

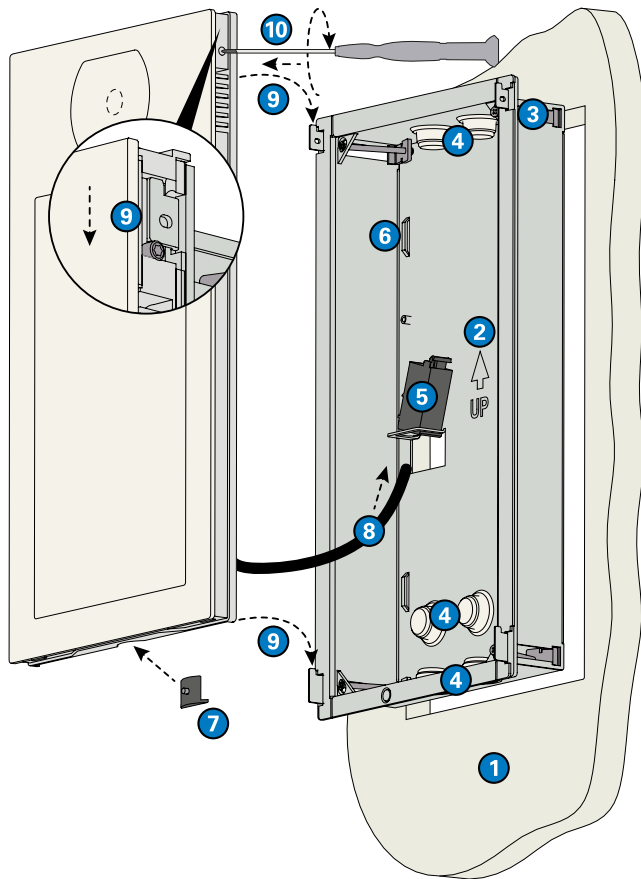
For mounting on brick walls, additionally the flush mount box OD10 FBS is required (not included in extent of supply).

Flush mount box OD10 FBS

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



Wall mounting with OD10 FB

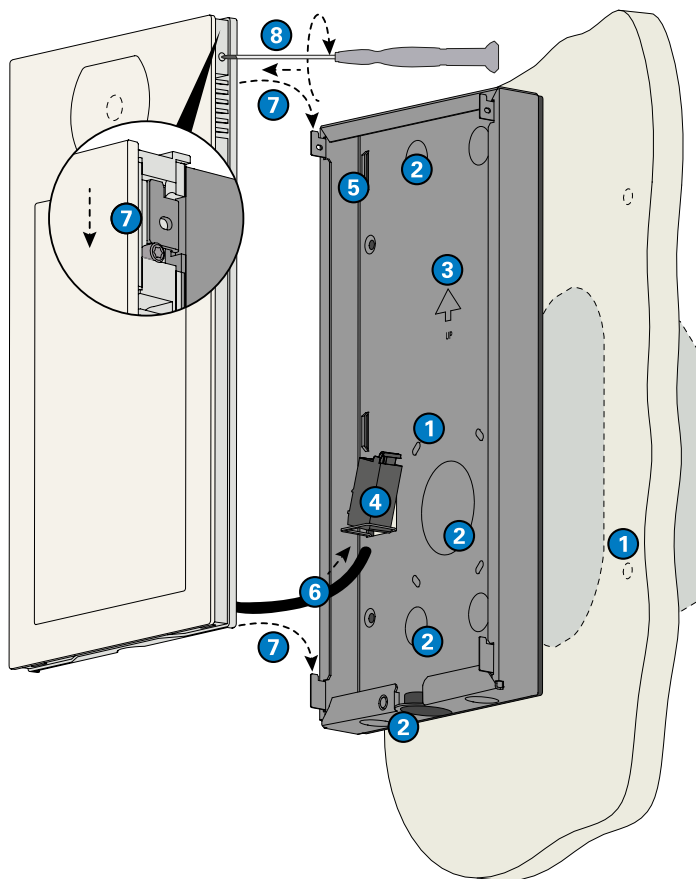


- 1 Cut out the wall (see "Dimensions").
- 2 Insert the mounting box onto the wall with the arrow pointing upwards.
- 3 Press the four claw clamps on the sides of the mounting box outwards and tighten them using the corresponding screws (Torx T10).
- 4 Pierce one of the provided cable glands depending on cable supply (from top, bottom or rear). Guide the required cables through this entry (Ethernet, I/O and USB cable, if needed), run the cables along the corners of the mounting box and adjust them to the desired length.
- 5 Assemble the Ethernet cable and connect it to the optional Cat. crimp jack. Insert the Cat. crimp jack with its gib head on the right at the intended position and clip it on the left.
- 6 Fix the cables on the provided strain-relief using the cable ties included in extent of supply of the OD10 TD CM.
- 7 Attach the blind cover included in extent of supply to the bottom side of the Intercom station using a screwdriver (Torx T10, not included in extent of supply).
- 8 Connect the cables to the Intercom station and the Cat. crimp jack (Ethernet, I/O and USB cable, if needed).
- 9 Place the Intercom station on the mounting box so that the Intercom station attaches to every hook. Press the Intercom station onto the mounting box and push it downwards to lock it.
- 10 Turn the two lateral locking screws clockwise out as far as it will go using a screwdriver (Torx T08, not included in extent of supply). Check whether the Intercom station is fixed on the mounting box.

NOTE: Mounting

- For mounting on brick walls, additionally the flush mount box OD10 FBS is required (not included in extent of supply). In this case, plaster the flush mount box OD10 FBS into the wall and then continue with 2.
- To ensure that the tamper detection functions correctly, the magnet in the lower part of the mounting box must not be covered, damaged or electromagnetically influenced.

Surface mounting with OD10 SH



- ❶ Drill four holes into the wall and insert dowels (see "Dimensions"). Alternatively, break out the four small openings in the lower half of the mounting box in order to be able to screw the mounting box to a 2-fold flush-mounted box (no wall holes are required for this).
- ❷ Break out one of the provided cable openings depending on cable supply (from bottom or rear).
- ❸ Screw the mounting box to the wall or to the 2-fold flush-mounted box with the arrow pointing upwards. Guide the required cables through this entry (Ethernet, I/O and USB cable, if needed), run the cables along the corners of the mounting box and adjust them to the desired length.
- ❹ Assemble the Ethernet cable and connect it to the optional Cat. crimp jack. Insert the Cat. crimp jack with its gib head on the right at the intended position and clip it on the left.
- ❺ Fix the cables on the provided strain-relief using the cable ties included in extent of supply of the OD10 TD CM.
- ❻ Connect the cables to the Intercom station and the Cat. crimp jack (Ethernet, I/O and USB cable, if needed).
- ❼ Place the Intercom station on the mounting box so that the Intercom station attaches to every hook. Press the Intercom station onto the mounting box and push it downwards to lock it.
- ❽ Turn the two lateral locking screws clockwise out as far as it will go using a screwdriver (Torx T08, not included in extent of supply). Check whether the Intercom station is fixed on the mounting box.

NOTE: Mounting

To ensure that the tamper detection functions correctly, the magnet in the lower part of the mounting box must not be covered, damaged or electro-magnetically influenced.

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 9001:2015**.



The technical data contained herein has been provided solely for informational purposes and is not legally binding. Subject to change, technical or otherwise. lolP®, OpenDuplex® and Commend® are trademarks registered by Commend International GmbH. All other brands or product names are trademarks or registered trademarks of the respective owner and have not been specifically earmarked.

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