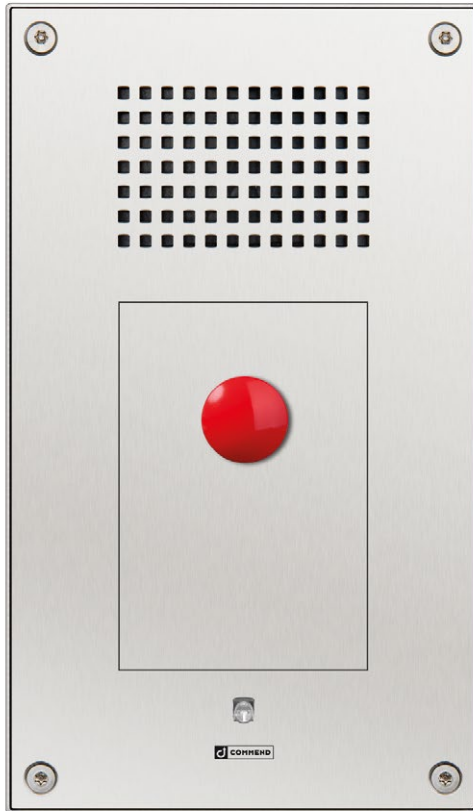# WS 211V D M

Digital emergency call station for highest requirements on safety

Vandal resistant IK10

Weather-proof IP66

Big mushroom button

16 kHz eHD Voice
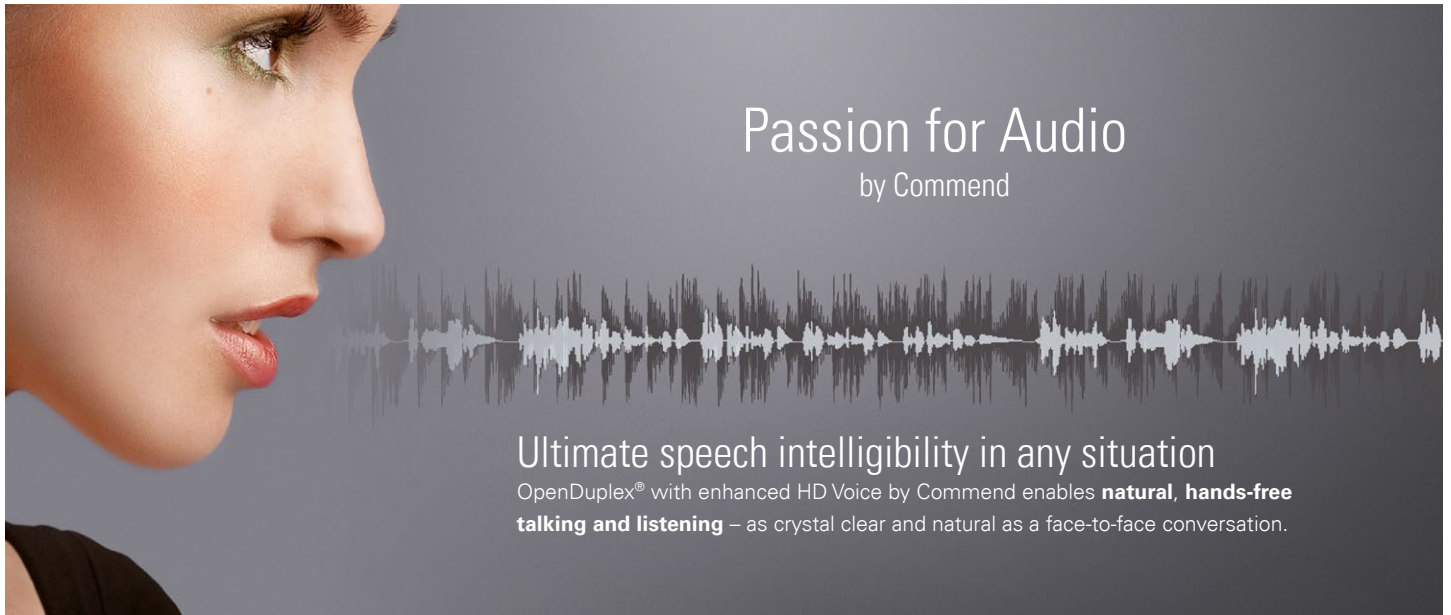
Instant help in emergency situations

The vandal-resistant emergency station WS 211V D M is designed for areas with high requirements on safety. The technology allows excellent speech quality and comprehensibility independent of background noise.

Permanent function monitoring ensures in-service status and the 3 mm stainless steel front panel with poke protection and special screws protects against vandalism.

No water spray, dirt or dust can penetrate the compact construction – protection class IP66. The red emergency call mushroom button is easily visible from a considerable distance and can be activated quickly in emergency situations.

Features and highlights

– Extremely robust, weatherproof and vandal-resistant construction enables use in outdoor locations and public areas (IK10 is the highest impact protection rating)

– Optimised mushroom button for emergency calls, featuring self-check (NC contact) and frost-protected design

– Cyclical connectivity and function checks ensure permanent availability of all functions and low manual maintenance requirements

– Special audio functions ensure superior speech quality in any situation

– The high-sensitivity microphone supports speaking distances of up to 7 m from the microphone, making the device ideally suited, e.g. for wheelchair users

– Sound output or playback of pre-recorded messages can be used to provide information and reassurance to callers

– Various functions can be added via extension modules (e.g. camera or direct dialling button modules)

– Support of different installation options (flush-mounting or surface-mounting) ensure maximum flexibility; special enclosures available with "SOS" and "HELP" imprint

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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 **Natural communication**	**16 kHz** **eHD Voice** enhanced HD Voice	**High volume**	**IVC** Intelligent Volume Control	Loudspeaker / microphone surveillance

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	High 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

Learn more
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

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

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WS 211V D M
Technical Specifications

Technical data

IP rating acc. EN 60529:	IP66
Mechanical impact resistance acc. EN 62262:	IK10
Front panel:	1.4301/AISI 304, 3 mm (0.12 in)
Microphone:	electret condenser microphone polar pattern: omnidirectional speaking distance: max. 7 m (23 ft)
Loudspeaker:	special membrane type for optimal sound quality, sound pressure: 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) max. 60 VDC, 2 A, 60 W [1] expected life: min. 5 x 10^4 (2 A), 10^5 (1 A)
Line output:	for connection loudspeaker module
Call indication:	multifunction LED (colours: red, green, blue)
Call button:	large red emergency call mushroom button (NCC)
Transmission bandwidth:	16 kHz
Operating temperature range:	–20 °C to +70 °C (–4 °F to +158 °F)
Storage temperature range:	–20 °C to +70 °C (–4 °F to +158 °F)
Relative humidity:	up to 95 %, not condensing
Connection:	pluggable screw terminals expansion plug for e.g. EB2E2A
Power supply:	from Intercom Server or external supply 12 – 24 VAC or 15 – 35 VDC power consumption: max. 3.5 W
Cabling:	star feed, 2-wired, twisted
Signalling:	2B + D (2 x 64 kBit/s speech, 16 kBit/s data)
Mounting:	flush mount kit WSFB 50V surface mount kit WSSH 50V
Dimensions (W x H x D):	with flush mount kit: 164 x 279 x 14 mm (6.46 x 10.98 x 0.55 in) with surface mount kit: 164 x 279 x 50 mm (6.46 x 10.98 x 1.97 in)
Weight incl. package:	approx. 1,500 g (3.3 lbs)

[1] 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$_{peak}$ (30 VAC$_{eff}$)!
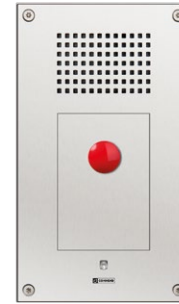
System requirements

– GE 800 (min. PRO 800 3.1) with G8-GED (min. G3-8-SUB 3.7) or
– GE 300 (min. PRO 800 3.1) with G3-GED (min. G3-8-SUB 3.7) or
– VirtuoSIS/S3/S6 with ET 901-D (min. firmware version 3.0)
– Configuration software min. CCT 800 3.1

Line length

The indicated line length is valid for standard stations without connected expansion modules.

GE 800/GE 300

	Power Supply Server		
Cable type	24 VAC	30 VDC	26 VDC
Ethernet cable e.g. Cat. 5 Loop resistance: 125 Ω/km Capacity: 44 nF/km (13.4 nf/1,000 ft)	900 m 2,953 ft[1]	900 m 2,953 ft[1]	650 m 2,133 ft[1]
Telecommunication cable e.g. F-YAY; ø 0.6 mm; AWG: 22 Loop resistance: 133 Ω/km Capacity: 100 nF/km (30.5 nf/1,000 ft)	900 m 2,953 ft[1]	900 m 2,953 ft[1]	600 m 1,969 ft[1]
External Power Supply:	max. 2,800 m/9,186 ft[2]		

[1]...with volume level 9
[2]...with full scope of operation

Extent of supply

– Intercom station
– Screws for mounting
– Short reference

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WS 211V D M
Installation Instructions

Dimensions front panel

Front panel thickness: 3 mm (0.12″)
Measuring units in mm (inch), not to scale!

160 (6.3)
140 (5.5)
4 x ⌀ 7
(0.28)
255 (10.05)
275 (10.84)
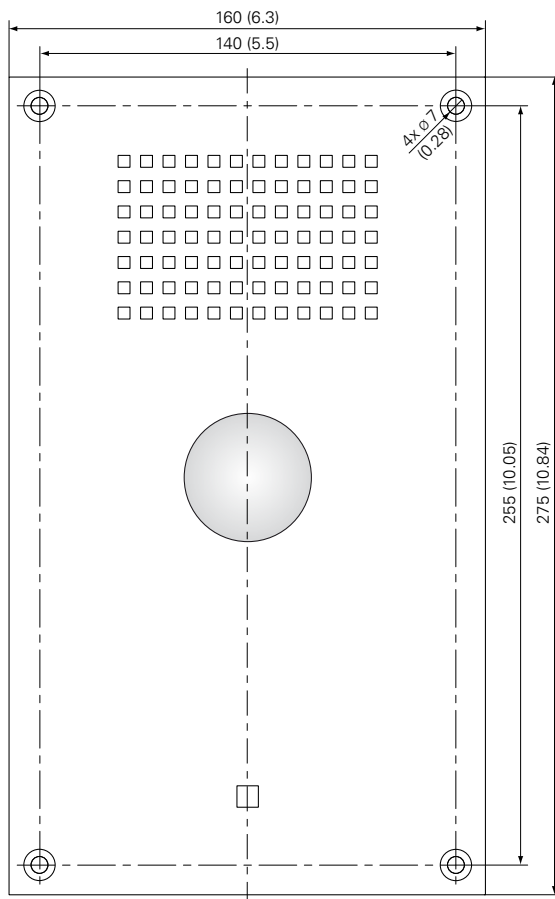
Mounting instructions

– Do not expose the station to extreme temperature (see "Technical data").
– For flush mounting a flush mount kit WSFB 50V (available separately) is required.
– For surface mounting a surface mount kit WSSH 50V (available separately) is required.
– Optionally a mounting with a rain protection roof (WSRR 50V) is possible
– When opening the stations ESD precautions must be observed.
– The stations may only be opened by authorised service engineers.
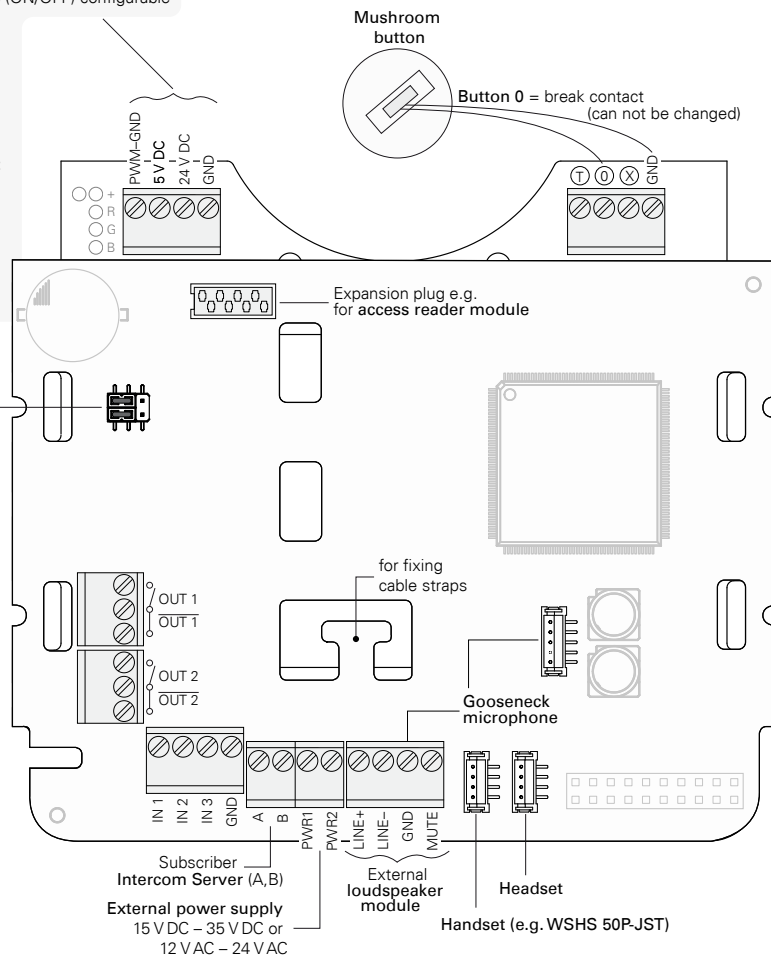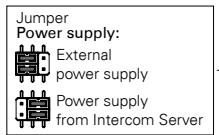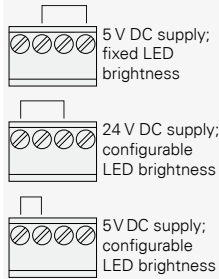
Recommended mounting height
The upper edge of the station approx. 1.65 m (5.4 feet) from the finished floor. Please adapt the mounting height to the individual needs.
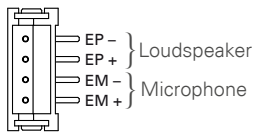
approx. 1.65 m (5.4 ft)
Finished floor

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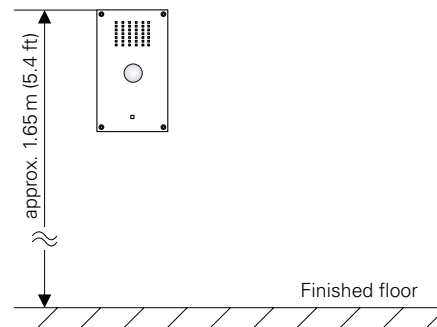
Connection

Power Supply for LED ring:
– optionally 5 V DC **or** 24 V DC
– optionally GND **or** PWM–GND

GND: fixed LED brightness (not configurable)
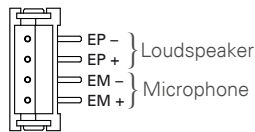**PWM–GND:** LED brightness (ON/OFF) configurable
Examples:

5 V DC supply;
fixed LED
brightness

24 V DC supply;
configurable
LED brightness

5 V DC supply;
configurable
LED brightness

Jumper
Power supply:
External
power supply

Power supply
from Intercom Server

Mushroom button

Button 0 = break contact
(can not be changed)

PWM–GND
5 V DC
24 V DC
GND

Expansion plug e.g.
for **access reader module**

for fixing
cable straps

Gooseneck
microphone

OUT 1
OUT 1
OUT 2
OUT 2

IN 1 IN 2 IN 3 GND   A B   PWR1 PWR2   LINE+ LINE– GND MUTE

Subscriber
Intercom Server (A,B)

External power supply
15 V DC – 35 V DC or
12 V AC – 24 V AC

External
loudspeaker module

Headset

Handset (e.g. WSHS 50P-JST)

Connection headset:

EP – } Loudspeaker
EP +
EM – } Microphone
EM +

Note:
The headset jack has to be activated via an ICX message (see below).

Connection handset:

EP – } Loudspeaker
EP +
EM – } Microphone
EM +

Connection OUT 1/OUT 2:

S
W   OUT x
O   OUT x
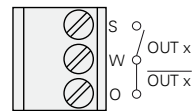
S = NO (normally open)
W = C (common)
O = NC (normally closed)

ICX message for connection of headset

Microphone / loudspeaker	Task	Type	Data (variable length)	Server-SW
Switchover microphone / loudspeaker (subscriber)	40	92	TTTT 050Z	Pro 800 2.1

Variable TTTT → 4-digit call number of the subscriber
Variable Z → 0 = deactivate; 1 = activate; 2 = toggle

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**.

AUSTRIA

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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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