SIP-WS 800F
SIP-WS 500F

SIP Stations SIP-WS 800F / SIP-WS 500F

Full Duplex capable SIP stations for interior and outdoor areas. The stations are connected directly to the Ethernet (LAN/WAN) and in this manner are connected to an compatible SIP Server via the IP-network.
Besides high volume, the SIP stations provide a numerous amount of further features: Pre-recorded audio can be applied in a multi-purpose manner, e.g. as acoustic indication at line fault or as waiting information at call initiation, an configurable background noise canceller provides a crystal clear communication in challenging situations.

Furthermore, the stations are perfectly suited for use as door stations at entry- and gateways, due to integrated relay outputs.
The built-in switch with downlink function allows direct connection of an additional IP-device (e.g. an IP-camera).
The robust construction provides full protection against water, dirt and dust – protection class IP 65.
The special foil on the front panel has a dirt-repellent effect and can be quickly and easily cleaned using normal cleaning agents and disinfectants. Large foil-type buttons make operation with protective gloves easy.

1. **SIP-WS 800F**
   SIP station with Mono-LCD display with white backlight, back-lit alphanumeric standard keypad, function buttons, electret microphone, red conversation LED, loudspeakers 2 x 8 Ω, built-in amplifier class "D" 2.5 W, 3 inputs for floating contacts and 2 relay outputs (connection as "make" or "break" contact), protection classification IP 65, polycarbonate construction, front panel with protective foil.
2. **SIP-WS 500F**
   SIP station like SIP-WS 800F but without Mono-LCD display.
3. **SIP-WS 800F MD (see picture 1)**
   SIP station like SIP-WS 800F but additionally with antibacterial foil surface.

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Technical Data – Benefits

TECHNICAL DATA

IP rating:	IP 65
Front panel:	Polycarbonate with protective foil
Operating temperature range:	–20° C to 60° C (–4° F to 140° F)
Storage temperature range:	–20° C to 60° C (–4° F to 140° F)
Relative humidity:	up to 95% not condensing
Keypad:	alphanumeric full keypad, white backlight activation force: 3 N, 1 x 10^6 cycles
Display:	*SIP-WS 800F:* Mono-LCD display, 128 x 64 pixel, white backlight
Microphone:	Omnidirectional electret microphone for max. 7 m (23 ft) speaking distance
Loudspeaker:	Special membrane type for optimal sound quality, sound pressure: 85 dB/1 W/1 m (3.28 ft), 2 x 8 Ω
Amplifier:	Built-in amplifier class "D" with 2.5 W
Handset, Headset:	EM sensitivity: 14 mV_{eff} EM impedance: 3.3 kΩ / EM supply: 2.5V EP level: 850 mV_{eff} at 0 dBm0 / EP impedance: 200 Ω
Status indication:	red LED
Line output:	for connection of loudspeaker module
Outputs:	2 SPDT relay outputs 30 V / 1 A: 100,000 make-and-break cycles
Inputs:	3 inputs for floating contacts
RAM Memory:	32 MByte
Flash Memory:	8 MByte
DTMF Decoding:	RFC 2833
SIP User Agent (UDP):	RFC 3261
IP Protocol:	IPv6 ready, IPv4, TCP, UDP, HTTP, RTP, RTCP, DHCP, SNMPv2, STUN
Frequency range:	300 - 7,000 Hz
Connection: - IP Uplink/Downlink:	pluggable screw terminals shielded RJ 45 modular jacks
Cabling:	min. Cat. 5
Power supply:	24 VDC ± 2 V, 500 mA or PoE Power consumption: 1.6 W idle approx. 2 W at conversation (depending on volume)
PoE (Power over Ethernet):	IEEE 802.3af standard Power consumption of the terminal device: Class 0 (0.44 W to 12.95 W)
Codecs:	G.711 a-Law, G.711 µ-Law G.722
Ethernet:	2 x 10/100 MBit/s (full/half Duplex)
Additional mounting material:	flush mount kit WSFB 50P surface mount kit WSSH 50P
Measurements:	with flush mount kit: W 165 mm (6.5 in), H 280 mm (11 in), D 13 mm (0.51 in) with surface mount kit: W 165 mm (6.5 in), H 280 mm (11 in), D 51 mm (2 in)
Weight incl. package:	approx. 750 g (1.65 lbs)
Colour:	front panel: light-grey (like RAL 7035) front panel frame: graphite-grey (like RAL 7024)

EXTENT OF SUPPLY

SIP station, Short reference
only WS 800F MD: Locking block with screw

BENEFITS

- Polycarbonate construction
- IP 65 Protection classification
- Dirt-repellent foil surface, resistant to cleaning agents and disinfectants
- HD Voice – 7 kHz Audio NEW!
- Display, Full keypad support, Full handset support, i.e. handling same like at a telephone
- Optional text in display (e.g. house number, Info,...) NEW!
- Configurable, automatic call acceptance NEW!
- Very high volume
- Provisioning NEW!
- Phonebook and Webcalls directly via web interface NEW!
- RGB LED support at SIP stations NEW!
- Full Duplex for natural, hands-free communication
- Local directory support
- Chain call support (e.g. automatic processing of call sequences)
- STUN support
- SNMP for surveillance of the station
- Using Pre-recorded audio as: Waiting information at call initiation; Individual call tone for call initiation; Location message; Acoustic indication at line fault
- Control of the 2 relays e.g. as door opener via
  – DTMF post-dial or Web
- Attendant contacts for various functions, e.g.
  – Additional signalisation while ringing, during a call or in case of malfunction
- Three inputs for connecting add-on call button modules
- Server redundancy (up to 3 servers) NEW!
- Operation without Server possible
- Configurable Acoustic Echo Canceller (AEC)
- Configurable Background Noise Canceller
- Adaptive jitter buffer
- Complies with SIP standard for easy integration in every SIP capable PBXes
- Integrated webserver for configuration & firmware update
  – Adjustment of microphone sensitivity and volume
- Flexible operation via Power over Ethernet or via external power supply
- 7 kHz speech quality for optimum intelligibility & compatibility
- Remote controllable via HTTP
- Increased system availability by redundant LAN infrastructure
- The integrated data switch function enables the connection of further IP devices, e.g. IP camera
- Configurable Auto Answer Function
- Instant boot (system boot within seconds)
- Configurable backlight

SYSTEM REQUIREMENTS

- Compatible SIP Server (see page 5) or
- G8-VOIPSERV (for additional features)

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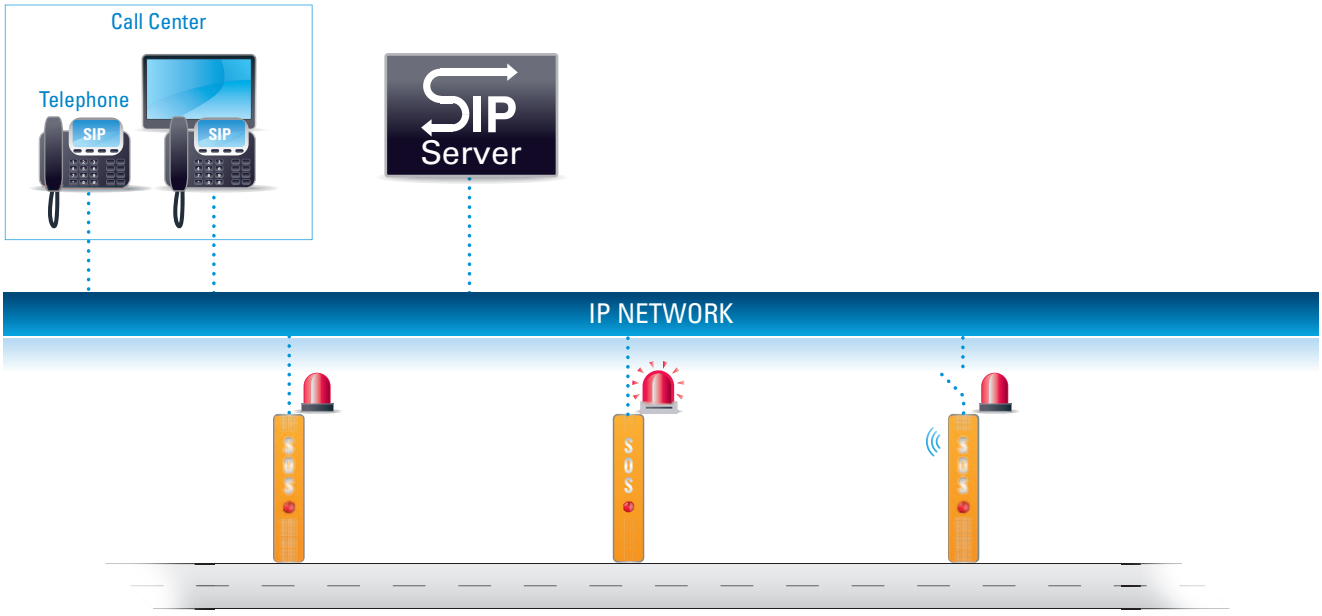
Typical Applications

EMERGENCY SYSTEMS AT HIGHWAYS

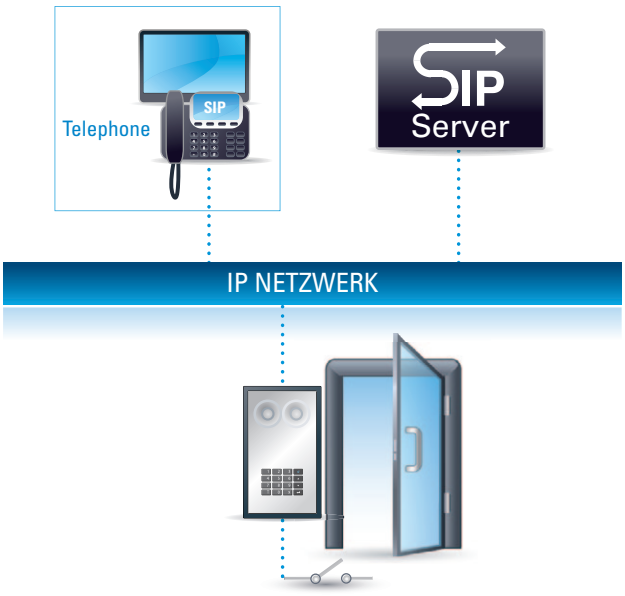
A typical application for use of SIP stations are emergency systems at highways.

- The SIP stations integrated in helppoints are connected to the appropriate SIP server and a call center over the IP network.
- A possible line fault is indicated acoustically via pre-recorded audio and can be processed by the SIP Server.



OPERATION AS DOOR STATION

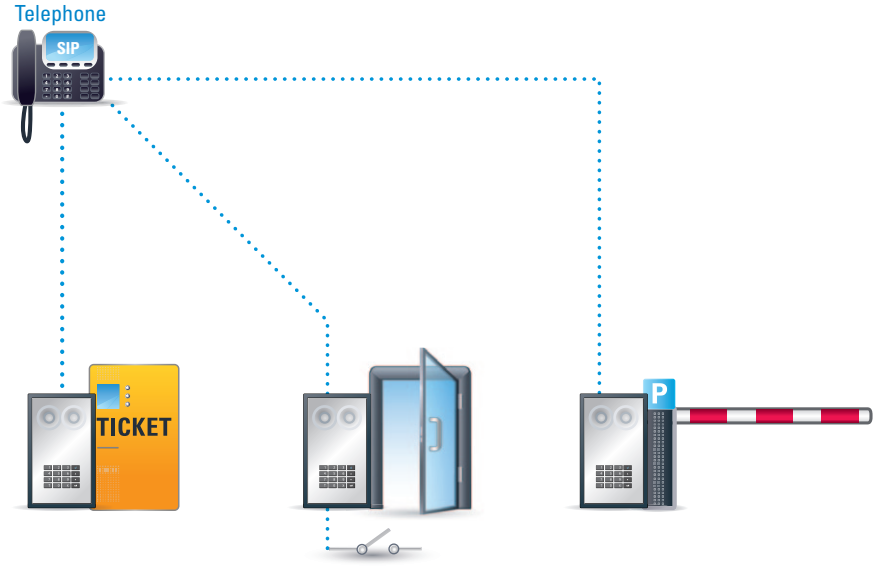
Due to integrated relay outputs it is possible, to use the SIP stations as door stations (with door opener contacts) at entry- and gateways. The door opener contacts can be controlled by means of DTMF post-dialling or via web.



Typical Applications

IN SMALLER SYSTEMS

Due to the open standard of the SIP protocol, the stations can be operated without server. Therewith, cost-efficient use of the stations in smaller systems is enabled.



Compatibility

COMPATIBILITY SIP PBX

Basically the SIP stations can be used with any SIP server.
The following server types have been tested explicitly by Commend and therefore a proper functionality can be confirmed:

MANUFACTURER *	TYPE	VERSION
Digium	Asterisk	Version 1.2, 1.4, 1.6
Cisco	Cisco Call Manager Cisco Unified Communication Manager	Version 5 or higher
Nortel	CS1000	Version 6
Innovaphone	Virtual Appliance IPVA	Version 9 final
Alcatel	OmniPCX Enterprise	OXE
Siemens	Hipath 4000	Version 5
3CX	3CX for Windows	3CX PhoneSystem 9
Starface	Starface free	Version 4.6.5.1
Aastra	MX-ONE	Version 4.1 SP 1

*The listed products and company names are brand names or registered trademarks of their respective owners.

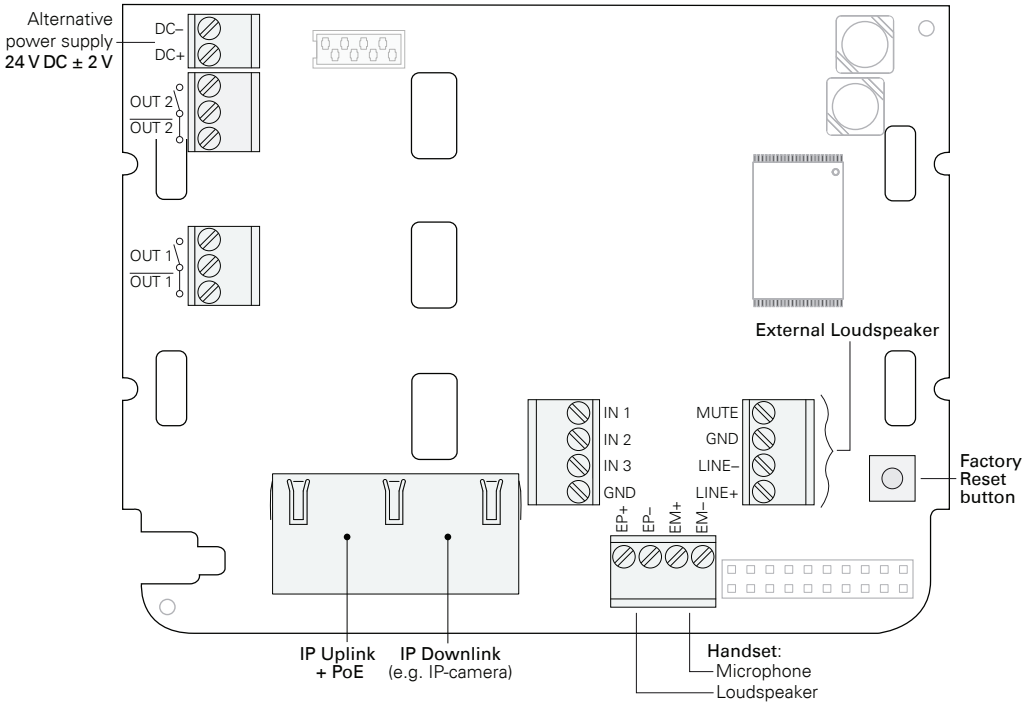
VOIP PROVIDER	TYPE	VERSION
Sipgate	Sipgate.at, Sipgate.de	December 2010
Vodafone Arcor	Vodafone.de	January 2011
blueSIP	blueSIP.net	May 2011

Installation

PRECAUTIONS

- When opening the stations ESD precautions must be observed.
- The stations may only be opened by authorised service engineers.

CONNECTION



Attention:

- It is mandatory to ensure a correct power sup ply of the SIP station: **min. 22 VDC, max. 26 VDC**
- **PoE** has to be connected to the RJ 45 jack "IP Uplink" (see above).
- Further IP devices can be connected to the RJ 45 jack "IP Downlink" (see above), like e.g. an IP camera. But it is also possible to link up to 20 SIP stations in series via this ethernet interface.

  Attention – Use of PoE:
  If multiple SIP stations are connected in series, then only the 1st device can be supplied with Power over Ethernet. All other devices (connected in series) must be supplied separately by an external power supply unit.

CONFIGURATION VIA WEBINTERFACE

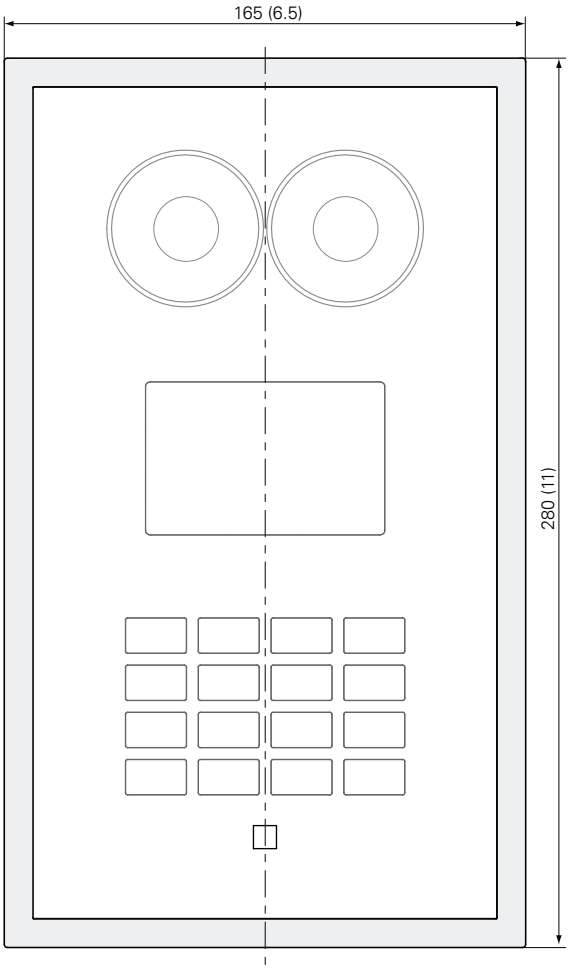
Via the integrated **webinterface**, it is possible to configure optional speed dial numbers for the respective call destinations.

Installation

MEASUREMENTS FRONT PANEL

Measurements in mm (inch), not to scale!

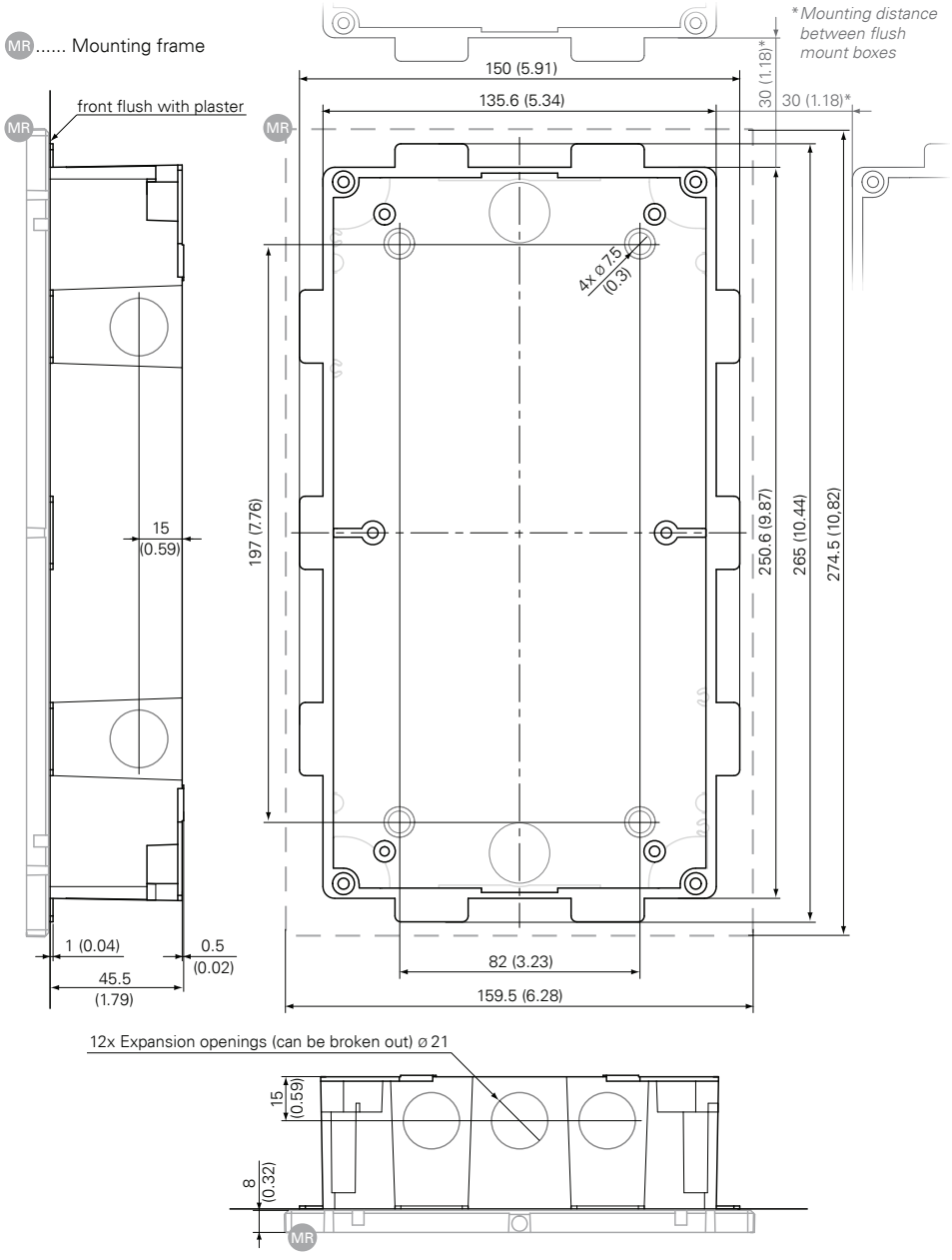
Depth: 13 (0.51)
cavity wall mounting: 15 (0.59) *(⇨ shadow gap between front panel & wall)*



Installation Additional Mounting Material

MEASUREMENTS FLUSH MOUNT BOX WSFB 50P

Measurements in mm (inch), not to scale!



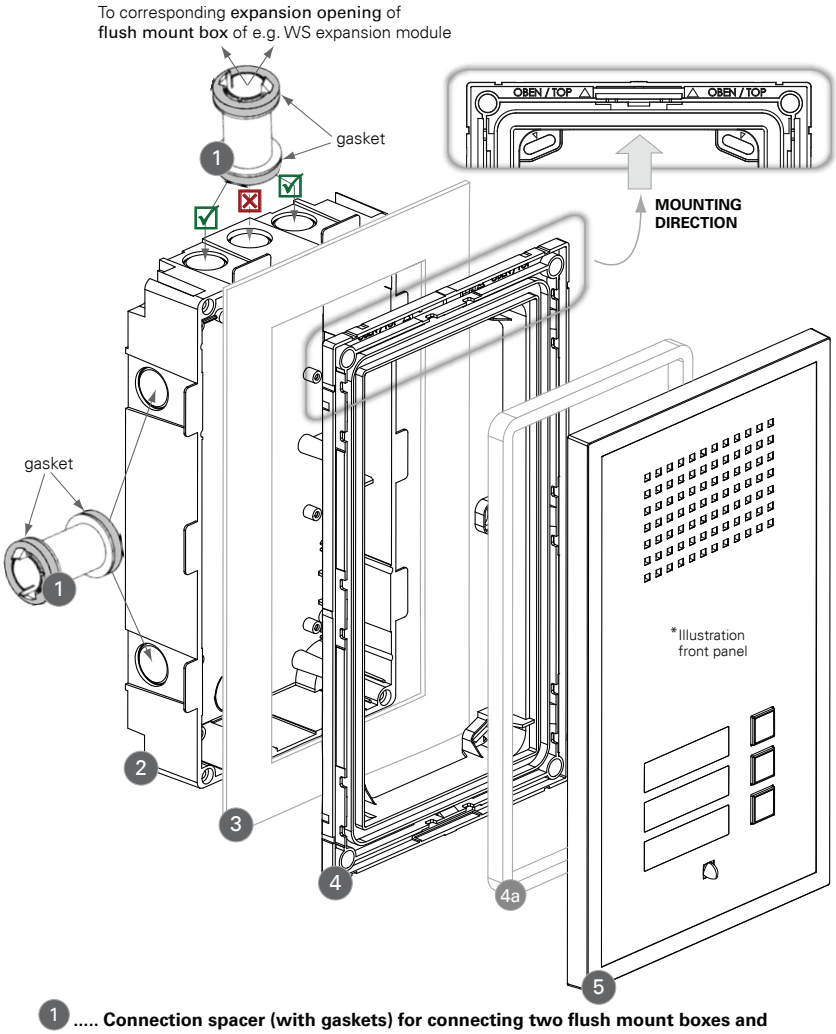
EXTENT OF SUPPLY

- Flush mount box plastic
  (incl. cavity wall claws & cover lid)
- Mounting frame plastic
  (incl. gaskets and mounting screws)
- Cable fixing brackets (incl. screws)
- Short reference

Weight incl. package: approx. 380 g (0.84 lbs)

Installation Additional Mounting Material

MOUNTING FLUSH MOUNT BOX WSFB 50P



1 ..... **Connection spacer (with gaskets) for connecting two flush mount boxes and for cable feed through**
→ If possible, then 2 connection spacers shall be used per expansion (at deppened openings, see above)

2 ..... **Flush mount box (plastic)**
→ For cavity wall mounting or installation in a desk, the cavity wall claws have to be used. (wall thickness: 5 mm to 30 mm / 0.19 in to 1.18 in)

3 ..... **Gasket**

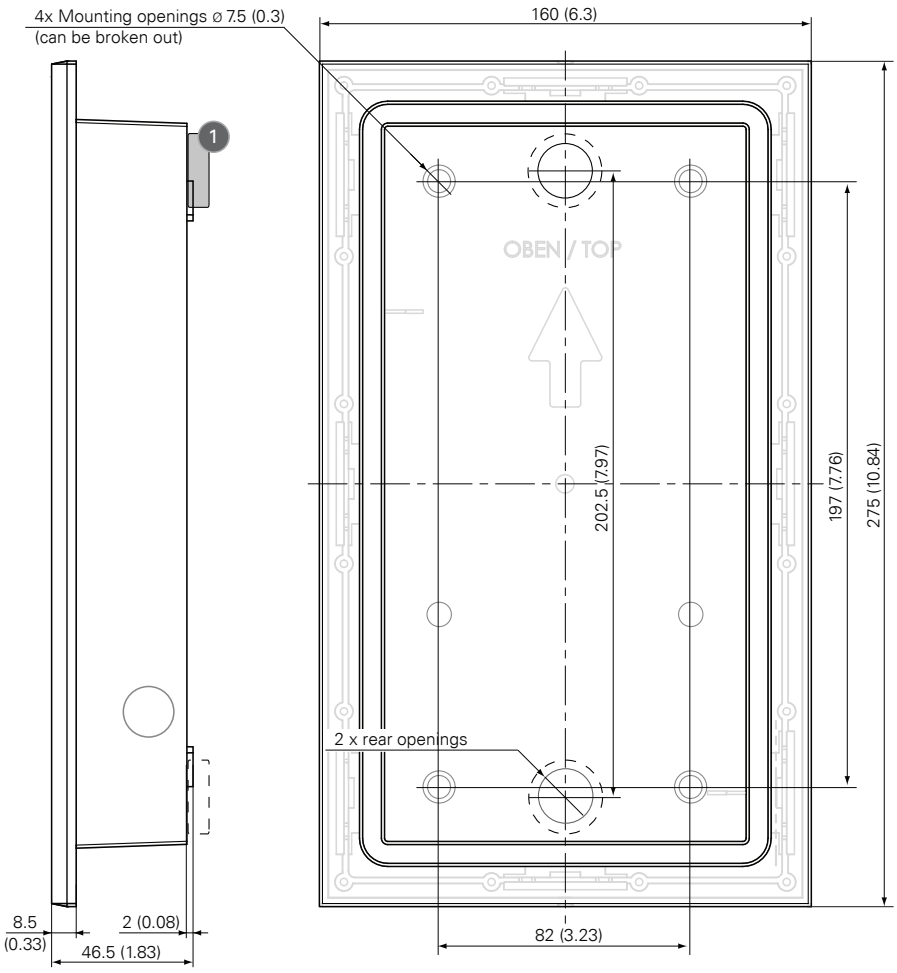
4 ..... **Mounting frame (plastic)** 4a ..... **Top gasket for mounting frame** ***(mounted ex works)***
→ Screw mounting frame onto the flush mount box - screws in extent of supply

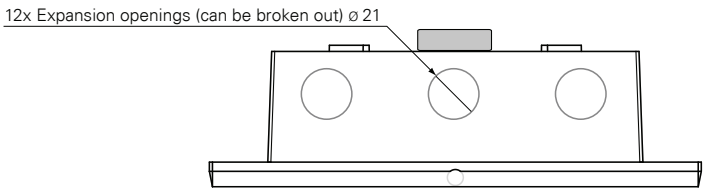
5 ..... **Front panel (plastic) with station electronics**
→ Mounting: Press the front panel onto the mounting frame.
→ Dismounting: Pull off the front panel.

Installation Additional Mounting Material

MEASUREMENTS SURFACE MOUNT BOX WSSH 50P

Measurements in mm (inch), not to scale!





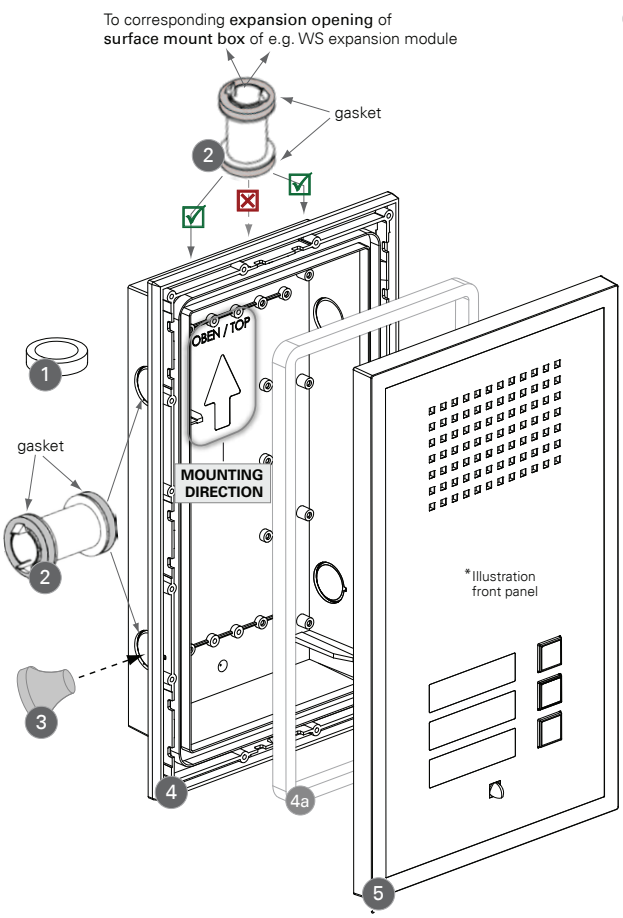
EXTENT OF SUPPLY

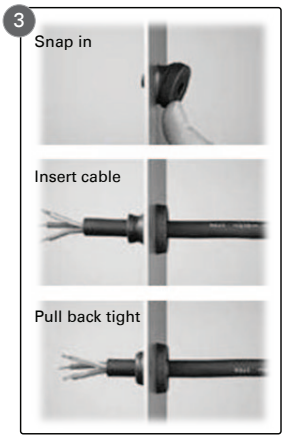
- Surface mount box (incl. gaskets)
- 4 x IP 65 cable feed through
- Wall mount kit (screws, dowels, gasket rings and washers)
- Cable fixing brackets (incl. screws)
- Short reference

Weight incl. package: approx. 300 g (0.66 lbs)

Installation Additional Mounting Material

MOUNTING SURFACE MOUNT BOX WSSH 50P





1 ..... **Gasket for expansion opening at the rear of the housing**
- → The expansion openings have to be broken out with a blunt object at the outer notch!
- → If the rear opening is used, attach the gasket at the backside of the flush mount box (see Measurements).

2 ..... **Connection spacer (with gaskets) for connecting two surface mount boxes and for cable feed through**
- → The expansion openings have to be broken out with a blunt object at the outer notch!
- → If possible, 2 connection spacers shall be used per expansion.
- → Make sure the connection spacer is snaped-in correctly in the expansion opening!

3 ..... **IP 65 cable feed through**
- → The cable feed through can be put in after breaking out the expansion openings (installation cable feed through see above).

4 ..... **Surface mount box (plastic)** 4a .....**Top gasket for surface mount box *(mounted ex works)***
- → Mounting via wall mounting kit (screws, dowels, gasket rings and washers) – in extent of supply.
- → Washer and gasket ring have to be mounted inside the surface mount box.

5 ..... **Front panel (plastic) with station electronics**
- → Mounting: Press the front panel onto the surface mount box
- → Dismounting: Pull off the front panel.

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