EF 862A

1  2  3

4  5  6  7

# Digital 2-wire DSP wall station EF 862A

Sub station for areas, in which high requirements of security are needed (reliability, vandal proof, ...). Line saving, secure 2-wire-technology. With programmable call button, electret condenser microphone and loudspeaker. Metal housing, resistant against dust and spray water.

Front panel made of 3 mm (0.12 in) V-2A stainless steel (CrNi), with poke protection and special screws for protection against vandalism. Various call buttons available for adaption to the application. Ready for OpenDuplex®. Fitting surface mount boxes are available.

1. **EF 862A**
   Weather and vandal resistant sub-station with DSP-technology, loudspeaker, microphone and LED (protective plate in front of loudspeaker and microphone). Flush mount box GUEF 62 must be ordered separately. Several surface mount boxes available separately.

2. **EF 862AM**
   Same as EF 862A, but with red mushroom button. Flush mount box GUEF 62 must be ordered separately. Several surface mount boxes available separately.

3. **EF 862AP**
   Same as EF 862A, but with 2-color LED piezo button. Flush mount box GUEF 62 must be ordered separately. Several surface mount boxes available separately.

4. **GUEF 62**
   Flush mount box for EF 862A, EF 862AM and EF 862AP made of 1.5 mm hot galvanised sheet steel.

5. **EF 62W**
   Surface mount box for use indoors, made of 1.25 mm thick galvanised sheet steel, powder coated in RAL 9016 white.

6. **EF 62G**
   Surface mount box for use in outside areas, made of 1.25 mm thick galvanised sheet steel, powder coated in RAL 9006 grey.

7. **EF 62O**
   Surface mount box for use in outside areas, made of 1.25 mm thick galvanised sheet steel, powder coated in RAL 2004 pure orange with "SOS" labelling.

8. **EF 62OOA** (not shown)
   Surface mount box for use in outside areas, made of 1.25 mm thick galvanised sheet steel, powder coated in RAL 2004 pure orange.

9. **EF 62NIRO** (not shown)
   Surface mount box for use in outside areas, made of 1.25 mm high-grade steel.

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# Technical Data – Benefits

## TECHNICAL DATA

| | |
|---|---|
| IP rating: | IP54 |
| Front panel: | stainless steel (1.4301), 3 mm (0.12 in) |
| Microphone: | omnidirectional electret condenser 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), 8 Ω |
| Amplifier: | built-in amplifier 2.5 W output power with built-in loudspeaker: 1.5 W |
| Input: | 1 input for floating contacts, max. 1 kΩ (detection of 5 input states) |
| Output [1]: | relay output (switch-over contact) max. 60 W (DC)/37.5 VA (AC), max. 2 A, max. 60 VDC/30 VAC, expected life: min. $5 \times 10^4$ (2 A), $10^5$ (1 A) |
| Call indication: | multifunctional LED EF 862AP: additional LED ring (red / green) |
| Call button: | EF 862A: flat stainless steel button, EF 862AM: red mushroom button EF 862AP: piezo button with LED ring |
| 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% |
| Plug: | pluggable screw terminals expansion plug for e.g. EB2E2AHE |
| Cabling: | star feed, 2-wire, twisted |
| Power supply: | from Intercom Server EF 862AP: 24 VAC/VDC, 500 mA for LED ring [1] option [1]: external power supply for greater line length (12 – 24 VAC or 15 – 35 VDC, 15 W) |
| Signalling: | 2B + D (2 x 64 kBit/s speech, 16 kBit/s data) |
| Mounting: | flush mount box required for flush and surface mounting (available separately), surface mount boxes EF62G, EF 62W, EF62O, EF62OOA or EF62NIRO |
| Dimensions: | front panel: 110 x 151 mm (4.33 x 5.95 in) depth flush mount: 48 mm (1.89 in) depth surface mount: 84 mm (3.3 in) |
| Weight incl. packaging: | approx. 1020 g surface mount box EF 62x approx. 600 g |

[1] All connected circuits must meet the following safety requirements:
1. Safety extra-low voltage (SELV) according to IEC/EN 60950-1 or
2. Circuits according to IEC/EN/UL 62368-1
2.1 ES1 for all connections.
2.2 PS1 for the power supply.
2.3 PS2 for the relay output.
A SELV/ES1 circuit must be safely separated from a dangerous electrical circuit (e.g. 230 V or 110 V mains power), e.g. by double insulation. The SELV circuit must not exceed 60 VDC or 42.4 $VAC_{peak}$ (30 $VAC_{eff}$)!
The wiring of the PS2 circuits must meet the requirements of IEC 62368-1 chapter 6.5.

## BENEFITS

- Excellent 16 kHz speech quality, even from a distance (up to 7 m/23 ft)
- Cabling with 2 wires, star feed, fully digital transmission of speech and data
- DSP technology, prepared for software download of future functions – ready for OpenDuplex®
- Audio monitoring, adjustable integration time and noise level
- Loudspeaker/microphone surveillance
- Input for floating contacts
- Built-in loudspeaker and microphone
- Output contact for direct connection of e.g. doors or gates
- Tamper resistant push buttons (function programmable)

## SYSTEM REQUIREMENTS

- GE 800 (min. PRO 800 1.2) with G8-GED (G3-8-SUB min. 3.2) or
- GE 300 (min. PRO 800 1.2) with G3-GED (G3-8-SUB min. 3.2) or
- VirtuoSIS/S3/S6 with ET 901-D (min. firmware version 3.0)

## LINE LENGTH

| | Power Supply Intercom Server | | |
|---|---|---|---|
| Cable type | 24 V AC | 30 V DC | 26 V DC |
| Ethernet cable e.g. Cat. 5 Loop resistance: 190 Ω/km Capacity: 48 nF/km | 1500 m 4921 ft | 1700 m 5577 ft | 1400 m 4593 ft |
| Telecommunication cable e.g. F-YAY; ø 0,6/0,8 mm Loop resistance: >135 / >73 Ω/km Capacity: 100 nF/km | 1500 m 4921 ft | 2100 m 6889 ft | 1500 m 4921 ft |
| External power supply | max. 2800 m / 9186 ft | | |

All values for connected loudspeaker ≥8 Ω and volume level 9.

## EXTENT OF SUPPLY

1 station including:
- Short reference

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# Installation

## MOUNTING INSTRUCTIONS

- Do not expose the station to extreme temperature (under –20 °C or above +70 °C / –4 °F to 158 °F).

- For flush mounting the flush mount box GUEF 62 (sold separately) is required. For surface mounting the flush mount box as well as one of the surface mount boxes is required (not in extent of supply)

- When the included flush mount box is used, the mounting tabs must be bent out at least 15 mm (0.6 in) before applying plaster.

- Use of flush mount boxes in order to comply to the IP 54 regulations, it is mandatory to close the hole on the bottom of the frame with the included sealing screw or the threaded cable joint. No warrenty claim when not installed properly!

- For stations to be mounted in outdoor areas, the screws must be closed with a sealing compound.

## CONNECTION

- OUT factory adjusted as "make" contact. With the jumper JP1 it can be converted into an "open" contact.

- Terminals PWR: external, floating power supply (12 – 24 VAC or 15 – 35 VDC, 15 W) for greater line length or loudspeaker < 8 Ω)
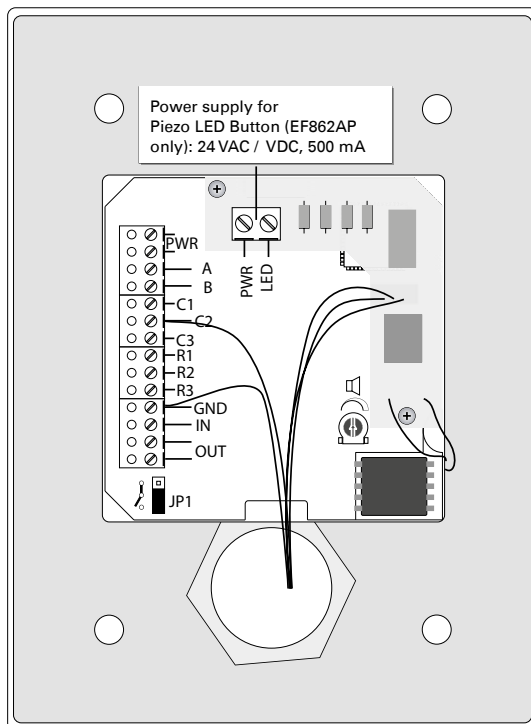


## SAFETY INSTRUCTIONS

- This device shall be installed or replaced by trained and qualified personnel only.

- Only use recommended tools when installing the device.

- Observe the country-specific standards for installation, mounting and configuration.

- Only accessories that comply with the device's technical specifications shall be used.

- Do not make any unauthorised modifications to the device.

- The station may only be cleaned with cleaning agents for stainless steel – in no case with cleaning agents containing chlorine
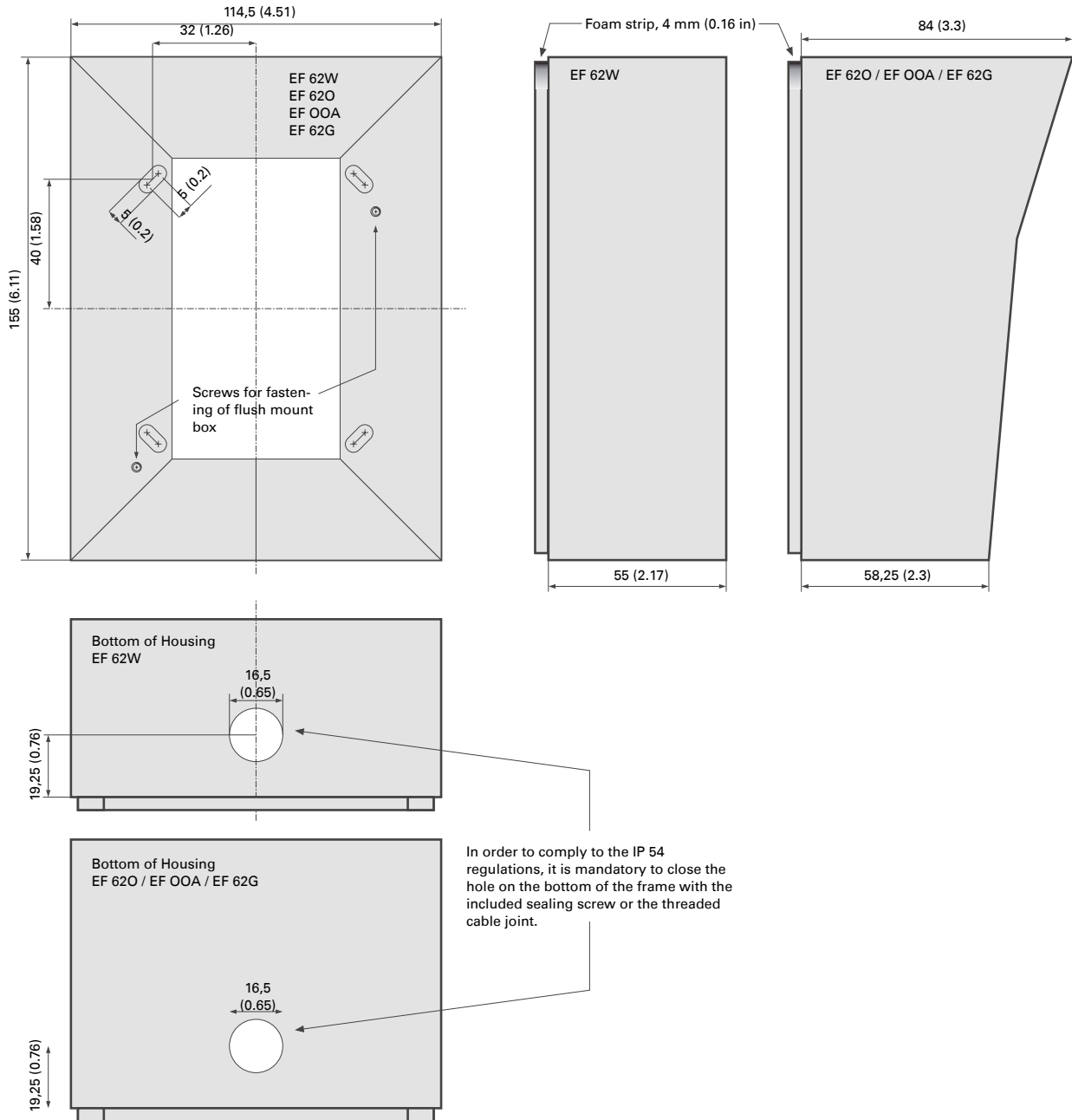
## MOUNTING



EF 62G
EF 62O
EF 62OOA
EF 62NIRO
EF 62W

GUEF 62

EF 862A/EF 862AM/EF 862AP
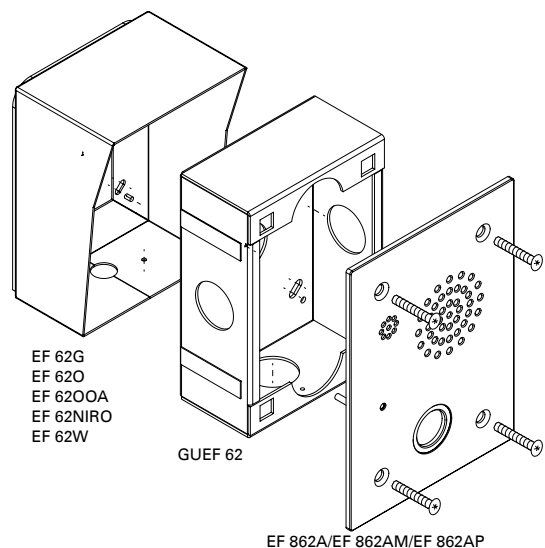
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# Installation

## DIMENSIONS SURFACE MOUNT BOXES

Measuring units: mm (in), not to scale

114,5 (4.51)
32 (1.26)

EF 62W
EF 62O
EF OOA
EF 62G

5 (0.2)
5 (0.2)

40 (1.58)
155 (6.11)

Screws for fastening of flush mount box

Foam strip, 4 mm (0.16 in)

EF 62W

84 (3.3)

EF 62O / EF OOA / EF 62G

55 (2.17)

58,25 (2.3)

Bottom of Housing
EF 62W

16,5 (0.65)

19,25 (0.76)

Bottom of Housing
EF 62O / EF OOA / EF 62G

16,5 (0.65)

19,25 (0.76)

In order to comply to the IP 54 regulations, it is mandatory to close the hole on the bottom of the frame with the included sealing screw or the threaded cable joint.

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# Installation

## DIMENSIONS FLUSH MOUNT BOX GUEF 62

Measuring units: mm (in), not to scale



90 (3.55)

131 (5.16)

Front panel:
110 x 151 mm
(5.95 x 4.33 inch)

Bandtaps for flush
mounting out  at least
15 mm (0.6 in)

Depth of the flush mount box 48 mm (1.89 in)
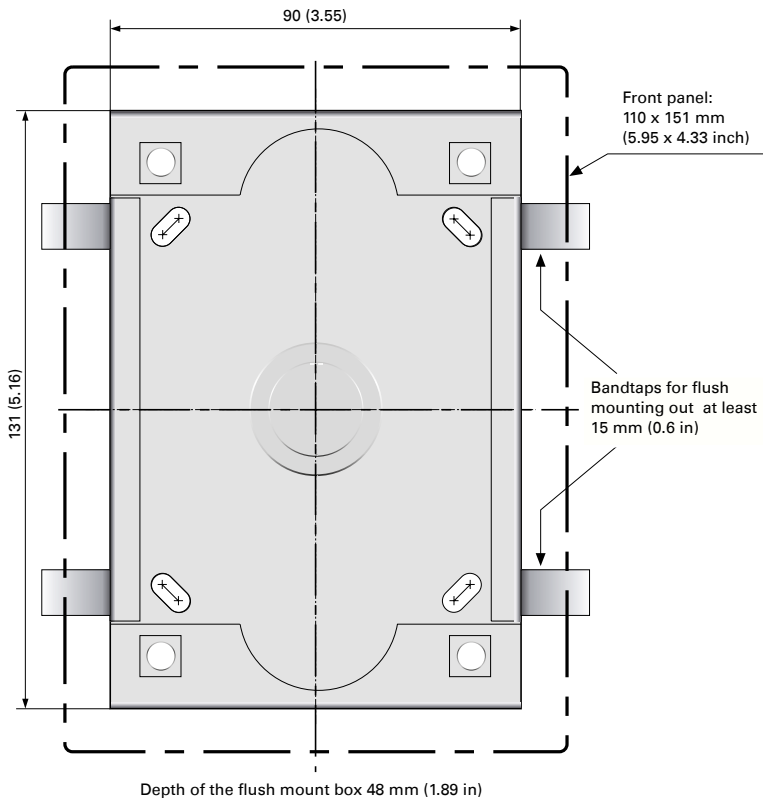
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The development and manufacturing processes are certified in
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tailored solutions.

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