

Series EE 411

Analogue Intercom stations for desk and wall



Backwards
compatibility

Desk & wall
mounting

Audio +
functionality

Reliable 4-wire technology

The stations feature both ergonomic design and ease of use. The 6-character alphanumeric display allows immediate identification of the called or calling station and displays information regarding operational status, alarms, etc.

The stations have three additional, context sensitive function keys that can perform different functions depending on the implemented features, e.g. electronic volume control, scrolling of display messages, etc. An index field is available to hold important numbers and functions. The bright red LED makes it easy to see when the station is active, even from a distance. The integrated amplifier allows different volume levels to be set for speech, signals, music, etc.

Features and highlights

- 4-wire cabling for voice and data (4 kBit), star feed
- 6-character alphanumeric display
- Display scrolling possible
- High quality speech, even from a considerable distance (up to 7 m / 23 ft)
- Intercom stations EE 411 and EE 420 with integrated handset function
- Subscriber index with protective cover
- Additional function keys
- Reinforced silicone keypad
- Comprehensive integrated diagnostic functions

Product details

Station versions

This series includes the following versions:

EE 411 (EE 401)

The EE 411 is a desktop master station with reinforced silicone keypad (standard keypad with three additional function keys), 6-character (16 segment) alphanumeric display, electret condenser microphone, loudspeaker, red function light, and a 3 m (9.8 ft) connection cable. The intercom station also has a handset facility with automatic switching therefore it can be used on the desk as desktop station with excellent speech quality, as well as a handset with reduced volume when it is picked up. The handset facility is not available for EE 401 .



EE 472

The EE 472 is a desktop master station like EE 411, but with noise cancelling gooseneck microphone and special anti-tilt stand.



EF 401

The EF 401 is a desktop sub station with restricted dialling possibilities (T, 0,X).



EE 420

The EE 420 is a wall-mount master station like EE 411. It has a handset function with automatic switching (in the wall mount with hands-free speech with excellent speech quality, when lifted out of the wall bracket with reduced volume).



EE 411

Technical specifications



Technical data

| | |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP rating: | IP50 (according to EN 60529) |
| Keyboard: | Silicon type with polycarbonate layer, activation force: 1.3 N, 1x10 ⁶ cycles EF 401: restricted keyboard (T, O, X) |
| Housing: | shock proof ABS polycarbonate |
| Microphone: | all devices except EE 472: electret condenser microphone polar pattern: omnidirectional speaking distance: max. 7 m (23 ft) EE 472: electret condenser microphone polar pattern: cardioid speaking distance: 3–10 cm (1.2–3.9 inch) |
| Loudspeaker: | Special membrane type for optimal sound quality, sound pressure: 85 dB/1 W/1 m (3.3 ft), 50 Ω |
| Display: | 6-character, alphanumeric (16-segment) |
| Call indication: | red LED |
| Frequency range: | 16 kHz |
| Operating temperature range: | –10 °C to +60 °C (14 °F to 140 °F) |
| Storage temperature range: | –20 °C to +60 °C (–4 °F to 140 °F) |
| Relative humidity: | up to 95%, not condensing |
| Connection: | all devices except EE 420: modular jack 6/6 for connection to Intercom Server EE 420: plugable screw terminals |
| Power supply: | from Intercom Server |
| Cabling: | star feed, 4 wires, twisted pair |
| Signalling: | 4 kBit/s data |
| Dimensions (W x H x D): | EE 411, EE 401, EF 401: 66 x 230 x 55 mm (2.6 x 9.1 x 2.2 inch) EE 420: 73 x 232 x 57 mm (2.9 x 9.1 x 2.2 inch) EE 472: 179 x 230 x 57 mm (7.1 x 9.1 x 2.2 inch), gooseneck 430 mm (16.9 inch) |
| Weight incl. package: | EE 411, EE 401, EF 401: approx. 350 g (0.77 lbs) EE 420: approx. 425 g (0.94 lbs) EE 472: approx. 767 g (1.69 lbs) |
| Colours: | all devices except EF 401: light grey (like RAL 7035) and black (like RAL 9011) EF 401: light grey (like RAL 7035) |

Note: Overvoltage protection EE 472

When using the Intercom station EE 472, the Commend system has to be protected against transient overvoltage (equivalent to SELV circuit as defined in standard EN 60950-1).

Extent of supply

- Connection cable 3 m (9.8 ft), pluggable at both sides (EE 420 with coiled cord, pluggable at one side)
- Short reference and operating instructions
- EE 420 includes screws and dowels for wall mounting

Line length in LAN

The following cable lengths are valid only with subscriber cards G1-GET-4/ G2-GET-4 with software from version V02.0 or G7-GET-4 with software from version V03.0. All data about line lengths correspond to a loudspeaker attenuation of approx. 9 dB and a microphone attenuation of approx. 3 dB. 9 dB correspond to approx. 3 volume steps adjusted at the station, 3 dB refer to approx. 1 volume step.

The maximum line capacity for cables not listed in this table is 90 nF. This capacity refers to: A against B, C against D, C/D together against A as well as the single lines A, B, C, D against an eventual shield (ground). This capacity can be measured with a multimeter with open end of the line: A against B, C against D, C/D together against A, A against shield, B against shield, C against shield and D against shield. All these capacity values may not be higher than 90 nF.

| Cable type | ø 0.5 mm | ø 0.6 mm | ø 0.8 mm |
|----------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|
| AWG | 24 | 22 | 20 |
| J-Y(ST)Y (Installation cable PVC); 120 nF/km (36.6 nF/1000 ft) | * | 750 m 2461 ft | 750 m 2461 ft |
| Telecommunication cable e.g. F-YAY ø 0.6 Loop resistance: 133 Ω/km Capacity: 100 nF/km | * | 900 m 2953 ft | 900 m 2953 ft |
| KC 102/104 (Installation cable PVC); 65 nF/km (19.8 nF/1000 ft) | 1000 m 3281 ft | * | * |
| F-2YA2Y (Buried cable polyethylene); 55 nF/km (16.8 nF/1000 ft) | * | 1500 m 4922 ft | 1500 m 4922 ft |
| J-02YS(ST)Y (Cat. 5 cable, foamed polyethylene); 45 nF/km (13.7 nF/1000 ft) | 1000 m 3281 ft | * | * |

* no data, because this diameter is not available for this cable type

System requirements

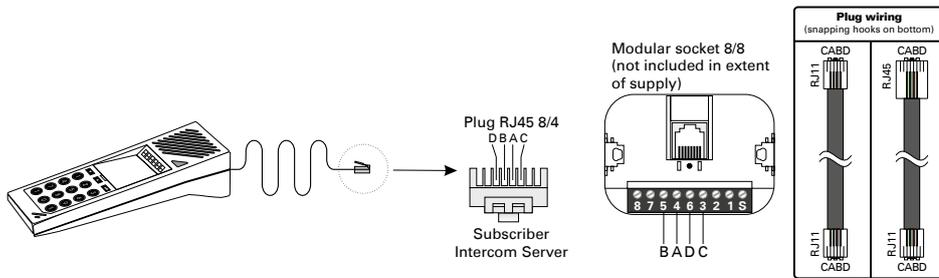
Intercom server

- GE 100 with G1-GET-4
- GE 200 with G2-GET-4
- GE 700 with G7-GET-4 or ET 901A (min.PRO 05.6) and G7-DSP-IP
- GE 300 with G3-GET
- GE 800 with G8-GET

EE 411 Installation instructions

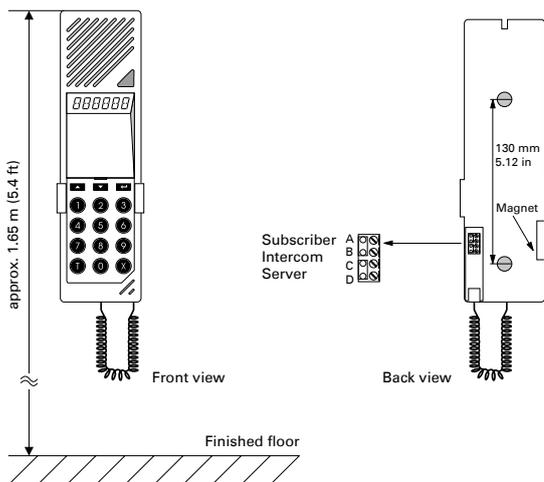
Connection diagrams

EE 411, EE 401, EE 472, EF 401



Recommended mounting height EE 420

The upper edge of the station approx. 1.65 m (5.4 ft) from the finished floor. Please adapt the mounting height to the individual needs.



Precautions and mounting instructions

- Do not expose the station to extreme temperatures ("Technical data," see TE | 1).
- When opening the stations ESD precautions must be observed.
- The stations shall be installed or replaced by trained and qualified personal only.
- The desk stations EE 411 may only be positioned on level surfaces because of the handset function. The angle of inclination may not be more than 30 degrees.
- The station must stand on its own, not e.g. in a shelf or under a filing tray.
- Do not position the stations directly besides the base station of a cordless phone.

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**.



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