

## EE 411



## 4-Wire Desktop Stations Series EE 411

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 lamp 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.

### 1. **EE 411 (EE 401)**

Desktop master station with reinforced silicone keypad (standard keypad with three additional function keys), 6-character (16 segment) alphanumeric display, electret microphone, loudspeaker, red function light, 3 m (9.8 ft) connection cable and handset facility with automatic switching (on the desk as a desktop station with excellent speech quality, when picked up as a handset with reduced volume). Model EE 401 does not have the handset facility.

### 2. **EF 401**

Desktop sub station with restricted dialling possibilities (T, O, X).

### 3. **EE 420**

Wall-mount master station like EE 411. 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).

### 4. **EE 472**

Desktop master station like EE 411, but with noise cancelling gooseneck microphone and special anti-tilt stand.

# Technical Data – Benefits

## TECHNICAL DATA

IP rating:	IP 50, resistant against dust, dirt, aggressive air
Keyboard:	Silicon type with plastic layer, activation force: 1.3 N, 1x10 <sup>6</sup> cycles EF 401: restricted keyboard (T, O, X)
Housing:	shock proof ABS plastic
Microphone:	all except EE 472: omnidirectional electret microphone for max. 7 m (23 ft) speaking distance EE 472: electret noise cancelling microphone with cardioid characteristic for 3–10 cm (1.2–3.9 inch) speaking distance)
Loudspeaker:	Special membrane type for optimal sound quality, sound pressure: 85 dB/1 W/1 m (3.3 ft), 50 Ohm
Display:	6-character, alphanumeric (16-segment)
Frequency range:	200 – 12000 Hz
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 %
Plug:	all except EE 420: Modular jack 6/6 for connection to central, EE 420: pluggable screw terminals
Cabling:	star feed, 4 wires, twisted pair
Power supply:	from central
Signalling:	4 kBit/s data
Measurements:	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: 370 g (0.8 lbs) EE 401: 370 g (0.8 lbs), EF 401: 350 g (0.8 lbs) EE 420: 450 g (1.0 lbs), EE 472: 700 g (1.5 lbs)
Colours:	all except EF 401 light grey (like RAL 7035) and black (like RAL 9011), EF 401 light grey (like RAL 7035)

## EXTENT OF SUPPLY

- 1 station including:
- 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

## SYSTEM REQUIREMENTS

GE 100 with G1-GET-4, GE 200 with G2-GET-4 or GE 700 with G7-GET-4

## BENEFITS

- Timeless ergonomic design
- 4-wire cabling for voice and data (4 kBit), star feed
- Plug-in connection cable (modular plug)
- 6-character alphanumeric display
- Display scrolling
- Modern SMD technology
- Electret microphone
- High quality speech, even from a considerable distance (up to 7 m / 23 ft)
- EE 411 and EE 420 with handset function
- Subscriber index with protective cover
- Additional function keys
- Reinforced silicone keypad
- Comprehensive integrated diagnostic functions

## LINE LENGTH

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
F-YAY (Installation cable PVC); 100 nF/km (30.5 nF/1000 ft)	*	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



# Installation

## PRECAUTIONS

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

## POSITION AND MOUNTING INSTRUCTIONS

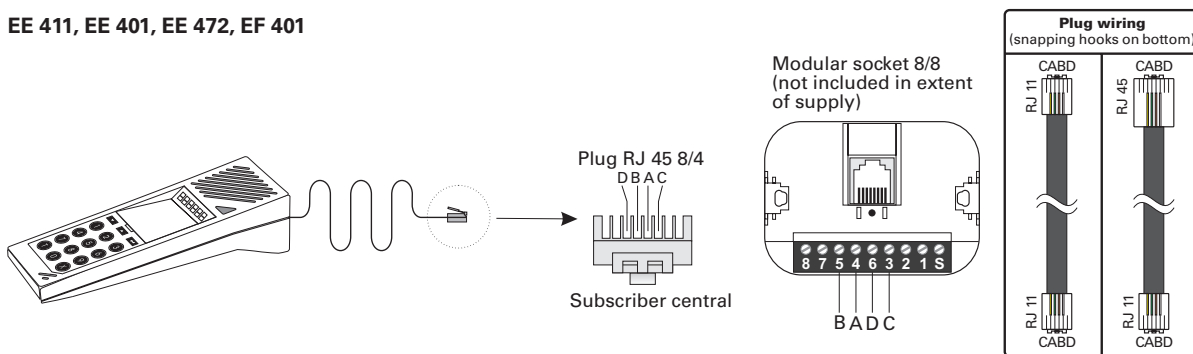
- Do not expose the station to extreme temperature (under  $-10^{\circ}\text{C}$  or above  $+60^{\circ}\text{C}$  / under  $14^{\circ}\text{F}$  or above  $140^{\circ}\text{F}$ ).
- The desk stations EE 411 may only be positioned on level surfaces because of the handset function. The angle of inclination 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.

### Recommended Mounting height EE 420

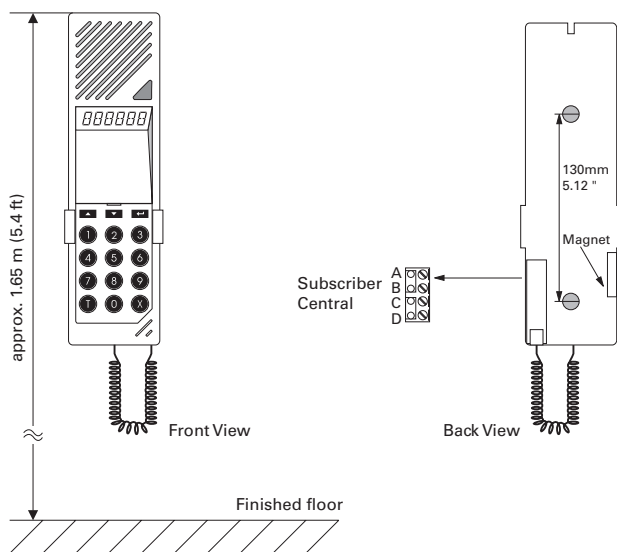
The upper edge of the station approx. 1.65 m (5.4 ft) from the finished floor. Please adapt the mounting height to the individual needs.

## CONNECTION DIAGRAMS

EE 411, EE 401, EE 472, EF 401



EE 420



## 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 9001:2008**.

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