EE 380A

Digital control desk system

Ultimate availability

16 kHz *e*HD Voice

Scalable modular system

Control at the push of a button

The base terminal EE 380A allows the operation of up to 4 button modules, each module equipped with 12 buttons.

The buttons can be assigned to various functions, including direct dialling with call indication, triggering of output functions such as switching lighting circuits or managing doors and indicating input messages, for example, the status of doors, gates and barriers.

Optionally, button modules with 3-colour LEDs are available, allowing calls or system states to be clearly displayed and distinguished. The base terminal is equipped with the latest DSP technology, enabling functions such as audio monitoring or loudspeaker/microphone monitoring.

Features and highlights

- Excellent 16 kHz speech quality, for optimum intelligibility
- OpenDuplex® with powerful Blackfin DSP
- Integrated amplifier with 2.5 W output power
- Simulation of an input with a predefined level when pressed and released
- Acknowledgement of call requests and input messages
- Modules EM 302 / EM 302EG with LED buttons: indication of conversations, call requests, input messages, status of outputs

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Product versions and accessories

EE 380AA

Base terminal including gooseneck microphone with cardioid polar pattern, standard keypad and the possibility to connect up to four button modules EM 301 or EM 302.

EE 380ABEG

Base terminal including gooseneck microphone with cardioid polar pattern, active add-on loudspeaker, standard keypad and the possibility to connect up to four keypad modules EM 301EG or EM 302EG. The mechanical screw and adhesive connection make these Intercom stations exceptionally robust.

EE 380AC

Base terminal including electret condenser microphone, standard keypad and the possibility to connect up to four button modules EM 301 or EM 302. Also suitable for wall mounting.

EE 380ADEG

Base terminal including electret condenser microphone, active add-on loudspeaker, standard keypad and the possibility to connect up to four keypad modules EM 301EG or EM 302EG. The mechanical screw and adhesive connection make these Intercom stations exceptionally robust.

EM 301 / EM 302

EM 301: Button module with 12 buttons for the base terminals EE 380AA and EE 380AC.
EM 302: Button module with 12 buttons and 3-colour LEDs for the base terminals EE 380AA and EE 380AC.

EM 301EG / EM 302EG

EM 301EG: Button module with 12 buttons and connector housing for the base terminals EE 380ABEG and EE 380ADEG.
EM 302EG: Button module with 12 buttons, 3-colour LEDs and connector housing for the base terminals EE 380ABEG and EE 380ADEG.

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EE 380A
Technical specifications

Technical data

IP rating:	IP50 (acc. to EN 60529)
Keypad:	silicone type with plastic layer, activation force: 1.3 N, 1 x 10^6 cycles
Housing:	ABS plastic
Microphone:	EE 380AC, EE 380ADEG: omnidirectional electret condenser microphone for max. 7 m (23 ft) speaking distance EE 380AA, EE 380ABEG: electret noise cancelling microphone with cardioid polar pattern for 3–10 cm (1–4 in) speaking distance, additionally omnidirectional electret condenser microphone, connection possibility for handset
Loudspeaker:	EE 380AA, EE 380AC: special membrane for optimal sound quality, sound pressure level: 85 dB/1 W/1m (3.3 ft), 8 Ω EE 380ABEG, EE 380ADEG: magnetically shielded broadband loudspeaker, sound pressure level: 82 dB/1 W/1 m (3.3 ft), 8 Ω
Amplifier:	EE 380AA/EE 380AC: built-in amplifier: 2.5 W output power: 1.5 W EE 380ABEG/EE 380ADEG: built-in amplifier 20 W output power: 15 W
Display:	6 characters, alphanumeric (16 segments)
Input:	1 input for floating contacts, max. 1 kΩ
Output:	1 open collector output (30 VDC / 50 mA)
Frequency range:	200 – 16,000 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:	EE 380A: RJ11 socket for connection A/B, 4-way modular socket for headset, handset, mini DIN socket for connection to EM module EM 301/EM 302: 2 x mini DIN socket for connection of the EM modules; 1 x jack plug for power supply
Cabling:	star feed, 2 wires, twisted + power supply
Power supply:	EE 380AA/EE 380AC: from Intercom Server power supply EM modules: 12 – 24 VAC or 15 – 35 VDC (e.g. PA20W30V) external supply for long line length: 12 – 24 VAC or 15 – 35 VDC EE 380ABEG/EE 380ADEG: 15 VDC power supply EM modules: from station additionally 12 – 24 VAC or 15 – 35 VDC EM modules: 12 – 24 VAC or 15 – 35 VDC (e.g. PA20W30V)
Signalling:	2B + D (2 x 64 kBit/s speech, 16 kBit/s data)
Dimensions (W x H x D):	EE 380AC, EM 301/EM 302: 66 x 230 x 55 mm (2.6 x 9.1 x 2.2 in) EE 380ABEG, EE 380ADEG: 205 x 271 x 96 mm (8.1 x 10.7 x 3.8 in) EM 301EG/EM 302EG: 104 x 45 x 80 mm (4.1 x 1.8 x 3.2 in) EE 380AA: 179 x 230 x 57 mm (7.1 x 9.1 x 2.2 in) gooseneck 430 mm (16.9 in)

Weight incl. packaging:	EE 380AA: 740 g (1.6 lbs) EE 380AC: 440 g (1 lb), EE 380ABEG: 1,340 g (3 lbs), EE 380ADEG: 1,220 g (2.7 lbs) EM 301/EM 302: 400 g (0.9 lbs), EM 301EG/EM 302EG: 440 g (1 lb)
Colours:	all types available in black (like RAL 9011) and translucent blue (like RAL 5022) EE 380AA, EE 380AC, EM 301 and EM 302: additionally in light grey (like RAL 7035)

Extent of supply

EE 380A – base terminal including:
– Connection cable RJ11/RJ45, 3 m (9.8 ft) pluggable at both sides
– Short reference and operating instructions
– Connection cable

EM 301 / EM 302 – module including:
– Connection cable,
– Mounting plate incl. screws
– Short reference

EM 301EG / EM 302EG – module including:
– Connection cable
– Connection frame and cover
– Mounting plate incl. screws
– Short reference

Power supply must be ordered separately.

System requirements

– GE 800 with G8-GED
– GE 300 with G3-GED
– VirtuoSIS/S3/S6 with ET 901-D (min. firmware version 3.0)

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EE 380A
Installation instructions

Line length

	Power supply server		
Card type	24 VAC	30 VDC	25 VDC
Ethernet cable e.g. Cat. 5 Loop resistance: 190 Ω/km Capacity: 48 nF/km (14.4 nf/1000 ft)	1500 m/4922 ft 3000 m/ 9843 ft with external supply [1]	1600 m/5249 ft 3000 m/ 9843 ft with external supply [1]	1200 m/3937 ft 3000 m/ 9843 ft with external supply [1]
Telecommunication cable e.g. F-YAY; ø 0.6/0.8 mm; AWG: 22/20 Loop resistance: >135 / >73 Ω/km Capacity: 100 nF/km (30.5 nf/1000 ft)	1500 m 4922 ft 2000 m/ 6561 ft with external supply [1]	1500 m 4922 ft 1800 m/ 5905 ft with external supply [1]	1100 m/3609 ft 1800 m/ 5905 ft with external supply [1]

[1] The supply of the EM 301/EM 302 modules and the active loudspeaker does not supply the base terminals.

Button module test

Activate direct dialling button test:
– Press and hold button **X** and then press button **2**.
– All LED buttons are switched to red (EM 302 only) and the display shows "0<-00".
Execute direct dialling button test:
– Press a direct dialling button.
– In the display, the pressed button and the respective module number are shown (e.g.: 1<-04...first module, fourth button).
– Press the button again to change the colour to green, then blue and then OFF (cycle).
– The test is cancelled by pressing the button **X** or automatically after 10 seconds.

Station test

The station tests are started as follows: Keep button **⏎**, pressed, press the button for the desired test (e.g. **1** for test 1), release button **⏎**, release the button for the test. The test is cancelled by calling up "test X".

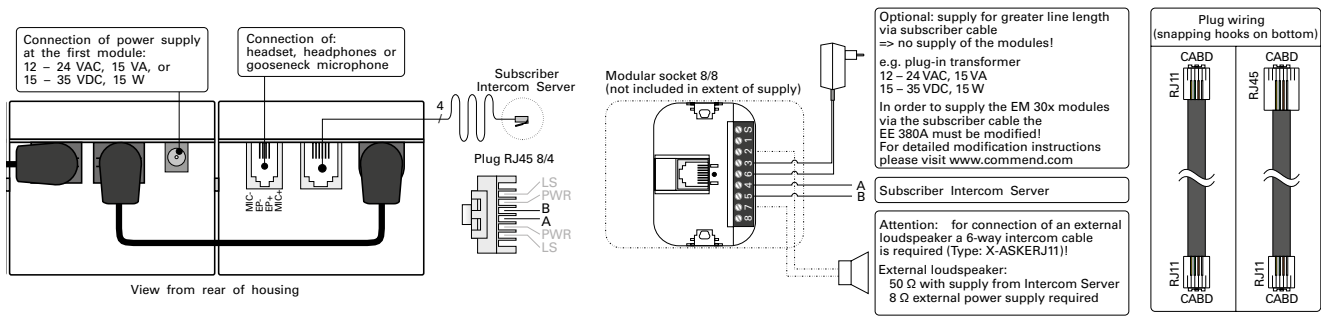| Button	Test
Button 1:	Display test with "888888" – with this test the display can be tested.
Button 2:	Dialling test – with this test the buttons can be tested.
Button 3:	Input/Output test – (0 = inactive, 1 = active) 2nd digit = OUT1, 4th digit = IN1
Button 4:	Display test with all segments – with this test all segments of the display are switched on, so any defects of the display can be diagnosed.
Button 5:	Indication software version: e.g. *V02.0* means: station software version 02.0
Button 6:	Test for line errors – a number is indicated (increments by 1 about every 10,000 error-free messages, up to a maximum of 99).
Button 7:	Display of the conversation partner's microphone level in dB.

Mounting Instructions

– Do not place the device in areas where it may become wet or damp, and avoid particularly dusty, humid or high-temperature environments.
– Before using the device, ensure all cables are connected correctly and are not damaged.
– Do not connect the power supply of the modules until all modules are connected to each other.
– Do not expose the station to extreme temperature below –10 °C/14 °F or above +60 °C/140 °F.
– The station must stand on its own, not e.g. in a shelf or under a filing trey.
– Do not position the stations next to the base terminal of a cordless phone.
– For operation of the active loudspeaker (EE 380ABEG/EE 380ADEG), an external power supply is mandatory.
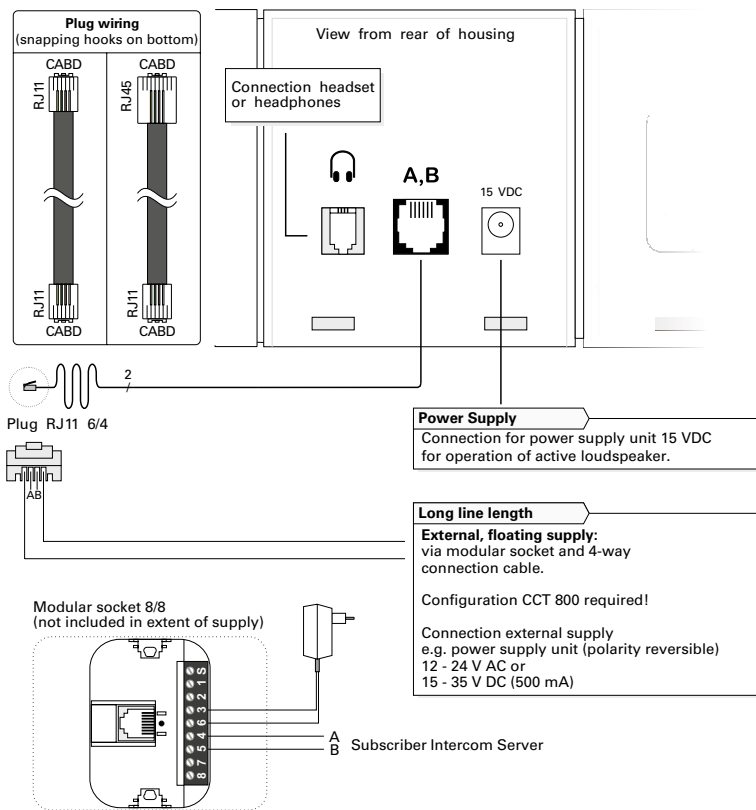
Safety instructions

– This device shall be installed or replaced by trained and qualified personnel only.
– Devices belonging to another earthing network must not be connected to the device's connectors.
– All connected circuits shall fulfill the following requirements:
  – Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN 60950-1 or
  – ES1, PS2 circuits and Annex Q (Limited Power Source) according to IEC/EN/UL 62368-1
– The device is intended for appropriate installation in locations where possible high transient voltage surges are not likely to occur.
– Only accessories that comply with the device's technical specifications shall be used.
– The DC power supply of the device must comply with the requirements for LPS (acc. to IEC/EN 60950-1) or PS2 (acc. to IEC/EN 62368-1) (EE 380ADEG, EE 380ABEG: max. 24 W / EM 302, EM 302EG: max. 30 W). If one power supply (EE 380ADEG, EE 380ABEG: > 24 W / EM 302, EM 302EG: > 30 W) is used for multiple devices, an overcurrent protective device must be installed in each device's supply line.
– Disconnect all cables for any maintenance.
– All changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
– There must be no direct connection to a cable outside of a building.
– When opening the station, ESD precautions must be observed.
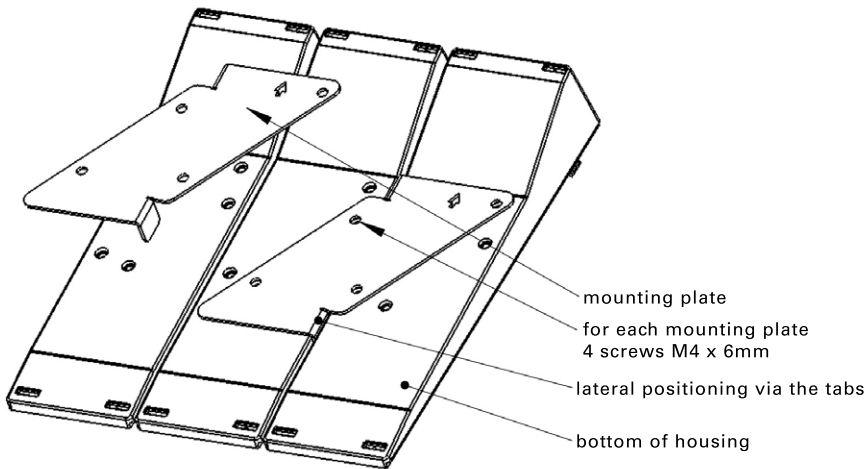– The station may only be opened by authorised service engineers.

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Connection EE 380AA | EE 380AC

Connection of power supply at the first module:
12 – 24 VAC, 15 VA, or
15 – 35 VDC, 15 W

Connection of:
headset, headphones or gooseneck microphone

Subscriber Intercom Server

4

Plug RJ45 8/4

MIC-
EP-
EP+
MIC+

LS
PWR
B
A
PWR
LS

View from rear of housing

Modular socket 8/8
(not included in extent of supply)

8 7 5 4 6 3 2 1 S

A
B

Optional: supply for greater line length via subscriber cable
=> no supply of the modules!
e.g. plug-in transformer
12 – 24 VAC, 15 VA
15 – 35 VDC, 15 W
In order to supply the EM 30x modules via the subscriber cable the
EE 380A must be modified!
For detailed modification instructions please visit www.commend.com

Subscriber Intercom Server

Attention: for connection of an external loudspeaker a 6-way intercom cable is required (Type: X-ASKERJ11)!
External loudspeaker:
50 Ω with supply from Intercom Server
8 Ω external power supply required

Plug wiring
(snapping hooks on bottom)

CABD   CABD
RJ11   RJ45

RJ11   RJ11
CABD   CABD

Connection EE 380ABEG | EE 380ADEG

Plug wiring
(snapping hooks on bottom)

CABD   CABD
RJ11   RJ45

RJ11   RJ11
CABD   CABD

View from rear of housing

Connection headset or headphones

A,B

15 VDC

2

Plug RJ11 6/4

A B

Power Supply
Connection for power supply unit 15 VDC for operation of active loudspeaker.

Long line length
External, floating supply:
via modular socket and 4-way connection cable.

Configuration CCT 800 required!

Connection external supply
e.g. power supply unit (polarity reversible)
12 - 24 V AC or
15 - 35 V DC (500 mA)

Modular socket 8/8
(not included in extent of supply)

8 7 5 4 6 3 2 1 S

A
B   Subscriber Intercom Server

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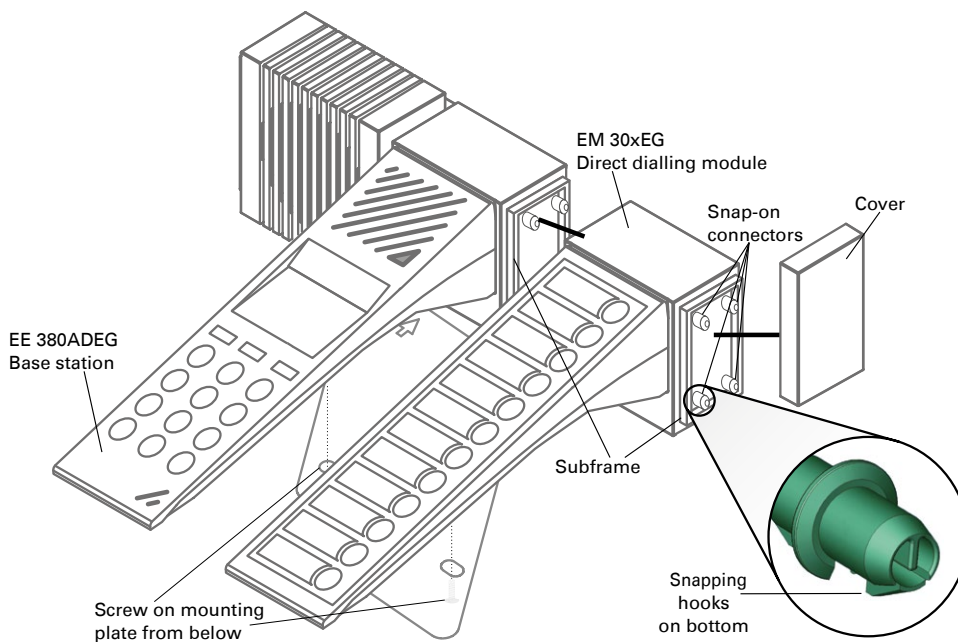
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Mounting of the modules EM 301 | EM 302

– The modules are mounted to the base terminal as shown in the illustration.
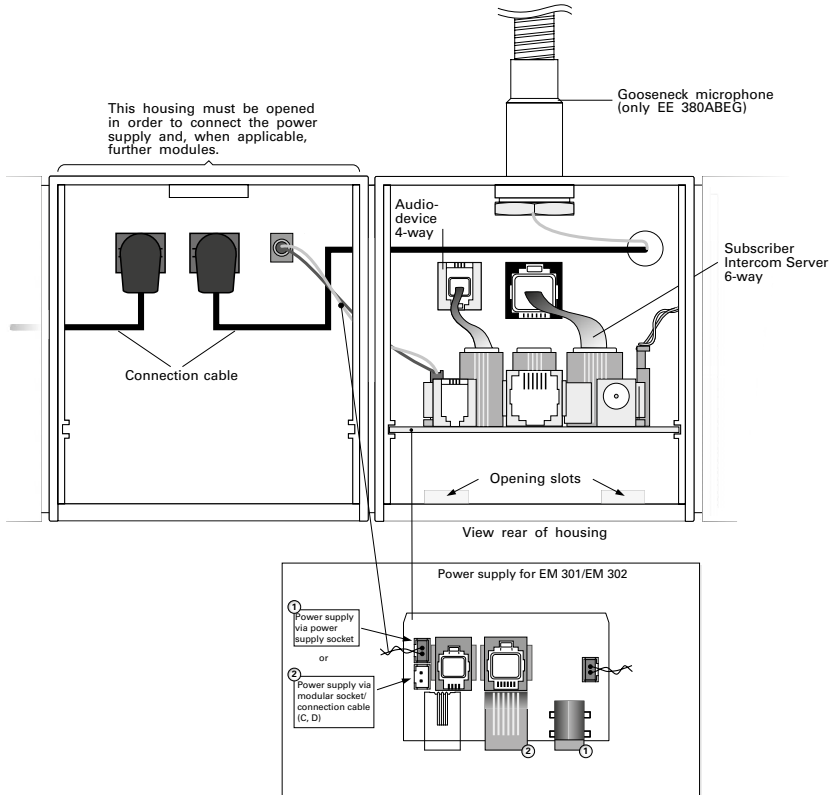– The unused screws must not be removed, as this might cause acoustic problems and allow dust to enter.

mounting plate

for each mounting plate
4 screws M4 x 6mm

lateral positioning via the tabs

bottom of housing

Mounting of the modules EM 301EG | EM 302EG

– The housing components are connected to the supplied snap-on connectors.
  – Ensure that the snapping hooks are facing downward (see detailed illustration).
– Additionally, the modules are fixed together with the mounting plate.
– With the cover, the module is closed on the right side.

EM 30xEG
Direct dialling module

Snap-on
connectors

Cover

EE 380ADEG
Base station

Subframe

Screw on mounting
plate from below

Snapping
hooks
on bottom

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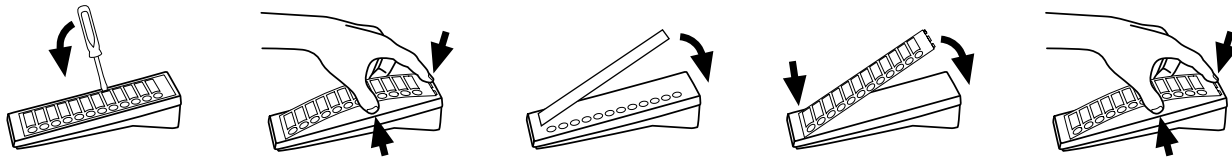IN | 3   commend.com   commend

Mounting of the modules EM 301EG | EM 302EG

1. Open the rear of the module housing using the opening slots and a screwdriver.
2. Connect the first module to the power supply on the base terminal as shown in the illustration below.
3. Connect the modules to each other using the included cables.
   Note: To change the jumper settings, pull the connection board of the base unit out of the housing.
4. Close the housing.

This housing must be opened in order to connect the power supply and, when applicable, further modules.

Gooseneck microphone (only EE 380ABEG)

Audio-device 4-way

Subscriber Intercom Server 6-way

Connection cable

Opening slots

View rear of housing

Power supply for EM 301/EM 302

① Power supply via power supply socket

or

② Power supply via modular socket/ connection cable (C, D)

Changing the labelling sheet

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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