AF 20A
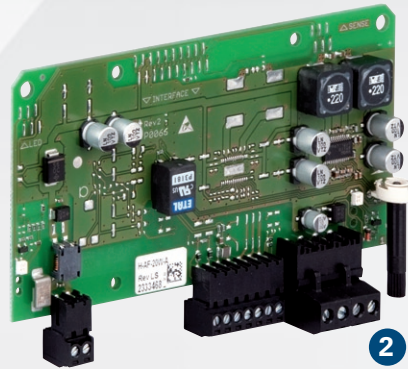

Analogue 20 watt amplifier AF 20A

Their compact design makes the 20 Watt amplifiers ideal for a decentralised, cable saving installation next to PA loudspeakers and Intercom terminals. To provide even greater flexibility, the analogue amplifiers are available as add-in modules that integrate easily into the Intercom terminals themselves.

The range of application environments is suitably flexible as well, serving the public address needs in areas from public service facilities (e.g. railway stations) to auditoriums or waiting rooms, and covering the Intercom requirements of noisy industrial facilities, garages, tunnels or office buildings.

1. **AF 20A**
   Analogue 20 watt amplifier with polycarbonate housing for connection to an Intercom Server or standard audio components. Output power 1 x 20 watt at 4 ohm loudspeaker or 2 x 10 watt at 8 ohm loudspeakers.

2. **AF 20A EB**
   Analogue 20 watt amplifier add-on module without polycarbonate housing, e.g. mounting with terminals wherever amplification is required. Output power 1 x 20 watt at 4 ohm loudspeaker or 2 x 10 watt at 8 ohm loudspeakers.

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Technical Data – Benefits

TECHNICAL DATA

IP rating:	AF 20A: IP 20
Operating temperature range:	–25° C to +55° C (–13° F to 131° F)
Storage temperature range:	–25° C to +70° C (–13° F to 158° F)
Relative Humidity:	up to 95 %
Connection: - Pluggable screw terminals (0,08 mm² - 1,5mm²):	Intercom Server, power supply
- Pluggable screw terminals (0,08 mm² - 2,5mm²):	loudspeaker
Power supply:	20 - 26 VDC (max. 1.1A at 4 Ω / 20W or max. 0.5A at 8 Ω / 10W) Power supply e.g.: PA70W24V
Cabling:	star feed, 4 wires, twisted pair
Frequency response:	50 Hz to 15 kHz (–3 dB)
Transmission bandwidth:	16 kHz
Output power:	20 watt (RMS)
Input impedance :	10 kΩ
Input sensitivity :	from 390 mV to 3 V
Audio output:	low resistance, minimum impedance 4 Ω
Measurements:	AF 20A: 159 x 49 x 87 mm (6.26 x 1.93 x 3.43 inch) AF 20A EB: 130 x 82 x 16 mm (5.12 x 3.23 x 0.63 inch)
Weight including package:	AF 20A: 180 g (0.4 lbs) AF 20A EB: 67 g (0.15 lbs)

EXTENT OF SUPPLY

AF 20A
- Amplifier incl. Short Reference
- Wallmount Kit

AF 20A EB
- Amplifier add-on module incl. Short Reference
- Spacer Kit

Note: Power supply not in extent of supply

SYSTEM REQUIREMENTS

Integrate the amplifier in an Intercom System following System requirements are necessary:

- GE 300 with G3-GET or G8-AUD (using a G8-AUD a interface housing GEI 300 is required)
- GE 800 with G8-GET or G8-AUD
- Configuration software min. CCT 800 1.0
- GE 100 with G1-GET-4, GE 200 with G2-GET-4, GE 700 with G7-GET-4 or G7-DSP-AUD4

BENEFITS

- 20 W output power
- Class-D amplifier, optimised for high efficiency at low operating temperatures
- Short-circuit and overrange protected
- Connection monitoring between amplifier and Intercom Server
- Easy integration in existing Intercom Systems
- 16 kHz audio quality
- Suitable for decentralised on-site use
- Rugged enclosure made from polycarbonate

LINE LENGTH

Amplifier - Loudspeaker
It is recommended to select the line length between amplifier and loudspeaker as short as possible.

cable diameter	line length at loudspeaker impedance	
	4 Ω	8 Ω
ø 0,5 mm (AWG: 24)	10 m (32.8 ft)	20 m (65.6 ft)
ø 0,6 mm (AWG: 22)	14 m (45.9 ft)	28 m (91.9 ft)
ø 0,8 mm (AWG: 20)	24 m (78,7 ft)	48 m (157.5 ft)
ø 1,0 mm (AWG: 18)	37 m (121.4 ft)	73 m (239.5 ft)
ø 1,4 mm (AWG: 15)	73 m (239.5 ft)	146 m (479 ft)
ø 1,8 mm (AWG: 13)	122 m (400 ft)	244 m (800 ft)

The specified line length correspond to a halving of the performance of the speaker or - 3dB voltage drop.
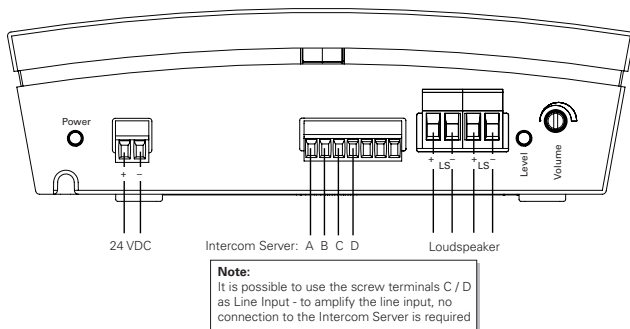
PRECAUTIONS

- Observe the precautions for handling of electrostatic sensitive devices!

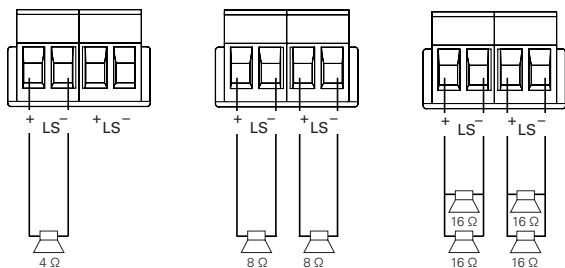- The amplifier may only be installed by authorised service engineers.

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Installation AF 20A

CONNECTION

24 VDC   Intercom Server: A B C D   Loudspeaker

Note:
It is possible to use the screw terminals C / D as Line Input - to amplify the line input, no connection to the Intercom Server is required

Connection loudspeaker:

SETTINGS

The volume control is carried out via the potentiometer "Volume".
Setting:
For a faultless operation at the Intercom Server it is mandatory to set volume for the amplifier not higher than to level 3 via CCT 800 (Subscriber > Audio - Features)
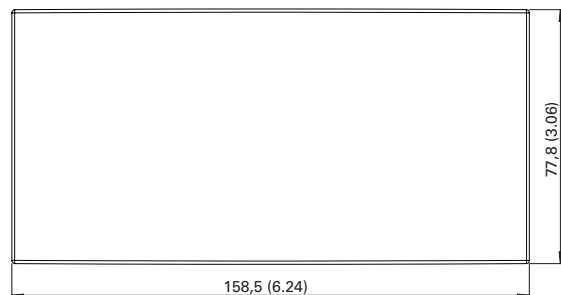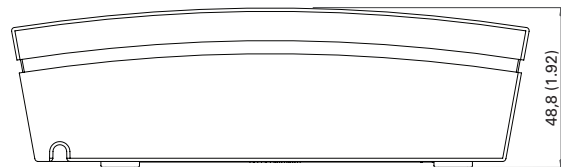
LED STATUS INDICATION

LED „Power"
• LED green: power supply existent
• LED red: short-circuit at the loudspeaker
LED „Level"
• LED red: too much amplification (Clipping)
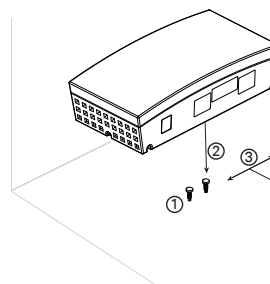• LED green / orange: good amplification

MEASUREMENTS

Measurements in mm (inch), not scale!

48,8 (1.92)
77,8 (3.06)
158,5 (6.24)

MOUNTING

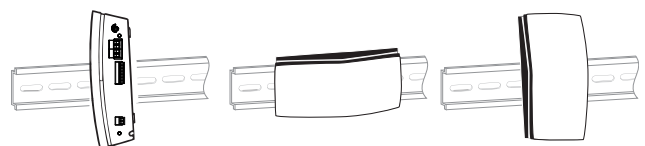It is possible to mount the amplifier in two different ways:

Wallmount Kit (in extent of supply)

① Install screws and dowels
② Break out the mounting opening on the back side of the housing and hook onto the screws
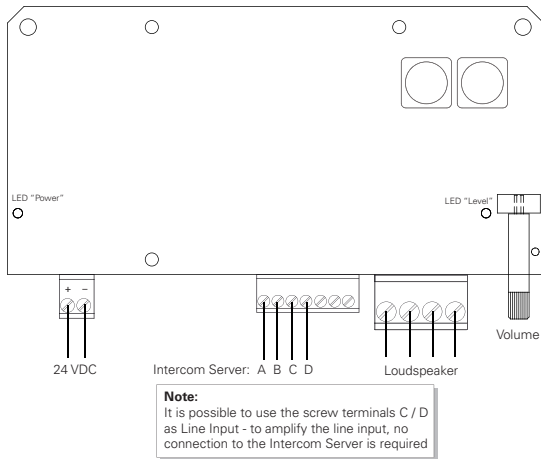③ Fix wireless module by moving to the left, right or down

Top Rail Clamp ET 901-HSH35 (not in extent of supply)
With this rail clamp, the housing of the amplifier box can be installed upright or flat to the rail in a vertical or horizontal position.
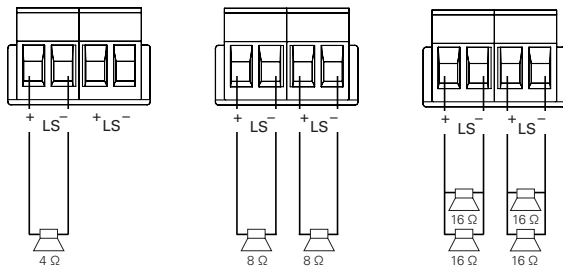
Installation

CONNECTION

LED "Power"
LED "Level"

Volume

24 VDC   Intercom Server: A B C D   Loudspeaker

Note:
It is possible to use the screw terminals C / D as Line Input - to amplify the line input, no connection to the Intercom Server is required

Connection loudspeaker:

+ LS −   + LS −   + LS −   + LS −   + LS −   + LS −

16 Ω   16 Ω

4 Ω   8 Ω   8 Ω   16 Ω   16 Ω

SETTINGS

The volume control is carried out via the potentiometer "Volume".
Setting:
For a faultless operation at the Intercom Server it is mandatory to set volume for the amplifier not higher than to level 3 via CCT 800 (Subscriber > Audio - Features)
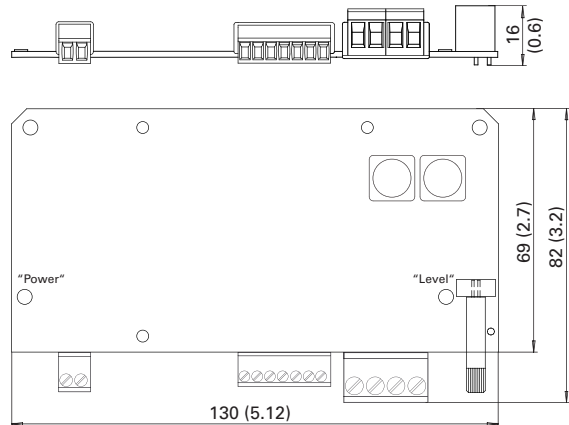
LED STATUS INDICATION

LED „Power"
• LED green: power supply existent
• LED red: short-circuit at the loudspeaker
LED „Level"
• LED red: too much amplification (Clipping)
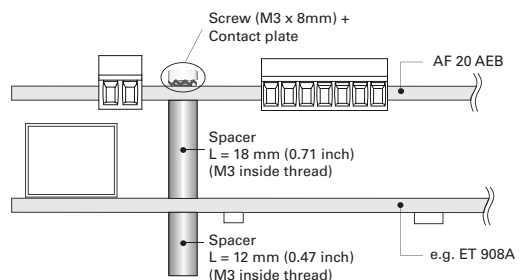• LED green / orange: good amplification

MEASUREMENTS

Measurements in mm (inch), not scale!

16 (0.6)

"Power"   "Level"

69 (2.7)   82 (3.2)

130 (5.12)

MOUNTING

3x each:
• Position spacer L=18 mm (0.71 inch) between AF 20A EB and ET 908A
• Screw on over-head screw with contact plate to spacer L=18 mm (0.71 inch) – AF 20A EB thus is fastened
• Screw on spacer L=12 mm (0.47 inch) to spacer L=18 mm (0.71 inch) – ET 908A thus is fastened

Screw (M3 x 8mm) + Contact plate

AF 20 AEB

Spacer L = 18 mm (0.71 inch) (M3 inside thread)

Spacer L = 12 mm (0.47 inch) (M3 inside thread)

e.g. ET 908A

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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