AF 50A

Compact 50-watt analogue amplifier

Easy integration

Audio + functionality

Rugged housing

Flexible amplification

The series AF 50 provides a particularly high output range and various loudspeaker outputs. These amplifiers are universally suitable for any size of application up to complex public address and Intercom solutions. They are specifically optimised for installation either in a 19″ rack or on site. This helps to save on cabling and any costs incurred.

The range of application environments is suitably flexible as well: serving the public address needs 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.

Features and highlights

- 50 watts of output power
- Output for low-resistance loudspeakers and for 70 V/100 V loudspeakers
- Class-D amplifier, optimised for high efficiency at low operating temperatures
- Protection against short circuits and overranges
- 16 kHz transmission bandwidth for highest speech intelligibility
- Easy integration into existing Intercom systems
- High level of reliability
- Single or double mount in a 19″ rack or on site
- Rugged housing made of polycarbonate

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AF 50A
Technical specifications

Technical data

IP rating:	IP20 (acc. EN 60529)
Output power:	50 W (RMS)
Loudspeaker outputs:	low-resistance (min. impedance: 4 Ω) or 70 V/100 V
Signal-to-noise ratio:	93 dB(A)
Input impedance:	10 kΩ
Input sensitivity:	390 mV to 3 V
Frequency response:	50 Hz to 15 kHz (–3 dB)
Total harmonic distortion (THD+N):	4 Ω, 8 Ω: < 0.2% 70 V/100 V: < 1% at 50 W/< 0.4% at 35 W
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%, not condensing
Connections:	pluggable screw terminals (0.08 mm² – 1.5 mm²): Intercom Server, power supply, 70 V/100 V loudspeaker output pluggable screw terminals (0.08 mm² – 2.5 mm²): low-resistance loudspeaker output
Power supply:	20 – 26 VDC [1] (max. 2.6 A at 4 Ω/50 W or max. 1.3 A at 8 Ω/25 W, max. 3 A at the 70 V/100 V loudspeaker output)
Cabling:	star feed, 4-wires, twisted pair
Dimensions (W x H x D):	201 x 44 x 255 mm (7.91 x 1.73 x 10.04 in)
Weight incl. package:	1,500 g (3.31 lbs)

[1] For a faultless operation, an earthed power supply unit is recommended, e.g. PA60W24V.

Line length

It is recommended to select the line length between the low-resistance loud-speaker output of the 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 corresponds to a halving of the performance of the loudspeaker or –3 dB voltage drop.

Extent of supply

– Amplifier
– Short reference

NOTE:
The power supply is not included in extent of supply.

System requirements

Intercom Server
– GE 800 with G8-GET or G8-AUD or
– GE 300 with G3-GET or G8-AUD (requires interface housing GEI 300) or
– GE 150 with G15-GET-4 or
– GE 700 with G7-GET-4 or
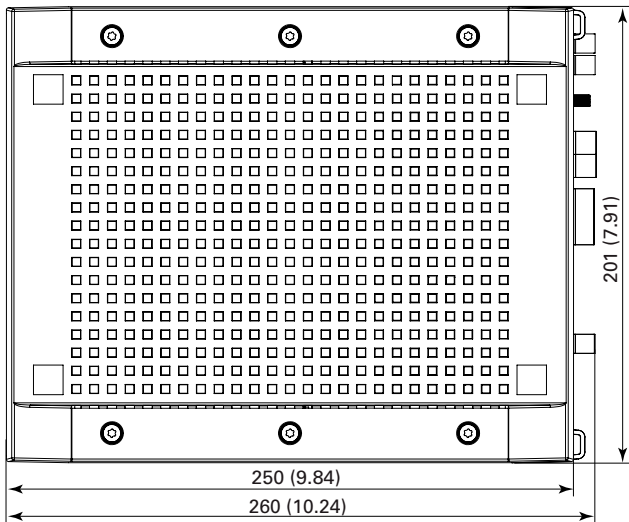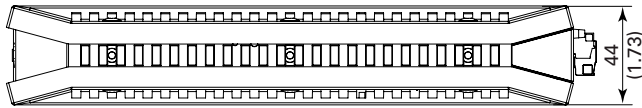– GE 200 with G2-GET-4

Configuration software
– min. CCT 800 1.0

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The design and/or specifications of products may be subject to change for improvement without prior notice. Errors excepted.

TE | 1

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AF 50A
Installation instructions

Dimensions front panel

Measuring units in mm (in), not to scale!

44 (1.73)

201 (7.91)

250 (9.84)

260 (10.24)

Mounting instructions

– Do not expose the amplifier to extreme temperatures (see "Technical data").
– Observe the country-specific standards for installation, mounting and configuration.
– When opening the amplifier, ESD precautions must be observed.
– The amplifier may only be opened by authorised service engineers.

LED status indication

LED "Power" (front)
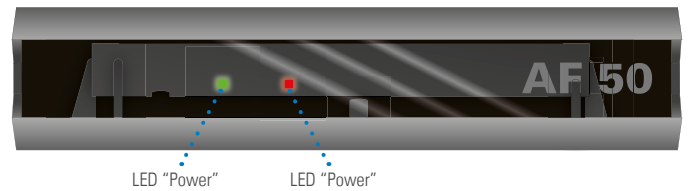– Green: main power supply applied

LED "Fault" (front)
– Red: short circuit at the low-resistance loudspeaker output

LED "Level" (rear)
– Red: too much amplification (clipping)
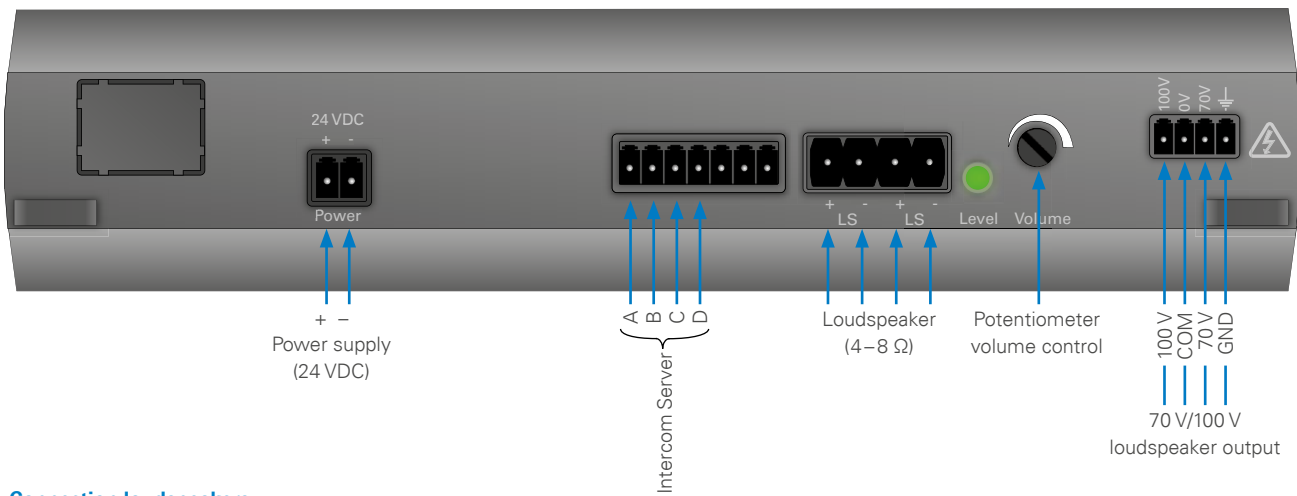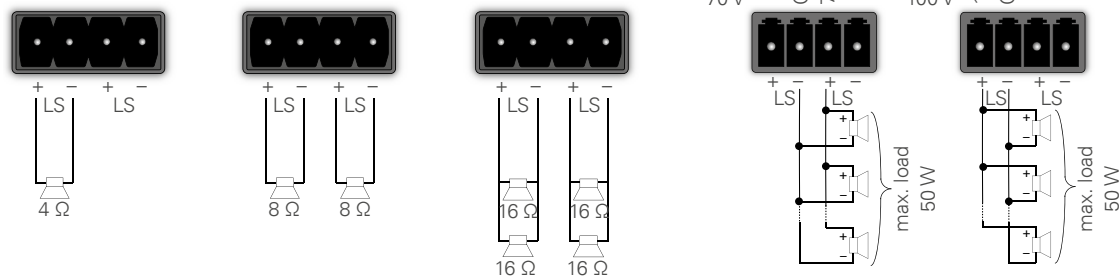– Green/orange: amplification okay

Front view

AF 50

LED "Power"   LED "Power"

Rear view

24 VDC   Power   LS   LS   Level   Volume   100 V 0 V 70 V

LED "Level"

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Connection

Connection diagram

24 VDC
+ −
Power

+ −
Power supply
(24 VDC)

A B C D
Intercom Server

Loudspeaker
(4−8 Ω)

+ − + −
LS LS

Level Volume

Potentiometer
volume control

100 V
COM
70 V
GND

70 V/100 V
loudspeaker output

Connection loudspeakers

+ − + −
LS LS
4 Ω

+ − + −
LS LS
8 Ω 8 Ω

+ − + −
LS LS
16 Ω 16 Ω
16 Ω 16 Ω

70 V
COM
70 V
+ − + −
LS LS
max. load
50 W

100 V
100 V
COM
+ − + −
LS LS
max. load
50 W

Volume settings

– The volume can be controlled via the potentiometer "Volume".
– For a faultless operation at the Intercom Server, it is mandatory to set the volume for the amplifier not higher than to level "3" in CCT 800 (**Subscriber > Audio - Features**).

Mounting

It is possible to mount the AF 50A via a wall and desk mount kit or a rack mount kit:
– Wall mount kit PF-WM (not included in extent of supply; for mounting, see short reference "PF-WM")
– Rack mount kit PF-WM (not included in extent of supply; for mounting, see short reference "PF-RM")

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**.

AUSTRIA **OBSESSIVE ABOUT QUALITY**

A strong worldwide network

COMMEND is represented all over the world by local Commend Partners and helps to improve security and communication with tailored Intercom solutions.

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IN | 2

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