

PVA-2P500 Power amplifier, 2x500W

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Invented for life



- ▶ 2 × 500 Watt class D amplifier
- ▶ Low power consumption in standby mode (3 Watt)
- ▶ Local input per channel
- ▶ Excellent sound quality > 104 dB s/n ratio

The PVA-2P500 class-D amplifier is a 2 × 500 W professional audio amplifier for evacuation purposes. It can be operated from both the mains and a DC supply.

The output voltage is galvanically insulated and is constantly monitored for ground fault. An energy-saving mode and temperature-controlled fans reduce energy consumption and noise levels. The control and monitoring functions are performed via CAN bus. This amplifier is designed for operation in an emergency evacuation system. The amplifiers are usually controlled via a controller and configured using IRIS-Net.

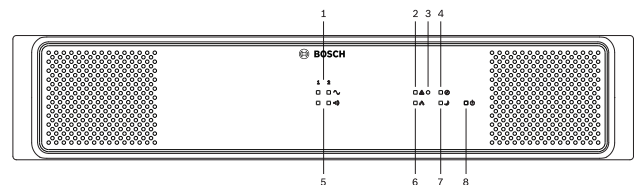
The power amplifier has the following features:

- Floating 100 V or 70 V power outputs
- High efficient amplifier blocks in class-D technology
- Outputs idling and short circuit-protected
- Mains operation 120-240 V (50/60 Hz) and/or 24 V DC emergency backup
- Electronically balanced inputs
- Temperature monitoring function
- Processor control of all functions
- Monitoring of the processor system via watchdog circuit
- Non-volatile FLASH memory for configuration data
- Internal monitoring function
- Integrated audio relays
- Line monitoring function

- Pilot tone and ground fault monitoring function via PVA-4CR12 controller or PVA-4R24 router

The power amplifier is processor-controlled and equipped with extensive monitoring functions. Line monitoring for the CAN bus and for audio transmission allows line interruptions and short-circuits to be detected and indicated to the user.

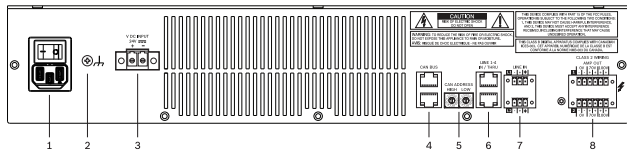
System overview



- 1 Signal clip indicator light
- 2 Combined fault warning indicator light
- 3 Recessed button
- 4 Ground fault indicator light
- 5 Audio signal indicator light
- 6 Network indicator light

7 Standby indicator light

8 Power indicator light



1 AC power input and power switch

2 Grounding screw

3 DC power input

4 CAN BUS port

5 CAN ADDRESS selector switch

6 LINE IN 1-4 audio input sockets (RJ-45)

7 LINE IN 1 or 2 audio input sockets (Euroblock, balanced signal)

8 Amplifier power output sockets (70 V or 100 V)

Certifications and approvals

- EN 50130-4
- EN 50581
- EN 55103-1/2
- EN 61000-3-2/3
- EN 61000-6-3
- EN 60945
- EN 54-16
- EN 54-4
- IEC 60065
- ISO 7240

Parts included

Quantity	Component
1	PVA-2P500
1	Power cord 230 V AC
1	Power cord 120 V AC
1	Euroblock connector 2-pole (Phoenix, PC 5/2-STF-7,62, 1975697, F.01U.108.398) for 24 V DC
2	Euroblock connector 3-pole (Phoenix, MC 1,5/3-STF-3,81, Nr. 1827716, F.01U.104.680) for audio input
2	Euroblock connector 6-pole (Phoenix, MC 1,5/6-ST-3,81, 1827745, F.01U.104.179) for audio outputs
4	Foot stand (self-adhesive)
1	Operation manual
1	Important safety instructions

Technical specifications

Rated load impedance (output power)

100 V 20 Ω (500 W)

70 V 10 Ω (500 W)

Rated output power, 1 kHz, THD ≤ 1% $2 \times 500 \text{ W}^1$

Rated input voltage +6 dBu

Max. RMS voltage swing, 1 kHz, THD ≤ 1%, without load

100 V 110 V

70 V 78 V

Voltage gain, ref. 1 kHz, fixed

70 V 33.2 dB

100 V 36.2 dB

Maximum load capacitance 2 μF

Input level, max. +18 dBu (9.75 V_{rms})

Frequency response, ref. 1 kHz, rated load, -3 dB 50 Hz to 25 kHz

Input impedance, active balanced 20 kΩ

Signal-to-noise ratio (A-weighted) > 104 dB

Output noise (A-weighted) < -62 dBu

Crosstalk, ref. 1 kHz < -85 dB

Output stage topology Class-D, transformer, floating

Power requirements

AC 115-240 V (-10/+10%)²

DC 21-32 V

Power consumption, AC and DC See section "Power consumption" in operation manual

Inrush current 2 A

Inrush current, after five-second power cycle 1.3 A

Mains fuse T6.3A (internally)

DC fuse 30A (internally)

Ground fault R < 50 kΩ

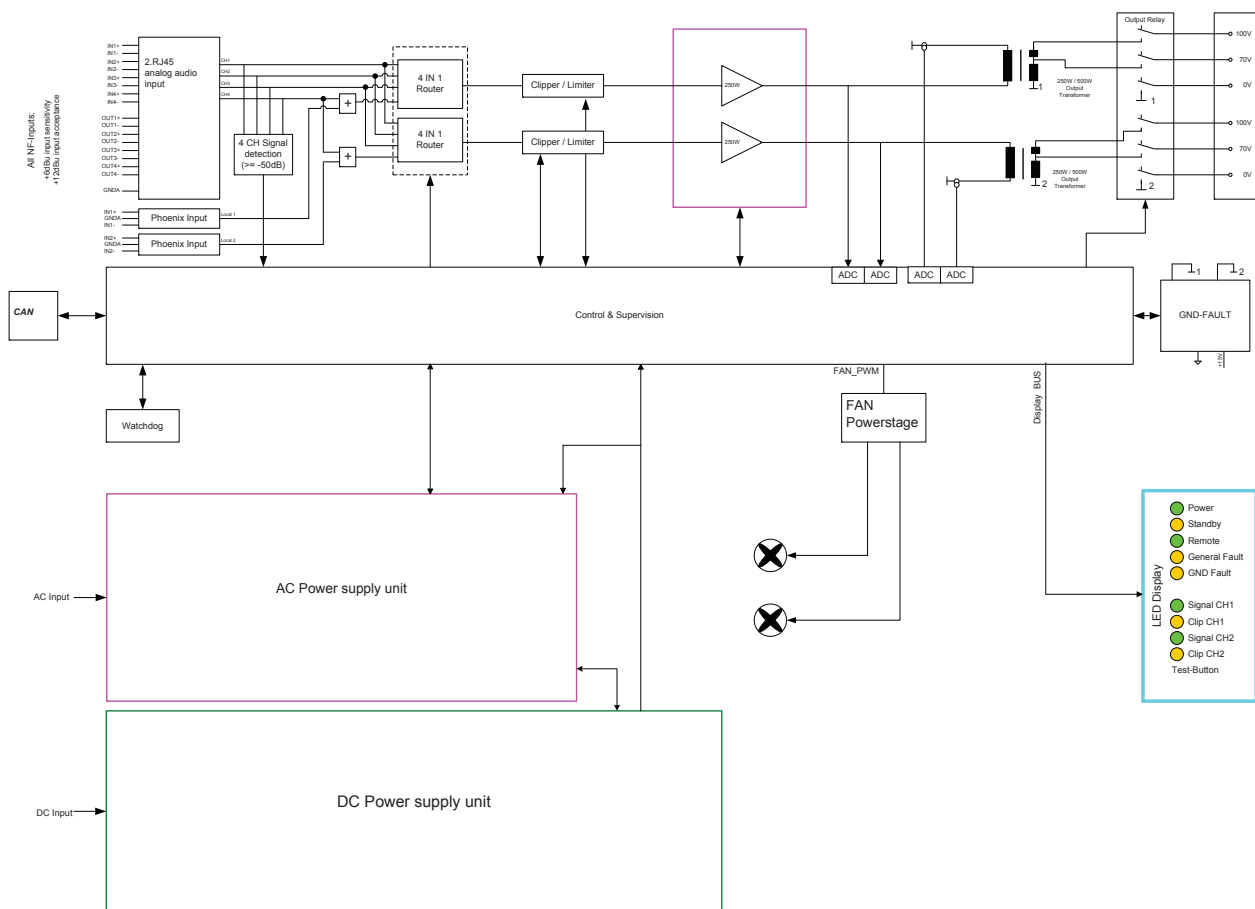
CAN BUS port $2 \times \text{RJ-45}$, 10 to 500 kbit/s

Protection	Audio input level limiter, RMS output power limiter, high temperature, DC, short circuit, mains undervoltage protection, DC supply undervoltage protection, inrush current limiter, ground fault
Cooling	Front-to-rear, temperature-controlled fans
Operating temperature	-5 °C to +45 °C (+23 °F to +113 °F)
Storage and transport temperature	-40 °C to +70 °C (-40 °F to +158 °F)

Safety class	Class I
Electromagnetic environment	E1, E2, E3
Product dimensions (Height x Width x Depth)	19", 2 HU, 88.2 mm x 483 mm x 375 mm
Net weight	16.5 kg
Shipping weight	19 kg

¹ In DC mode and in continuous alarm-signal operation, output signal limited by 3 dB max.

² Reduced output power at mains voltages below 115 V



Circuit diagram

Ordering information

PVA-2P500 Power amplifier, 2x500W
Power amplifier, 2 × 500 Watt, black.
Order number **PVA-2P500**