Protec Fire Detection plc

PDA Pro Range

- Ideal for where quality sound is a must
- Attractive free-standing design
- Two XLR 3 pin input sockets
- True output current meter
- On-board cooling fan on PDA500/2 and PDA1000/2
- Adjustable level controls
- Adjustable drive control
- Advanced audio signal processing

Our range of professional current mode audio-frequency induction loop amplifiers offer outstanding sound quality at a competitive price. They are ideal for use in large prestigious applications such as theatres, cinemas, churches, conference halls etc., where first class sound and unrivalled reliability are a must.

Each amplifier includes one balanced microphone input and one switchable balanced mic. or line level input, both of which will accept standard 3 pin XLR connectors. Optional 11V phantom power is also available on both inputs to allow the use of electret or condenser microphones.

By popular demand, each amplifier also features a four-way 'Outreach' input offering full compatibility with the unique Outreach Plate audio input extension system. This system allows the connection of up to 10 additional microphone or line level inputs via a range of specially designed single gang connector plates.

The pre-amplification stage of each amplifier utilises an advanced signal processing system that allows tight control over the audio signal without any degradation of output quailty. A metal compensation control is also provided to help offset the frequency response problems associated with excessive metal content of some rooms.

Other features include three level controls (one for each input), a loop drive control, an output current meter and a 'compression' activity display giving visible indication of the amplifiers compressor.

More Key Features:

- Optional 11V phantom power available for electret or condenser microphones.
- 'Outreach' input allows the connection of up to 10 additional mic. Or line level inputs via a series of separately available single gang connector plates.
- Metal compensation control helps offset the frequency response problems associated with excessive metal in a building.
- Visible indication of the amplifiers compressor action via two LED's.
- 3.5mm headphone socket allows true monitoring of the output signal.

Technical Specification

Power Requirements - 230-240 V a.c mains (PDA200/2 < 150 VA; PDA500/2 < 225 VA; PDA1000/2 < 300 VA). IEC 320 fused mains lead supplied

Inputs

Line	(3 pin XLR) – impedance: 6k8 + or – input to ground; Sensitivity: 200mV – 2.5V RMS balanced or unbalanced
Microphones	(3 pin XLR) - – impedance: 6k8 + or – input to ground; Sensitivity: 1 – 8 mV balanced
Outreaach (Four-way	Weidmuller connector BL5. 08/4) – impedance: > 10k; Sensitivity: 500mV – 6V RMS balanced
Outreach Power	16 – 21 V d.c is available via the amplifiers Outreach Socket.

Output Type - Current Mode

Loop Connector - Four Way binding posts

Recommended Loop Impedance - 0.5 – 1 Ohm @ 1KHz. Will drive higher impedance loops with reduced area of coverage

Loop Drive Current @ 1 Ohm - PDA200/2 – 6A; PDA500/2 W 9A; PDA1000/2 PDA1000/2 – 12A

Peak Loop Drive Current
PDA200/2 – 8 Amps @ 1 Ohm;13 Amps @ 0.5 Ohm;
PDA500/2 – 12 Amps @ 1 Ohm; 19 Amps @ 0.5 Ohm;
PDA1000/2 – 14 Amps @ 1 Ohm; 24 Amps @ 0.5 Ohm;

Headphones - 3.5mm jack socket allows monitoring of the loop signal via >32 Ohm headphones

Maximum Area Coverage
For a 400m A/M field strength +/- 2dB
PDA200/2 @ 6A max short term current: Square room = 200m, Rectangular room (2.:1 aspect ratio) = 240m
PDA500/2 @ 9A max short term current: Square room = 500m, Rectangular room (2.:1 aspect ratio) = 600m
PDA1000/2 @ 12A max short term current: Square room = 900m, Rectangular room (2.:1 aspect ratio) = 1100m

Performance - Frequency response: 20Hz – 14 KHz + - 3dB; Distortion: Less than 0.5%; S to N ratio: Better than –65dB any input

Metal Compensation
True 3dB/octave design counteracts frequency dependent absorption by metal in the proximity of the installation over a bandwidth of approximately 100Hz – 10KHz

Compressor - Gives dynamically variable compression ratio from 1:1 (no compression) to 17:1
Attack Time: Approx 10mS Release Time: Approx 2.25

Indicators
Power on LED •••• Red
Loop Current •••••• A five LED bar graph type meter is provided by monitoring of loop current rather than from a line level derived signal. This meter has PPM type characteristics i.e. fast attack and allow release. This allows easy reading of fast peaks. Accuracy - +-10% Indicators

Controls
On/Off switch incorporated into IEC mains inlet.
Four way piano key style DIP switch selects phantom power for mic 1 & 2 XLR inputs and switches XLR input 1 between line and microphone settings. The fourth of the 4-in-line switch is not connected.
Level controls for XLR 1 (Line/Mic switchable), XLR 2 (Mic) and Outreach. These can be used individually or any of them together, in which case they act as a three input mixer. Drive Control: Sets the level of amplifier output current supplied by the amplifier. Metal compensation control. When fully anti-clockwise has no effect on the signal. When turned clockwise imparts a rising 3dB/octave characteristic to the frequency response of the amp to counteract the effort of metal in proximity to the loop.

Cooling Requirements - The PDA1000/2 and PDA500/2 have thermostatically controlled cooling fans, which are activated when the amplifiers internal heatsink temperature reaches approxi 56˚C. The PDA200/02 model does not require a cooling fan, as it does not generate as much heat as the larger models.

Dimensions & Weight - All Models: Length – 380mm; Depth – 220mm; Height – 80mm
PDA200/2 – 3.46Kg, PDA500/2 – 3.74Kg; PDA1000/2 – 4.54Kg

Stock Code
PDA 500/2 - SP9979
PDA 1000/2 - SP2016

Protec Fire Detection Plc, Protec House, Churchill Way, Nelson, Lancashire, BB9 6RT

Tel: 01282 717171 Fax: 01282 717273 Web: www.protec.co.uk Email: sales@protec.co.uk