

Power Amplifier 4x125W / 100V Class D

4XD125B

The 1U 19 inch rack mountable direct drive, 4 channel voice alarm amplifier unit provides 4 x 125 W power output channels. The unit can also be configured to provide 2 x 250 W power output channels with the utilisation of the parallel mode adaptor unit. Each channel provides an independent 100 V audio line.

The unit has an BS EN 54-4 certified integral battery charger for charging 24 V lead acid batteries of up to 65 Ah used to provide standby supply in the event of mains failure. It is designed for direct integration and is fully compatible with the Honeywell D1 System Digital Output Module.

100 V Outputs

There are four 100 V outputs available at the connector marked 'SPK 1/2 OUT' and 'SPK 3/4 OUT' on the rear of the unit. These outputs are for connection to the DOM or other VA/PA system control module.

Extension Interface

The 'EXTENSION INTERFACE' provides 'a Common Fault' output via voltage free contacts. The external input is for system fault reset and automatic fans test. The CAN-bus interface is for remote control and monitoring supporting DeviceNet communication protocol.

Control Interface

The control inputs are via a connector marked 'CONTROL I/F' that can be connected to the DOM or other VA/PA controller.

Mains Supply

The mains power to the unit is via an IEC connector having an integral protection fuse.

External Battery Supply

The external batteries connect to the unit at the 'BATT' connector and are charged by the integral temperature compensated charger. The fully monitored 24 V standby supply is used in the event of mains supply failure.

A temperature sensor connects to the 'BATT TEMP' connector, with the sensor positioned in between the batteries to monitor the temperature of the external batteries for automatic charge voltage adjustment.



General Indicators

- Mains Power (green LED)
- CPU Status (green LED)
- System Fault (yellow LED)
- Battery Power (yellow LED)

Channel Indicators

- Power (green LED)
- Input high (green LED)
- Input low (green LED)
- Clip (yellow LED)
- Fault (yellow LED)

FEATURES & BENEFITS

- 4-channel Direct-Drive amplifier for VA applications utilising 100 V speakers
- High efficiency (80% typical) Class D Amplifiers
- Delivers maximum possible power under overload or overdrive condition to maintain intelligibility of voice messages
- Integrated temperature compensated battery charger Certified to BS EN 54-4, capable of charging up to 65Ah battery pack
- Microcontroller based self monitoring and control
- Protection against overload and wiring short circuits
- Protection against overheating
- Temperature management with variable speed fan-assisted cooling
- System control and monitoring via Digital Output Module
- Full status reporting, diagnostics and control over CAN bus
- BS EN 54-16 certified
- Configurable outputs 4 x 125 W or 2 x 250 W
- 100 V direct output from amplifier removes the need for traditional step up transformer
- Reduced weight compared to traditional amplifiers
- Reduced heat output
- Reduced power consumption
- Increases rack capacity due to only 1 U rack space being required
- Two independent 24 V DC power outputs to power VA/PA controller or accessories

Power Amplifier 4x125 W / 100 V Class D Technical Specifications

PARAMETERS	VALUES
Output Power (Mains Powered)	4 x 125 W
Weight (Approximate)	9 Kg
Power Consumption Battery Powered	636 W max.
Power Consumption Battery Powered (Channels Enabled)	21 W max.
Power Consumption Battery Powered (Channels Disabled)	5 W max.
Mains Fuse	F6,3 AH250 V
Nominal Mains Voltage	230V AC 50 / 60 Hz +10 % to -15 %
Battery Capacity and Type	Lead-acid battery pack 24 V: 38 Ah min. 65 Ah max.
Battery Operating Voltage Range	21.5 V DC to 28.5 V DC
Battery Charger Current Limit	3.4 A
Battery Source Impedance	0.2 Ω max
Overall Dimensions (W x H x D)	483 mm x 45 mm x 402 mm / 1 U 19"
Colour	RAL 7016 (Fine texture)
Ambient Operating Temperature	-5 °C to +55 °C
Storage Temperature	-10 °C to +55 °C
Relative Humidity	Up to 93 % (non condensing)
Air Flow Direction	From front to rear of the amplifier unit
Function	Class D, transformerless 100 V outputs
Frequency Response at The Rated Power	20 Hz to 22 KHz \pm 3 dB
Distortion at The Rated Power (Resistive Load)	< 0.3 % THD at 1 kHz sine wave
Signal to Noise Ratio at Rated Power	90 dB (A - weighted)
Maximum Load Capacitance	200 nF #
Channel Separation	> 75 dB
Voltage Gain	42 dB
Input Sensitivity	0 dBu for rated output power
Input Impedance (Balanced)	20 K Ω
Efficiency at A Maximum Load	80 % typical (Battery powered)
Self-Oscillation Frequency at Idle	320 kHz (\pm 20 kHz)
Overload Protection	Protected against short-circuit or output overload
Thermal Protection	Protected against overheating by temperature controlled fans~

Excessive load capacitance may result in a degradation in performance.

~ Excessive temperatures may result in the amplifier temporarily reducing the output level until the normal operating temperature is achieved.

ORDERING INFORMATION

DESCRIPTION	ORDER CODES
Power Amplifier 4 x 125 W / 100 V, Class D, Integrated Battery Charger	580242
Parallel Mode Adaptor Unit (Require 1 Unit Per 2 Channels Being Paralleled)	583536

For more information

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