VARIODYN ONE

8 Channel Power Amplifiers with Power Sharing & Battery Charger

APPLICATION

Power amplifiers are used to amplify the audio signal and VARIODYN® ONE offers a range of Class D Power Amplifiers to provide you flexibility to choose an appropriate model as per your project's requirement.

8XDPS1200B and 8XDPS2000B are 8 channel amplifiers with Power Sharing technology and inbuilt battery charger. They provide total power of 1200 W or 2000 W per amplifier unit respectively.



8XDPS1200B - *585035*



8XDPS2000B - *585036*

8XDPS1200B

8XDPS1200B is a constant voltage audio power amplifier with direct output to speakers. The amplifier is based on class D amplifier modules technology, improved by Power Sharing feature. Each channel is capable to deliver 500W/100V power to load. 8XDPS1200B is equipped with universal supply voltage 115 -230V AC mains input. The unit features a configurable integrated battery charger for charging 24 V batteries up to 150 Ah, providing backup power in the event of a mains failure.

8XDPS2000B

8XDPS2000B is same as 8XDPS1200B but with an overall power of 2000 W and supply voltage 230V AC mains input.

Mains Supply:
The mains power to the unit is via an IEC connector.

External Battery Supply:
The external batteries connect to the unit at the 'BACKUP SUPPLY' connector and are charged by the integral temperature compensated charger. The fully monitored 24V standby supply is used in the event of mains supply failure. A leaded 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. If using an external standby supply, the battery charger must be configured as 'Disabled'. By factory default, the battery charger is configured as 'Disabled'.

Configuration:
Amplifier unit and integrated battery charger are fully configurable by VARIODYN® ONE Configuration Tool and INC over CAN bus. Refer to VARIODYN® ONE System Manuals for details of system connectivity and configuration settings.

General Indicator:
- Mains Power (green LED)
- System Fault (yellow LED)
- Battery Power (yellow LED)
- Signature Ring (green/yellow LED)

Channel Indicator:
- Power (green LED)
- High (green LED)
- Low (green LED)
- Clip (yellow LED)
- Error (yellow LED)

100 V Outputs:
There are eight 100V outputs available at the connector marked 'SPEAKER OUTPUT CH1 CH2 / CH3 CH4 / CH5 CH6 / CH7 CH8' at the back of the amplifiers. These outputs are for connection to the VARIODYN® ONE INC or other VA/PA system controllers.

Audio Input:
The control inputs are via connectors marked 'AUDIO INPUT' at the back of the amplifier, which can be connected to the VARIODYN® ONE INC or other VA/PA controller.

Output Power:
The total power of 8XDPS1200B is 1200W/100V and 2000W/100V for 8XDPS2000B. The maximum power of each channel is 500W/100V. The channel output power can be configured via Configuration Tool in 10W steps. By factory default, the setting for each channel is:

8XDPS1200B 30% of maximum 500W, which is 150W/100V/67Ω

8XDPS2000B 50% of maximum 500W, which is 250W/100V/40Ω.

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FEATURES AND BENEFITS

- 8-channel Direct-Drive amplifier for voice alarm application that utilize industry standard 100V speakers
- Power Sharing technology that supports configurable allocation of 1200/2000W/100V power, each channel 500W/100V at maximum
- High efficiency (>77% typical) Class D Amplifiers
- Protection against overload and wiring short
- Delivers maximum possible power under overload or overdrive condition to maintain intelligibility of voice messages
- Microcontroller based extensive self-monitoring and control
- Protection against overheating
- Configurable integrated temperature compensated battery charger designed to EN54 Part 4, capable of charging up to 150Ah battery packs
- Temperature management with variable speed fan assisted cooling
- Full configuration, control, status reporting, and diagnostics over CAN bus by VARIODYN® ONE INC system control module
- Protected DC 24V power output for providing standby power to system controller in event of mains power failure and/or power to external peripheral module

TECHNICAL DATA

TYPE	8XDPS1200B	8XDPS2000B
Mains voltage	115V to 230V AC 50 to 60 Hz, ±10%	230V AC 50 to 60 Hz, ±10%
Battery capacity and type	Valve-regulated lead-acid battery: 65Ah min. (factory default configuration), 105Ah, 150Ah max.	Valve-regulated lead-acid battery: 65Ah min. (factory default configuration), 105Ah, 150Ah max.
Battery operating voltage range	21.5V DC to 28.5V DC	21.5V DC to 28.5V DC
Battery charger current limit	Configurable by battery capacity, 10A max	Configurable by battery capacity, 10A max
Battery source impedance	0.10 Ω max.	0.10 Ω max.
Battery charger start-up	15V DC min. battery voltage	15V DC min. battery voltage
Battery under voltage cut-off protection	20V DC	20V DC
Battery charger temperature compensation factor	24mV/°C, 36mV/°C (factory default), 48mV/°C	24mV/°C, 36mV/°C (factory default), 48mV/°C
Operation modes	Channel Enable/Channel Disable/Power Saving Mode	Channel Enable/Channel Disable/Power Saving Mode
Output power EN54-16 (mains powered)	Single channel max. 500W/100V (350W/70V or 125W/25V)	Single channel max. 500W/100V
Output power EN54-16 (battery powered)	Single channel max. 500W/100V (350W/70V or 125W/25V)	Single channel max. 500W/100V
Output voltage	100V (factory default configuration), 70V or 25V at 0 dBu input	100V at 0 dBu input
Distortion at -3dB below rated power (resistive load)	< 0,06% THD at 1 kHz sine wave	< 0,06% THD at 1 kHz sine wave
Signal to noise ratio at rated power	87 dB (A - weighted)	87 dB (A - weighted)
Channels separation	>70 dB	>70 dB
Frequency response at the rated power	20 Hz < -1.0 dB; 22 kHz < - 2.0 dB	20 Hz < -1.0 dB; 22 kHz < - 2.0 dB
Input impedance (balanced)	>20 kΩ	>20 kΩ
Input clipping	= +20 dBu	= +20 dBu
Technology	Class D Direct Drive	Class D Direct Drive
Efficiency at a maximum load	≥ 77 % typical (Mains powered)	≥ 78 % typical (Mains powered)
External DC power output	24V DC (18V DC to 28.5V DC) / 3A max. electronically protected against overload or short-circuit	24V DC (18V DC to 28.5V DC) / 3A max. electronically protected against overload or short-circuit
Ambient temperature	-5 °C to +55 °C	-5 °C to +55 °C
Storage temperature	-10 °C to +55 °C	-10 °C to +55 °C
Relative humidity	Up to 93 % (non-condensing)	Up to 93 % (non-condensing)
Air flow direction	From rear to front of the amplifier unit	From rear to front of the amplifier unit
Housing	Metal	Metal
Color	RAL 810-M (Enclosure)	RAL 810-M (Enclosure)
Weight	12.0 Kg	12.0 Kg
Dimensions (w x h x d)	441 x 88 x 401 mm (2 HU)	441 x 88 x 401 mm (2 HU)
Approval	EN 54-16 and EN54-4 (Battery charger)	EN 54-16 and EN54-4 (Battery charger)

ORDER INFORMATION

MODEL NAME	PART NO.	DESCRIPTION	STANDARD HEIGHT
8XDPS1200B	585035	8 Channels and 1200 W in total Class D Amplifier with Power Sharing & inbuilt Battery Charger	2 HU
8XDPS2000B	585036	8 Channels and 2000 W in total Class D Amplifier with Power Sharing & inbuilt Battery Charger	2 HU

Subject to technical changes without notice.
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