



Digital Power Amplifier

The DPA is a digital power amplifier with extremely low power consumption (0.2W per channel) during standby mode, and high amplification efficiency of 90%. A four-step DIP switch can be configured to enable/disable the function of standby mode (power-save mode) when powered by AC mains; to request the LEDs on the front panel to comply to EN54-16; and to enable/disable the battery monitoring.

The amplifiers are powered by 100 VAC ~ 240 VAC 50/60 Hz or 48 VDC battery backup. Each model has the line inputs with individual volume gain, status LEDs (power, battery, fault, general fault, overload and signal) on the front panel, and the DPA models can bridge two channels to double the power wattage.

FEATURES

- Class-D amplification performance and energy-efficient design
- Universal switch mode power supply with PFC (Power Factor Correction)
- Full protection circuitry against over/under AC voltage, overload, overheat, short-to-ground or short circuit on speaker lines
- Four models available:
 - DPA8060 (60W x 8 CH or 120W x 4CH, bridge mode)
 - DPA2125 (125W x 2 CH or 250W x 1CH, bridge mode)
 - DPA4125 (125W x 4CH or 250W x 2CH, bridge mode)
 - DPA2250 (250W x 2 CH or 500W x 1CH, bridge mode)
 - DPA4250 (250W x 4CH or 500W x 2CH, bridge mode)
 - DPA2500 (500W x 2CH or 1000W x 1CH, bridge mode)
- Support bridging two channels to double the power wattage
- Airflow cooling by internal speed fan (temperature controlled)
- Applicable for full scale of system applications: hotel, railway, airport, houses of worship, educational and sports facilities, club etc.

CONTROLS AND INDICATORS

- **Front**
 - General fault LED (system failed)
 - Overload LED
 - Signal, fault LEDs
 - Power and battery LEDs
- **Rear**
 - AC power socket
 - RS485 for firmware update
 - Lamp input and spare contact input (DPA4125/4250/2500)
 - General fault output and service request output
 - DIP switch for Sleep-AC, EN54-16, BAT-MNT, and one for reserved
 - 2/4/8 (depend on model) channel amp outputs
 - 2/4/8 (depend on model) channel inputs & volume gain
 - 48 VDC battery backup input

REAR PANELS



DPA8060



DPA2125



DPA4125



DPA2250



DPA4250



DPA2500

DPA

High-Efficiency Class-D Digital Power Amplifier

ELECTRICAL

- AC power input: 100 ~ 240 VAC, 50/60 Hz
- Power consumption (AC)

| model | idle | 1/2 full power | full power |
|----------------|------|----------------|------------|
| DPA8060 | 42VA | 365VA | 708VA |
| DPA2125 | 26VA | 190VA | 355VA |
| DPA4125 | 34VA | 340VA | 650VA |
| DPA2250 | 28VA | 350VA | 670VA |
| DPA4250 | 38VA | 660VA | 1300VA |
| DPA2500 | 28VA | 700VA | 1320VA |

Idle: pilot tone -36 dBu, 1/2 full power: alarm tone

- DC power input: 43 ~ 56 VDC
- Power consumption (DC)

| model | standby mode | idle | 1/8 full power | 1/2 full power | full power |
|----------------|--------------|------|----------------|----------------|------------|
| DPA8060 | 2W | 35W | 92W | 330W | 635W |
| DPA2125 | 0.7W | 12W | 55W | 175W | 325W |
| DPA4125 | 0.7W | 30W | 85W | 305W | 585W |
| DPA2250 | 0.7W | 15W | 90W | 315W | 560W |
| DPA4250 | 0.7W | 34W | 165W | 595W | 1170W |
| DPA2500 | 0.7W | 25W | 175W | 630W | 1180W |

Idle: pilot tone -36 dB, 1/8 full power: speech, 1/2 full power: alarm tone

- Amplifier outputs
 - EU type: 100V, 50V, 4 ohm

AUDIO CHARACTERISTICS

- Frequency response: 50 ~ 20 kHz (± 3 dB) @ 0 dBu
- SNR: > 90 dB
- THD+N: < 0.1% @ 1 kHz
- Maximum input level: 0 dBu
- Input impedance
 - DPA2500: 10k ohm
 - DPA8060/DPA2125/DPA4125/DPA2250/DPA4250: 12k ohm
- Crosstalk: > 70 dB @ 0 dBu gain

LOUDSPEAKERS OUTPUTS

| model | rated output power | rated load impedance | rated load capacitance |
|----------------|--------------------|--------------------------------|-------------------------------|
| DPA8060 | 60W | 167 ohm (100V) 82 ohm (70V) | 30 nF (100V) 62 nF (70V) |
| DPA2125 | 125W | 80 ohm (100V) 40 ohm (70V) | 62 nF (100V) 120 nF (70V) |
| DPA4125 | 125W | 80 ohm (100V) 40 ohm (70V) | 62 nF (100V) 120 nF (70V) |
| DPA2250 | 250W | 40 ohm (100V) 20 ohm (70V) | 240 nF (100V) 470 nF (70V) |
| DPA4250 | 250W | 40 ohm (100V) 20 ohm (70V) | 120 nF (100V) 240 nF (70V) |
| DPA2500 | 500W | 20 ohm (100V) 10 ohm (70V) | 240 nF (100V) 470 nF (70V) |

* (1 min. at 40°C) (per CH)

CERTIFICATIONS AND APPROVALS

| Region | Standard | Approval |
|--------|---------------------------|---|
| Europe | Voice Alarm | EN 54-16 (1438-CPR-0947 & 1438-CPR-0871) |
| Europe | CE/EMI | EN 55032 |
| Europe | CE/EMC | EN 61000-3-2 EN 61000-3-3 EN 55035 |
| Europe | CE/LVD | EN 62368-1 (In process) |
| USA | Mass Notification Systems | UL 2572 (Pending) |
| USA | Safety | UL 62368-1 (Pending) |

MECHANICAL

- Dimensions (W x H x D)
 - DPA8060: 437 x 88 x 400 mm
 - DPA2125: 437 x 88 x 270 mm
 - DPA4125: 437 x 88 x 370 mm
 - DPA2250: 437 x 88 x 270 mm
 - DPA4250: 437 x 88 x 387 mm
 - DPA2500: 437 x 88 x 387 mm
- Weight
 - DPA8060: 14.8 kg
 - DPA2125: 8 kg
 - DPA4125: 14.5 kg
 - DPA2250: 9.4 kg
 - DPA4250: 14.5 kg
 - DPA2500: 16 kg
- Mounting: 19" 2U rack
- Colour: RAL 7016

ENVIRONMENTAL

- Operating temperature: -5 °C ~ +55 °C
- Storage temperature: -40 °C ~ +70 °C
- Relative humidity: 20% to 95%
- Air pressure: 600 to 1100 hPa
- Heat dissipation
 - DPA8060: 767 BTU/hr
 - DPA2125: 380 BTU/hr
 - DPA4125: 512 BTU/hr
 - DPA2250: 580 BTU/hr
 - DPA4250: 1024 BTU/hr
 - DPA2500: 1092 BTU/hr

ORDERING INFORMATION

- DPA8060: 60Wx8 DPAmP/100-240Vac,OUT 100V/50V/4ohm
- DPA2125: 125Wx2 DPAmP/100-240Vac,OUT 100V/50V/4ohm
- DPA4125: 125Wx4 DPAmP/100-240Vac,OUT 100V/50V/4ohm
- DPA2250: 250Wx2 DPAmP/100-240Vac,OUT 100V/50V/4ohm
- DPA4250: 250Wx4 DPAmP/100-240Vac,OUT 100V/50V/4ohm
- DPA2500: 500Wx2 DPAmP/100-240Vac,OUT 100V/50V/4ohm