Class D Power Amplifiers

The class D power amplifiers are components of the Honeywell Voice Alarm System combining the latest in digital audio technology with the integrity necessary for emergency Voice Alarm systems to satisfy the requirements of EN54 part 16.

Key Features:

- Power amplifier, 2-channel, Class D, 100 V outputs
- Two models available: 2 x 250 W / 2 x 400 W
- 80% efficiency factor
- Integrated electronic protection against thermal overload and short-circuits during output
- Certified to EN 54-16
- Full power rating on 24 V standby power operation
- CPD number: 0786-CPD-20997

Connections

- Combined LF / control inputs
- Dual-channel 100 V output
- 230 V AC Power supply
- 24 V DC emergency power input

Indicators per amplifier channel

- Operation
- Amplifier channel status
- Amplifier channel fault
- Clip display

General Indicators

- 230 V AC mains voltage
- CPU status

The 100v audio connections from the amplifiers are managed by the VA system Digital Output Module (DOM). Inputs are via a combined audio and control cable for each channel making connection simple and problem free. The amplified 100V output is routed back to the DOM where output to the loudspeaker lines is managed.
# Technical Specifications

## DIMENSIONS

<table>
<thead>
<tr>
<th>Height, Width, Depth:</th>
<th>88mm, 402 mm / 2 HU, 19&quot;mm, 483mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>D250 approx. 16.5 kg, D400 approx. 19 kg</td>
</tr>
</tbody>
</table>

## HOUSING COLOR:

| Body                       | Grey, similar to RAL 7016 |

## GENERAL TECHNICAL DATA

- **Nominal voltage**: 230 V AC
- **Nominal frequency**: 50 to 60 Hz, +10% / -5%
- **Emergency power supply**: 24 V DC
- **Functional principle**: Class D
- **Transmission frequency band (-1 dB)**: 50 Hz to 22 kHz
- **Signal-to-noise ratio**: > 90 dB, A - unweighted
- **Harmonic distortion at full load / 1 kHz**: < 0.03 %
- **Channel separation**: > 42 dB
- **Input impedance 20 kΩ, el. balanced**: 20 kΩ, el. balanced

## ELECTRICAL SPECIFICATION - D250

- **Rated power output (sin.)**: 2 x 250 W
- **Voltage consumption (230 V AC)**: 2.8 A
- **VOLTAGE CONSUMPTION**
  - (24 V DC / Sinus continuous tone*): 25 A
  - (24 V DC / Announcement / 1/3 load): * 8.75 A
  - (24 V DC / Announcement / 1/8 load): * 3.6 A
- **Power consumption in standby mode (230 V) separated f. mains supply**: Approx. 0 VA

## ELECTRICAL SPECIFICATION - D400

- **Rated power output (sin.)**: 2 x 400 W
- **Voltage consumption (230 V AC)**: 4.5 A
- **VOLTAGE CONSUMPTION**
  - (24 V DC / Sinus continuous tone*): 40.5 A
  - (24 V DC / Announcement / 1/3 load): *13.9 A
  - (24 V DC / Announcement / 1/8 load): *5.6 A
- **Power consumption in standby mode (230 V) separated f. mains supply**: Approx. 0 VA

## DISSIPATION LOSS

<table>
<thead>
<tr>
<th>230 V AC (Idle)</th>
<th>24 V DC (channels off)</th>
<th>24 V DC (channels on)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D400</td>
<td>D250</td>
<td></td>
</tr>
<tr>
<td>30 W max</td>
<td>25 W max</td>
<td>12 W max</td>
</tr>
<tr>
<td>3 W max</td>
<td>3 W max</td>
<td>10 W max</td>
</tr>
</tbody>
</table>

## ENVIRONMENTAL SPECIFICATIONS

- **Ambient temperature during operation**: -5°C to +55°C
- **Humidity**: 40% to 93% relative humidity (non-condensing)

† The voltage consumption is for both amplifier channels together when both outputs are wired with maximum speaker power (2 x 250 W or 2 x 400 W)

## ORDER CODES

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ORDER CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class D Power Amplifier - 2 x 250W / 100V</td>
<td>580231</td>
</tr>
<tr>
<td>Class D Power Amplifier - 2 x 400W / 100V</td>
<td>580232</td>
</tr>
</tbody>
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