

## V600:4 Power amplifier, 600W, 4 channel V-series



- 4-channel amplifier, with a total powerTANK capacity of 600 W
- dualCOOL convection cooling with additional intelligent fan in case of extreme thermal conditions
- ecoRAIL and APD deliver significant reduction in power consumption
- Variable Load Drive (VLD) providing the same power into 4  $\Omega$ , 8  $\Omega$ , 70 V or 100 V
- amp-LINK single cable solution for easy installation

The V600:4 is a 600 W power amplifier with powerTANK technology that flexibly delivers the total power over its 4 channels.

The amplifier is ideally suited to background music and clear voice announcement applications such as:

- Supermarkets
- Bars and restaurants
- Retail outlets
- Education
- Houses of worship
- Museums and galleries
- Transport hubs
- Conference centers

### Functions

#### powerTANK

powerTANK is a reservoir of available amplification power that is deployed flexibly across the 4 channels of the amplifier. There is no need to set up the powerTANK as it adapts to the requirements of each zone or output without extra manual configuration of each individual channel.

#### Variable Load Drive

Variable Load Drive (VLD) ensures that the powerTANK capacity is utilized efficiently, providing consistent power to any channel with any impedance.

#### dualCOOL

The dualCOOL thermal design means that the amplifier typically operates as a convection cooled amplifier, but in extreme thermal conditions the amplifier is also equipped with an intelligent multi-speed fan to ensure maximum performance and reliability in any application.

#### ecoRAIL

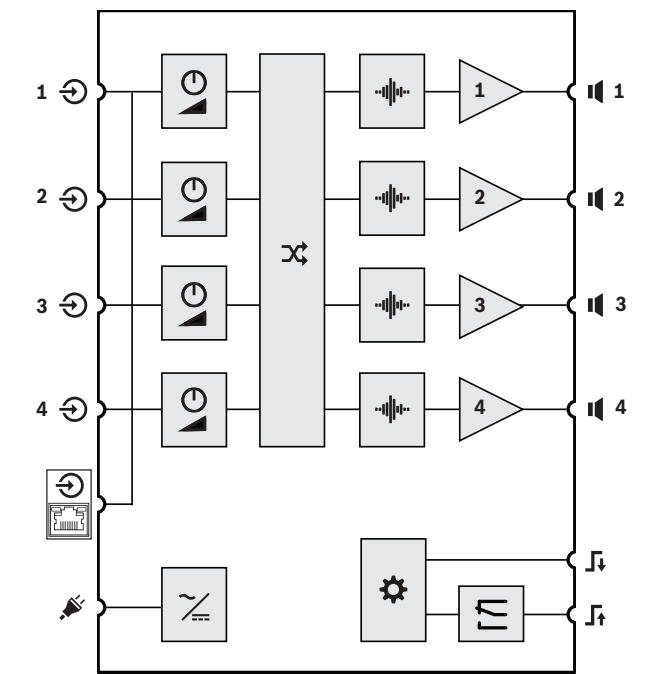
ecoRAIL's power consumption is similar to a regular standby level, yet ecoRAIL still produces audio output suitable for background music levels, and the Auto Power Down (APD) mode can be engaged to further reduce power consumption to less than a watt when there is no signal present for extended periods.

#### amp-LINK








The single cable installation feature of amp-LINK is compatible with AES72-1E (RJ45 connectors) wired devices. This solution provides easy installation for all four channels without needing to wire all the connections individually.

#### PFC power supply







Equipped with a PFC power supply and protection features usually reserved for the professional power amplifiers, means that the amplifier resists complete shutdown situations and will always perform at its best under all conditions.



Internal functions

|   |               |   |                                     |
|---|---------------|---|-------------------------------------|
|   | Level control |   | Signal processing (Filter, limiter) |
|  | Power supply  |  | Controller                          |
|  | Input routing |  | Amplifier                           |
|  | Failure relay |   |                                     |



Rear panel input and output connections

|   |                  |   |                        |
|---|------------------|---|------------------------|
|  | Signal input 1-4 |  | Mains input            |
|  | AMP-LINK input   |  | Loudspeaker output 1-4 |
|  | REMOTE ON Input  |  | RDY/FLT Output         |

Rear panel controls

|   |               |
|---|---------------|
|  | Level control |
|---|---------------|

Front panel indicators and control

|   |                              |   |                             |
|---|------------------------------|---|-----------------------------|
|  | Device/channel fault (CH1-4) | LIMIT   | Over driven channel (CH1-4) |
| SIGNAL  | Input signal present (CH1-4) |  | Power On/Off amplifier      |

Architects’ and engineers’ specifications

The 4-channel amplifier shall have a total power of 600 W, be able to adapt the power of the output channels to a maximum of 300 W per channel with power sharing in either 4 ohm, 8 ohm, 70 V and 100 V conditions on any channel simultaneously. The amplifier housing shall be a 1” rack unit size design. The amplifier shall have a thermal design that can operate as passive cooled device, but also be able to active forced air cooling when required under extreme conditions, to avoid reduction in available power. The reliable thermal operating range of the device shall be < 45 °C without reduction or shutdown. The amplifier shall have an automatic power down mode that can be turned on or off with a standby consumption of < 1 W. The amplifier shall also have a low power consumption feature whereby significant power consumption is maintained, but output modulation suitable for background music levels is still possible. The amplifier shall be able to connect audio as either input or through to other devices using the AES72-1E wiring protocol. The amplifier shall be equipped with a PFC power supply and protections to ensure reliable and safe operation including High Frequency Limiter (HFL), Output Current Limiter (OCL), Rail Supervision Limiter (RSL), High Frequency Protection (HFP), DC Protection (DCP), Over Current Protection (OCP), Mains Fail Protection (MFP), Output Balance Protection (OBP), Over Temperature Protection (OTP), Over Voltage Protection (OVP). The amplifier shall be the Dynacord V600:4 power amplifier.

Parts included

| Quantity | Component                                |
|----------|--|
| 1        | Power amplifier                          |
| 1        | Mains cord                               |
| 1        | Euroblock remote connector 5-pole        |
| 2        | Euroblock input connector 6-pole         |
| 2        | Euroblock output connector 4-pole        |
| 4        | Rubber feet                              |
| 2        | 19"-rack mounting brackets (pre-mounted) |
| 1        | Quick Installation Guide                 |
| 1        | Safety information                       |

Technical specifications

Electrical

| Output power  | 4 Ω       | 8 Ω | 70 V | 100 V |
|---|-----------|-----|------|-------|
| Rated output power <sup>1</sup>                               | 4 x 150 W |     |      |       |
| Maximum output power per channel (power sharing) <sup>1</sup> | 300 W     |     |      |       |
| Total rated output power <sup>1</sup>                         | 600 W     |     |      |       |

| Output power                      | 4 Ω                   | 8 Ω                   | 70 V                  | 100 V                |
|-----------------------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Number of channels                | 4                     |                       |                       |                      |
| Output voltage rated output power | 24.5 V <sub>RMS</sub> | 34.6 V <sub>RMS</sub> | 70.7 V <sub>RMS</sub> | 100 V <sub>RMS</sub> |
| Maximum output voltage            | 40.0 V <sub>RMS</sub> | 56.0 V <sub>RMS</sub> | 70.7 V <sub>RMS</sub> | 100 V <sub>RMS</sub> |
| Rated impedance per channel       | 4 Ω                   | 8 Ω                   | 33.3 Ω                | 66.7 Ω               |
| Minimum impedance per channel     | 2.6 Ω                 | 4 Ω                   | 16.7 Ω                | 33.3 Ω               |

| Amplifier   | 4 Ω  | 8 Ω       | 70 V   | 100 V     |
|---|--|-----------|--|-----------|
| Nominal Gain (+6 dBu input sensitivity, LEVEL 0 dB)                           | 24.0 dB  | 27.0 dB   | 33.2 dB  | 36.2 dB   |
| Maximum Gain (0 dBu input sensitivity, LEVEL +6 dB)                           | 30.0 dB  | 33.0 dB   | 39.2 dB  | 42.2 dB   |
| THD+N (1/8 rated output power, 1 kHz)   | < 0.1 %  |           |  |           |
| Crosstalk (ref. 1 kHz, 12 dB below maximum)                                   | < -80 dB   | < -85 dB  | < -90 dB   | < -95 dB  |
| Frequency Response <sup>2</sup> (ref. 1 kHz, analog in to speaker out, -3 dB) | HP: 30/100/150 Hz to 20 kHz<br>LP: 30 Hz to 150 Hz |           | HP: 50/100/150 Hz to 20 kHz<br>LP: 50 Hz to 150 Hz |           |
| Damping Factor (30/50 Hz to 1 kHz, ref. to rated impedance)                   | > 80   | > 160     | > 500  | > 1000    |
| Output Stage Topology   | Class D, fixed frequency                           |           |  |           |
| Signal to Noise Ratio (A-weighted, ref. to rated output power, LEVEL 0 dB)    | > 98 dB  | > 100 dB  | > 101 dB   | > 103 dB  |
| Output Noise (A-weighted, LEVEL 0 dB)   | < -68 dBu  | < -67 dBu | < -62 dBu  | < -61 dBu |

| Connectivity                     |   |
|----------------------------------|---|
| Analog Audio Input               |   |
| Type                             | 2 x 6-pin Euroblock, 3.81 mm, male, parallel 1x RJ45 AMP-LINK       |
| Maximum input level (LEVEL 0 dB) | +18 dBu   |
| Input impedance, active balanced | 20 kΩ   |
| Mains Input                      | IEC C14   |
| Loudspeaker output               | 2 x 4-pin Euroblock, 5.08 mm, female                                |
| Control Port                     |   |
| Type                             | 1 x 5-pin Euroblock, 3.81 mm, male                                  |
| REMOTE ON                        | Remote On / Standby contact (overrides power button on front panel) |

| Connectivity |   |
|--------------|---|
| READY/FAULT  | Galvanic isolated relay, max. 30 V <sub>DC</sub> / 500 mA <sub>DC</sub> |

| General                                  |  |
|--|--|
| Signal processing                        | Input Routing, HPF 24 dB/Oct., LPF 24 dB/Oct., Flat, Peak Limiter  |
| Power requirements                       | 100 V to 240 V, 50 Hz to 60 Hz AC  |
| Power consumption                        |  |
| Consumption at 1/8 rated output power    | 115 W  |
| Idle mode (ecoRAIL with no input signal) | < 20 W   |
| Standby mode (APD active)                | < 1 W  |
| Power supply topology                    | Switching power supply with power factor correction  |
| Protections                              | Audio limiters, high temperature, DC, HF, short circuit, back-EMF, peak current limiters, inrush current limiters, mains over/under voltage protection |
| Front status LEDs                        | Signal, limit, fault LEDs per channel; power LED   |

Environmental

| Climatic conditions        |  |
|----------------------------|--|
| Cooling concept            | Convection cooling in tabletop application and rack application with spacing between units. Forced cooling (side to rear) in rack application without spacing between units and in extreme thermal conditions. |
| Ambient temperature limits | -5 °C to +45 °C (+23 °F to +113 °F)  |
| Altitude (operating)       | -500 m to +5000 m (-1614 ft to 16404 ft)   |

Mechanical

| Enclosure  |   |
|--|---|
| IEC Protection Class                             | Class I (grounded)                            |
| Dimensions (HxWxD)<br>With 19" mounting brackets | 44.2 x 483 x 269.5 mm (1.74 x 19.2 x 10.6 in) |
| Weight   | 3.6 kg (7.9 lb)                               |

<sup>1)</sup> Test signal for max. output power according IHF-A-202 (Dynamic-Headroom, burst 1 kHz / 20 ms on / 480 ms off / low level -20 dB)  
<sup>2)</sup> Selectable via Speaker EQ.

## Ordering information

### **V600:4 Power amplifier, 600W, 4 channel**

4-channel, 600 W power amplifier with power sharing.

Order number **V600:4 | F.01U.398.543**

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