

IPX5:4 DSP power amplifier 4x1250W, install

IPX Series



- 4 x 1250 W multichannel installation DSP amplifier with digitally controlled PFC supply
- Fully integrated DSP with native 96 kHz and FIR Drive technology
- Dante and OCA integration via OMNEO with fallback options
- Parallel, Bridge and Parallel-bridge modes with 70/100/140/200 V and low impedance operation
- High efficiency Eco Rail technology for lower operating costs

Parts included

| Quantity | Component |
|----------|--|
| 1 | IPX series DSP power amplifier |
| 1 | 8-pin Euroblock-type connector, Output, 6 mm |
| 2 | 6-pin Euroblock-type connector, Input |
| 1 | 8-pin Euroblock-type connector, GPIO |
| 4 | M6x20 screw for rack mounting |
| 1 | Installation manual |
| 1 | Mains power connector, 32 A with safety & assembly instruction |
| 1 | Safety instruction booklet |

Technical specifications

OUTPUT POWER

| Low-Z mode: Load Impedance | 2 Ω | 2.7 Ω | 4 Ω | 8 Ω |
|--|--------|--------|--------|--------|
| Maximum Output Power ¹ | | | | |
| Normal Mode, all channels driven | 1300 W | 1500 W | 1250 W | 1250 W |
| Normal Mode, asymmetrical drive ³ | 1300 W | 1800 W | 2000 W | 1300 W |

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|---|-------------|--------------|---------------------------|---------------------------|
| Bridge | - | - | 2600 W | 2500 W |
| Parallel | 2500 W | 3000 W | 2500 W | 1250 W |
| Parallel-Bridge | 5200 W | 6000 W | 5000 W | 5000 W |
| Direct Drive Mode: Nominal Voltage | 70 V | 100 V | 140 V ² | 200 V ² |

Maximum Output Power¹

| | | | | |
|---------------------------------|--------|--------|--------|--------|
| All channels driven | 1250 W | 1250 W | 2500 W | 2500 W |
| Asymmetrical drive ³ | 1800 W | 2000 W | 3600 W | 4000 W |

Number of Amplifier Channels

| | |
|---|-----------------------|
| Maximum Output Voltage, Normal mode, per channel | 150 V _{peak} |
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|---|----------------------|
| Maximum Output Current, Normal mode, per channel | 41 A _{peak} |
|---|----------------------|

AMPLIFIER

Voltage Gain

| | |
|------------------------|---|
| Low-Z mode, ref. 1 kHz | 32.0 dB, adjustable 20.0-44.0 dB |
| Direct Drive mode | 33.2/36.2/39.2/42.2 dB for 70/100/140/200 V |

Input Sensitivity

| | |
|---|---|
| Low-Z mode, Max. Output Voltage | 10.7 dBu (2.66 V), adjustable -1.3-22.7 dBu |
| Direct Drive mode | 6 dBu (1.55 V), fixed |
| THD 3 dB below max, AES17, 1 kHz | < 0.05 % |
| DIM 100 3.15 kHz, 15 kHz | < 0.15 % |
| IMD-SMPTE 60 Hz, 7 kHz | < 0.05 % |
| Crosstalk ref. 1 kHz, 12 dB below Max, 8 Ω | < -80 dB |
| Frequency Response ref. 1 kHz, analog in to speaker out | 20 Hz to 20 kHz (±0.5 dB) |
| Damping Factor 20 Hz to 200 Hz, 8 Ω | > 400 |
| Output Stage Topology | Class D, fixed frequency |
| Signal to Noise Ratio Amplifier | |
| A-weighted, analog input | 112 dB |
| A-weighted, digital input | 115 dB |
| Output Noise | |
| A-weighted, analog input | < -70 dBu |
| A-weighted, digital input | < -73 dBu |
| CONNECTIVITY | |
| Analog Audio Input/Thru | |
| Type | 2 x 6-pin Euroblock, male |
| Maximum Input Level | +21 dBu |
| Input Impedance, active balanced | 20 kΩ |
| Reference level equal to digital input | +21 dBu for 0 dBFS |
| Speaker Output | 1 x 8-pin Euroblock, 6mm, female |
| GENERAL | |
| Power Consumption | |
| Rated power consumption (see BTU table) | 700 W |
| 1/8 Maximum Output Power at 4 Ω | 900 W |

| | |
|---|---|
| Idle Mode (no input signal) | 75 W |
| Standby Mode | < 15 W |
| Dimensions (W x H x D), mm | 483 x 88.1 x 514.2 |
| Weight | 14.3 kg (31.5 lb) |
| Shipping Weight | 16.5 kg (36.4 lb) |
| DIGITAL SIGNAL PROCESSING | |
| Sampling rate | 48 kHz/96 kHz, OMNEO/Dante synchronized |
| Signal delay/latency | 0.70 ms/0.53 ms |
| Analog In to Speaker Out, 48 kHz/96 kHz | |
| Dante Network Latency | typ. 1.00 ms |
| Signal Processing | |
| User EQ | 12 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass and Notch; 2 filters of them with additional asymmetric filter type |
| User Delay | 0 to 2000 ms per channel (units: μs, ms, s, cm, m, inches, feet) |
| Array EQ | 5 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass, and All-Pass |
| Array Delay | 0 to 500 ms per channel (units: μs, ms, s, cm, m, inches, feet) |
| Speaker EQ | 10 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Hi-Pass, Lo-Pass and All-Pass |
| Speaker X-Over | Hi-Pass, and Lo-Pass per channel, 6/12/18/24/30/36/42/48 dB Bessel/ Butterworth, 12/24/48 dB Linkwitz-Riley; Alignment Delay, 0 to 20 ms per channel |
| Speaker FIR | Up to 1025 taps, Linear Phase Filter, Linear Phase Brickwall X-Over |
| Speaker Limiters | Peak Anticipation Limiter and RMS/TEMP Limiter per channel |
| Other Functions | Source Selection and Mix, Level, Mute, Polarity, Sine and Noise Generator, Pilot Tone Generator and Detection, Level Meters, Impedance Measurement and Load Monitoring |
| Memory | |
| DSP Presets | 1 Factory + 20 User |
| Speaker-Pool Presets | 30 Speaker Settings |
| Source Supervision and Fallback | Pilot Tone supervision at Analog and OMNEO/Dante inputs, switchover to alternative Source Selection |
| CONNECTIVITY | |
| Network | |
| Type | 2 x Neutrik EtherCON/RJ45, redundant PRIMARY/SECONDARY |

| | |
|---------------------------------|---|
| General | 1000base-T/100base-TX, integrated switch |
| Network Audio Inputs | 8 channels, 48/96 kHz, OMNEO/Dante format |
| Network Audio Outputs (Monitor) | 2 channels, 48/96 kHz, OMNEO/Dante format |
| Mains Input | 1 x Neutrik powerCON-HC |
| GPIO Control Port | |
| Type | 1 x 8-pin Euroblock, male |
| Ports and Operating Modes | 3 x GPIO, switchable Analog In/Digital In/Digital Out |
| Analog Input Range | 0 V to +13 V, 40 k Ω input resistance |
| Digital Input Limits | ON: < 1.5 V OFF: > 2.0 V, internal Pull Up (10 k Ω) |
| Digital Outputs | ON: Output switched to GND, max. 200 mA OFF: Open Collector (40 k Ω to GND) |
| Reference Voltage Output | +10 V, max. 200 mA, supervised, short circuit protected |
| READY/FAULT contact | Galvanic isolated relay, max. 30 VDC/500 mADC |
| GENERAL | |
| User Interface | |
| Display | Black/white OLED 256 x 64 pixel |
| Front panel indicators | 4 x status LEDs (POWER, STANDBY, FAULT, OMNEO) |
| Front panel operating elements | 3 buttons (UP, ENTER, DOWN) |
| Rear panel indicators | 1 x status LED (STATUS) |
| Rear panel operating elements | Mains Switch |

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|------------------------------------|--|
| Power Requirements | 100 V to 240 V, 50 Hz to 60 Hz AC |
| Power Supply Topology | Switching Mode Power Supply with digital controlled Power Factor Correction |
| Protections | Audio Limiters, High Temperature, DC, HF, Short Circuit, Back-EMF, Peak Current Limiters, Inrush Current Limiters, Turn-on Delay, Mains Circuit Breaker Protection, Mains Over-/Under voltage Protection |
| Cooling | Front-to-rear, temperature controlled fans, supervised |
| Ambient Temperature Limits | +5 °C to +40 °C (+40 °F to +105 °F) |
| IEC Protection Class | Class I (grounded) |
| Electromagnetic Environment | E1, E2, E3 |
| Color | Black |

Amplifier at rated conditions, Low-Z Normal operation mode, all channels driven, 4 Ω loads, Analog input, 32 dB Gain, 48 kHz sample rate, unless otherwise specified.

¹Test signal for max. output power according IHF-A-202 (Dynamic-Headroom, burst 1 kHz/20 ms on/480 ms off/low level -20 dB).

²Available in Bridge operation mode only.

³Asymmetrical drive: using half of the available channels at -6 dB.

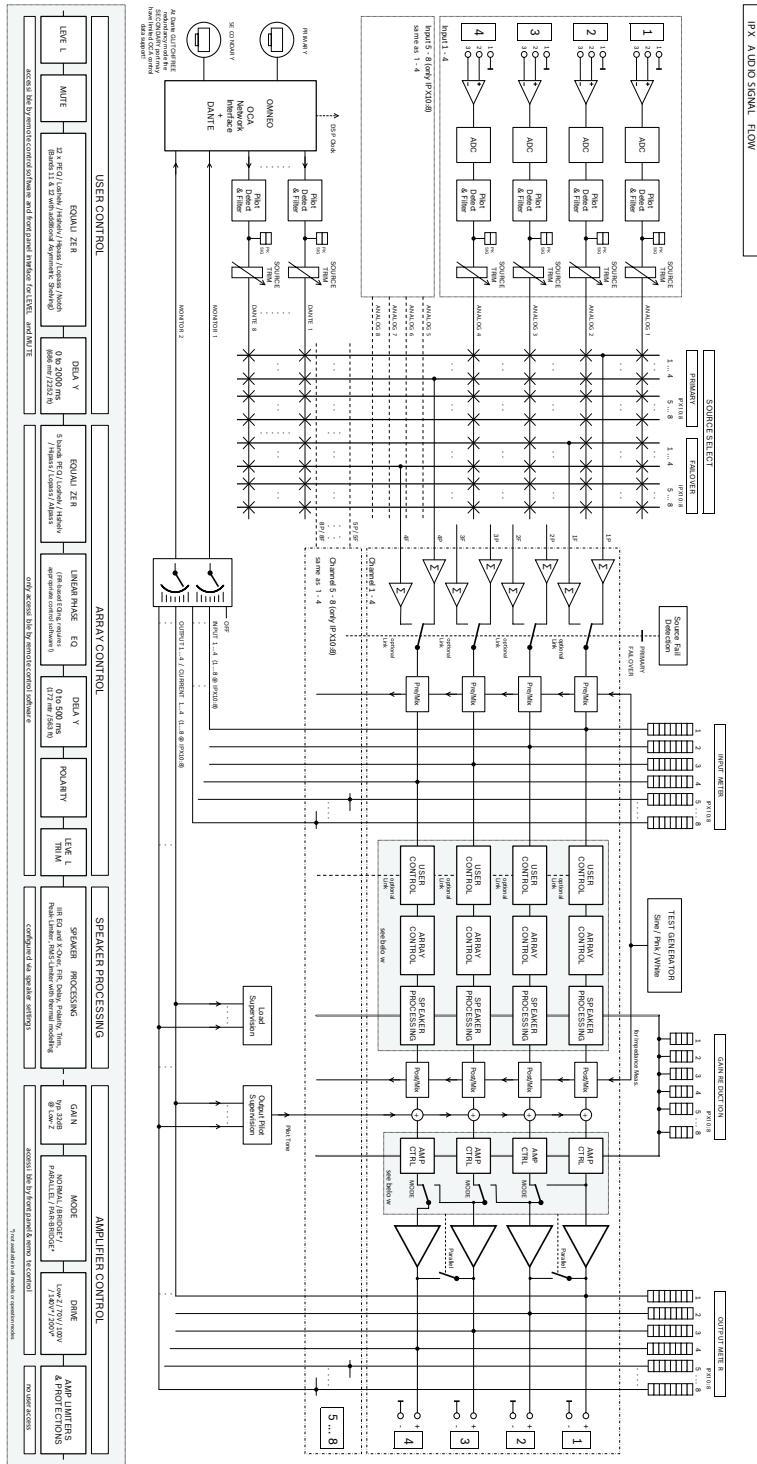


Fig. 1: Block diagram: IPX

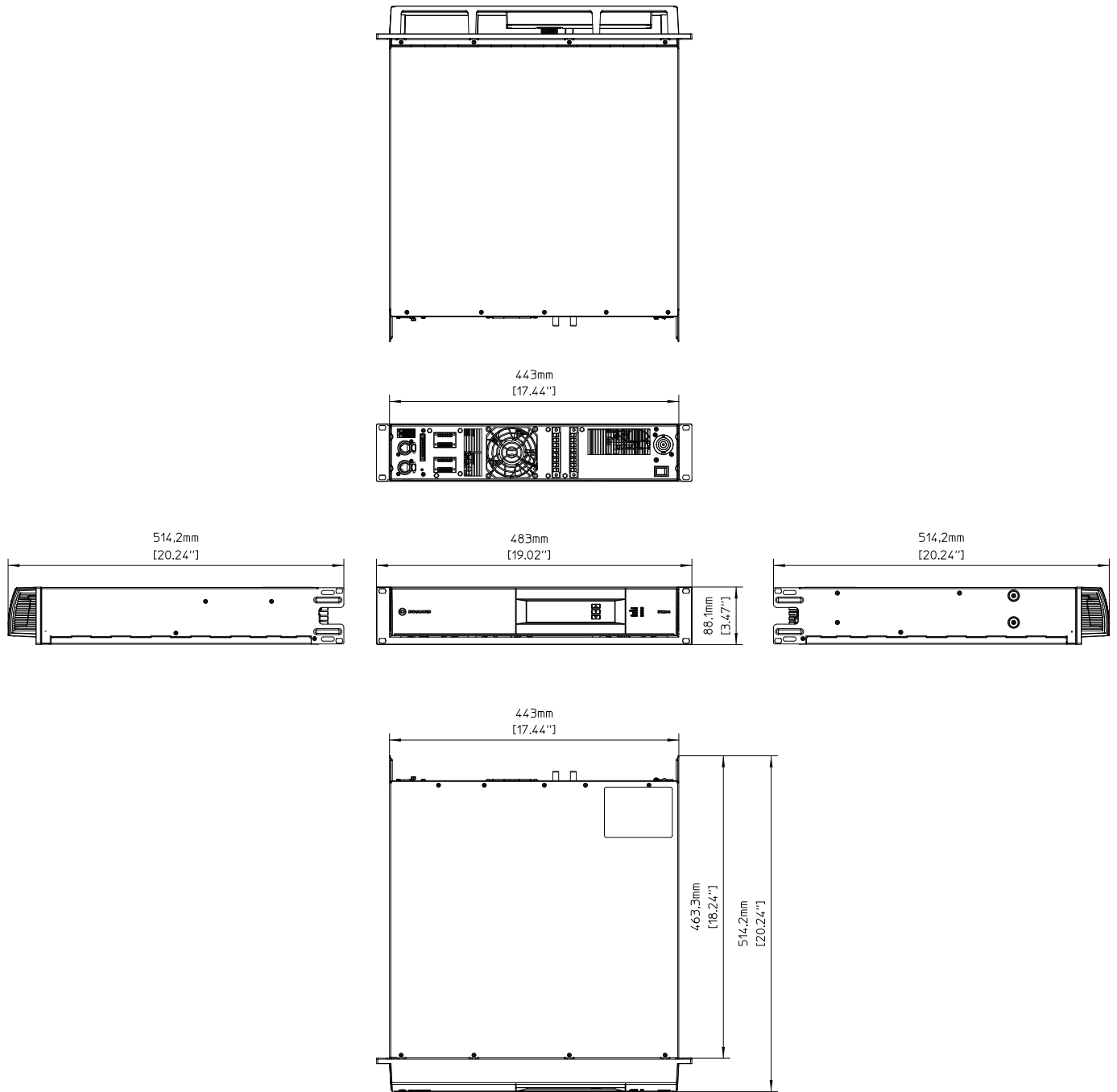


Fig. 2: Dimensions: IPX

Ordering information

IPX5:4 DSP power amplifier 4x1250W, install

DSP power amplifier 4x1250W @ 4 ohms, 8 OMNEO/Dante inputs, 4 analog inputs, hi-z direct drive, GPIOs, euro-block connectors, 100 - 240 V, black
 Order number **IPX5:4 | F.01U.329.709**

Accessories

PD32-EU Power distro 3x32A, 230V, CEE 32A

Power distribution for 3x 32A and 3x 16A, CEE32A mains connector, 3-phase 230/400V, European region, black
 Order number **PD32-EU | F.01U.336.243**

PD30-US Power distro 3x30A, 208V, NEMA L21-30

Power distribution for 3x 30A and 3x 15A, NEMA L21-30 mains connector, 3-phase 208V, North American region, black
 Order number **PD30-US | F.01U.336.244**

PCO32A30-US Power cord, powerCon32/NEMA L5-30

Power cord, powerCON32 to NEMA L5-30 mains connector, 2m, black
 Order number **PCO32A30-US | F.01U.349.975**

PCO32A16-EU Power cord, powerCon32/CEE7/7

Power cord, powerCON32 to CEE7/7 (Schuko, 16A) mains connector, 2m, black
 Order number **PCO32A16-EU | F.01U.349.976**

PCO32A16-UK Power cord, powerCon32/BS1363

Power cord, powerCON32 to BS1363 (UK-plug) mains connector, 2m, black

Order number **PCO32A16-UK | F.01U.349.977**

PCO32A10-AU Power cord, powerCon32/AU3-pin10A

Power cord, powerCON32 to AU, 3-pin 10A mains connector, 2m, black

Order number **PCO32A10-AU | F.01U.349.978**

DC-RMK15 Rear rackmount kit for CPS amplifiers

Rack Mount Kit for amplifiers, Length 15,5“; 1L/1R

Order number **DC-RMK15 | F.01U.135.402**

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