

Bias Q5



Specially designed with versatility and ease of use in mind, the Bias Q5 is equally suitable for most bass enclosures, as well as high-power, full-range systems in any configuration.

The flexible, innovative power supply can be used for single phase, bi-phase or three-phase operation from 85 VAC up to 460 VAC without the need for selection. True three-phase power load balancing with power factor correction is possible via the unit, enhancing efficiency without any complex load assignment in the power distribution system. Specialised technologies also minimise carbon footprint and operational costs.

The Bias Q5 provides four fully processable channels and selectable inputs from analogue sources, as well as digital AES3. Channel mixing and routing is enhanced by the integrated, revolutionary, low latency DSP, giving the highest degree of freedom in sound shaping and speaker management.

Full support to 100 Mbps and Gigabit Ethernet allow easy integration into any existing infrastructure. In addition, total integration with the Armonia Pro Audio Suite™ enables a new power management experience on smartphones and tablets.

Key features:

- Innovative power supply design
- Flexible routing and mixing
- Four input channels with physical analogue and digital AES3 connectors for maximum flexibility
- Customisable input backup policy to automatically switch input source in case of signal failure for improved reliability
- Complete user interface integrated into Armonia Pro Audio Suite™
- WiFi remote monitoring through mobile devices
- Top-grade DSP with high dynamic range and extensive feature set
- Multi-stage signal processing
- Input and output IIR, FIR, IIR+FIR equalizers and raised-cosine filters
- Complete sets of limiters (peak, RMS voltage, RMS current, and TruePower™)
- Speaker cable loss compensation with Active DampingControl™
- Full protection circuitry: over/under AC voltage; troublesome signals (clipping, VHF, long-term RMS); DC; thermal; short circuit; and mute at power on/off

Applications:

- Bar, club, lounge
- Corporate and AV
- Indoor and outdoor dance events
- Large-scale touring
- Live music venues

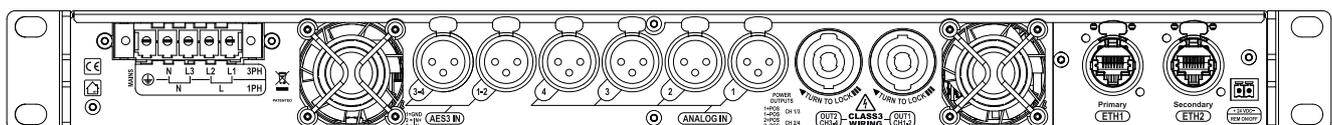
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Channel Handling	
Number of output channels	4 mono, bridgeable per ch. pair
Number of input channels:	
Analog	4 (4x XLR)
AES3	4 (2x XLR)

Audio	
Output Noise A-Weighted @ 8 Ω - Analog to Analog / Digital to Analog	< -70.0 dBV
Dynamic Range A-Weighted @ 8 Ω - Analog to Analog / Digital to Analog	114,3 dB
Damping Factor @ 8 Ω, 20Hz - 500Hz	> 5000
Slew Rate (input filter bypassed)	> 50 V/μs
Frequency Response (-3 dB, 1 W @ 8 Ω)	5 Hz - 30 kHz
Crosstalk (1 kHz)	-70 dB
THD+N (from 0.1 W to Full Power)	< 0.5% (typical < 0.01%)
DIM (from 0.1 W to Full Power)	< 0.5% (typical < 0.01%)
Input Impedance	20 kΩ Balanced
Input Acceptance	+27 dBu

DSP	
AD converters	24 Bit Tandem™ @ 96 kHz 129 dB Dynamic Range - 0.00056 % THD+N
DA converters	24 Bit Tandem™ @ 192 kHz 121 dB Dynamic Range - 0.00084 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 192 kHz 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	40 bit floating point
Delay	2 s + 100 ms for time alignment
Equalizer	Raised-cosine, custom FIR, parametric IIR: peaking, hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
Crossover	linear phase (FIR), hybrid (FIR-IIR), Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)
Limiters	TruePower™, RMS voltage, RMS current, Peak limiter
Damping control	Active DampingControl™

Construction	
Dimensions	483 mm x 44.5 mm x 495 mm (19.0 in x 1.75 in x 19.5 in)
Weight	15 kg (33.0 lb)



Output Stage	
Maximum output power per channel @ 8 Ω	1600 W
Maximum output power per channel @ 4 Ω	3000 W
Maximum output power per channel @ 2.7 Ω	4000 W
Maximum output power per channel @ 2 Ω	5200 W
Maximum output power @ 8 Ω Bridged	6000 W
Maximum output power @ 4 Ω Bridged	10400 W
Peak total output, all channels driven	20000 W
Maximum unclipped output voltage	175 V _{peak}
Maximum output current	130 A _{peak}

The power figure is calculated by driving and loading symmetrically all the channels: uneven loads allow to achieve highest performance.

AC Mains Power	
Single-Phase	
Nominal Voltage	100 - 240 V @ 50/60Hz
Operating Range	90 - 264 V from DC to 200Hz
Power Factor 1/8 Maximum Output Power @ 4 Ω	> 0.9
Current Draw 1/8 Maximum Output Power @ 4 Ω	18 A _{rms} @ 100V 9 A _{rms} @ 240V
Suggested circuit breaker	C16

Three-Phase	
Nominal Voltage**	208Y/120 - 416Y/240 V, 3~, 3W+N+PE @ 50/60Hz 200 V~, 3W+PE @ 50/60Hz
Power Factor 1/8 Maximum Output Power @ 4 Ω	> 0.9
Current Drawn from Each Single Phase 1/8 Maximum Output Power @ 4 Ω	6 A _{rms} @ 208Y 3 A _{rms} @ 416Y
Suggested circuit breaker (per phase)	C10

Bi-Phase	
Nominal Voltage	200/100 V, 2W+PE @ 50/60Hz
Idle Consumption (all AC MAINS cases)	< 100 W
Max Consumption (all AC MAINS cases)	< 3500 W

** Note: 208Y/120 V = 208 V phase-to-phase, 120 V phase-to-neutral

Thermal	
Operating temperature	0° - 15°C / 32° - 113°F
Cooling	Fan, continuously variable speed, temperature controlled
Thermal dissipation	
Single phase	115V 230V
1/8 Maximum Output Power @ 8 Ω	1127 BTU/h 1058 BTU/h
1/4 Maximum Output Power @ 8 Ω	2124 BTU/h 1639 BTU/h