

Duecanali DSP Series

2-Channel Fixed Installation Amplifier Platform with DSP



○ TOURING

✓ INSTALLATION



ArmoníaPlus
System Manager

Excellent sound quality and ample output power result from Powersoft's unique approach to Class D amplification, making the Duecanali DSP Series ideal for the main system in any venue where performance is priority.

The Duecanali DSP is versatile in use and easy to set up. The front panel LED display provides real-time status feedback, while all the amplifier's configuration, monitoring and control parameters are accessible via the software ArmoníaPlus.

The Duecanali Series heralds Powersoft's renowned efficiency, saving valuable energy, therefore keeping both operational cost and carbon footprint at a minimum.

This state of the art amplifier platform shines with outstandingly

low power consumption and heat dissipation, with direct positive effects on investment – not to mention the benefits for the environment and aiding to support a more eco-friendly planet.

A fully integrated state-of-the-art DSP yields extensive system management functionality.

In addition to sound shaping and limiter functions in unique Powersoft style, the DSP hardware and ArmoníaPlus software enable compliance with IEC 60849 for the crucial requirements of sound systems for emergency purposes.

The Duecanali DSP is designed to work with lo-Z (from 2 Ω) and with 70V/100V distributed lines: any mixed configuration of low and high impedance output

loads can be realized, making the Duecanali DSP suitable for all applications in installed sound reinforcement systems.

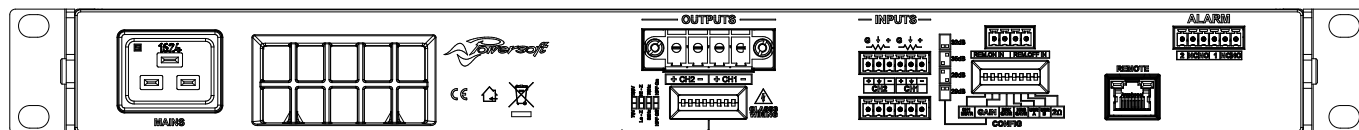
DSP versions of the Duecanali series extends system performance with on board high-end signal processing.

- ▶ Small to Medium-scale venues
- ▶ Main systems, central or distributed, subwoofers, hi-Z/lo-Z
- ▶ Emergency systems (IEC 60849)
- ▶ Stadiums, arenas
- ▶ Theaters, concert halls
- ▶ Houses of worship
- ▶ Convention centers
- ▶ Amusement parks, themed entertainment
- ▶ Cruise ships



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Specifications

Channel Handling						
Number of output channels		2 Hi-Z or Lo-Z (bridgeable per ch. pair)		Phoenix PC 5/4-STF1-7,62		
Number of input channels						
Analog		2		Phoenix MC 1,5/6-ST-3,81		
Audio		804	1604	4804	6404	
Input sensitivity @ 8 Ω with 26 dB Gain		2.84	4.08	5.03	5.76	Vrms
Input sensitivity @ 8 Ω with 29 dB Gain		2.01	2.89	3.56	4.08	Vrms
Input sensitivity @ 8 Ω with 32 dB Gain		1.42	2.04	2.52	2.88	Vrms
Input sensitivity @ 8 Ω with 35 dB Gain		1.01	1.45	1.79	2.05	Vrms
SNR (20 Hz - 20 kHz @ 8 Ω - Typical)		106	109	111	112	dB(A)
Max input level		20 dBu				
Frequency Response		20 Hz - 20 kHz ±1.0 dB, 1 W @ 8 Ω				
Crosstalk (1 kHz)		typical -70 dB				
Input impedance		20 kΩ balanced				
THD+N (from 0.1 W to Half Power)		< 0.1% (typical < 0.05%)				
SMPTE IMD (from 0.1 W to Half Power)		< 0.1% (typical < 0.05%)				
Slew Rate		> 50 V/μs @ 8 Ω, input filter bypassed				
Output impedance at 100 Hz		26 mΩ				
DSP						
AD converters		24 Bit Tandem™ @ 48 kHz typical 125 dB-A Dynamic Range - 0.005 % THD+N				
DA converters		24 Bit Tandem™ @ 48 kHz typical 117 dB-A Dynamic Range - 0.003 % THD+N				
Sample rate converter		24 Bit @ 44.1 kHz to 96 kHz typical 140 dB Dynamic Range - 0.0001 % THD+N				
Internal precision		32 bit floating point				
Latency		2.5 ms fixed latency architecture				
Memory/Presets		49 amplifier snapshots, virtually unlimited speaker presets				
Delay		2 s (input) + 100 ms (output) 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), Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)				
Limiters		TruePower™, RMS voltage, RMS current, Peak limiter				
Damping control		Active DampingControl™ and LiveImpedance™ measurement				

Output Stage		804	1604	4804	6404	
Maximum output power	per channel @ 8 Ω (symmetrical)*	400	800	1250	1800	W
	per channel @ 4 Ω (symmetrical)*	400	800	2400	3200	W
	per channel @ 2 Ω (symmetrical)*	500	1000	3000	4600	W
	@ 4 Ω Bridged (symmetrical)*	1000	2000	6000	9200	W
	@ 8 Ω Bridged (symmetrical)*	800	1600	4800	6400	W
	@ Hi-Z distributed line 100 V (symmetrical)*	400	800	2400	4000	W
	@ Hi-Z distributed line 70 V (symmetrical)*	400	800	2400	3200	W
	per channel @ 8 Ω (asymmetrical)**	800	1300	1300	1900	W
	per channel @ 4 Ω (asymmetrical)**	800	1600	2600	3600	W
	per channel @ 2 Ω (asymmetrical)**	1000	1600	4300	6000	W
@ Hi-Z distributed line 100 V (asymmetrical)**		800	1600	4000	5500	W
@ Hi-Z distributed line 70 V (asymmetrical)**		800	1600	3000	3000	W
Maximum unclipped output voltage @ 8 Ω		80 V _{peak}	115 V _{peak}	142 V _{peak}	175 V _{peak}	
Maximum output current		39 A _{peak}	45 A _{peak}	80 A _{peak}	110 A _{peak}	
*: All channels driven with the same burst power **: Maximum power-sharing capacity per channel						
Power & Thermal		804	1604	4804	6404	
@ 115 V	Power	23.0	23.0	32.5	33	W
	Idle					
	Current Draw	0.34	0.34	0.31	0.53	A _{rms}
	Thermal Loss	78	78	111	112	BTU/h
	1/8 Power @ 4Ω					
	Power	148	267	780	1073	W
	Current Draw	1.4	2.5	7.0	10	A _{rms}
	Thermal Loss	162	229	613	931	BTU/h
	Power	22.5	23.3	32.8	33	W
	Idle					
@ 230 V	Current Draw	0.21	0.21	0.30	0.37	A _{rms}
	Thermal Loss	77	79	112	114	BTU/h
	1/8 Power @ 4Ω					
	Power	147	274	755	1068	W
	Current Draw	0.9	1.5	3.9	5.3	A _{rms}
	Thermal Loss	161	251	528	913	BTU/h
	Power supply		Universal regulated switch mode with PFC, SRM			
	Nominal voltage (±10%)		100-240 VAC @ 50-60Hz			
	Operating Voltage		90-264 VAC			
	AC Mains connector		IEC C20 inlet (20 A max) region-specific power cord provided			
Typical use case power consumption is expected to be at least 20% lower (likely more than 50% lower)						
Networking						
Standards compliance		auto-sensing Fast Ethernet (IEEE 802.3u, 100 Mbit/s)				
Supported topologies		Star				
Remote interface		ArmoníaPlus™				
Construction						
Dimensions		483 x 44.5 x 358 mm 19.0 x 1.75 x 14.1 in				
Weight		7 Kg (15 lb)				

Data subject to change without notice.

