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SMARTAMPTM POWER AMPLIFIER

- Revolutionary green design provides 92% efficient, environmentally-friendly operation
- Silent operation provides for a noise-free test environment
- Supplies 400 W output power at 4 Ω load impedance
- Front panel, continuous gain adjustment up to 26 dB
- Flat frequency response to 40 kHz
- Lightweight—just 8.5 lb (3.8 kg)
- Interlock switch for overtravel protection of shaker armature
- Clipping detection provides real-time warning of signal distortion
- DC fault detection provides automatic shutdown of supply signal
- Over-current and over-temperature protection

POWERING ELECTRODYNAMIC EXCITERS

The SmartAmp™ Model 2100E21-400 offers a revolutionary green design, providing cool running, power thrifty, 92% efficient operation. The high performance, ultra-low noise digital amplifier also includes intelligent capabilities. In addition to an interlock switch for over-travel protection of the shaker armature and a safe start-up with the signal output in a mute mode, the SmartAmp includes intelligent clipping detection and DC fault recognition algorithms that provide real-time feedback of the signal output integrity with an automatic shutdown to protect the shaker and test article. Additional digital and analog auxiliary input ports on the SmartAmp allow for on-line shaker temperature and air flow monitoring, protecting the shakers in case of an abnormal condition. Including these smart features as standard in every SmartAmp model provides safety, performance, and value for electrodynamic shaker users.

The SmartAmp design also includes silent operation, as the unit does not require fans, for a noise-free test environment. The 2100E21-400 is extremely lightweight - just 3.8 kg (8.5 lb), which is approximately one third of the weight of traditional shaker amplifiers.

SPECIFICATIONS				
Performance				
Efficiency [1]	92%			
Output Voltage [2], max	38 V RMS			
Current Limit [3]	18 A peak			
Output Power [4]	400 W			
Distortion [5]	< 0.1%			
Frequency Response, +0 / -3 dB, 4 Ω load	0.4 to 40 000 Hz			
Max. Voltage Gain	26 dB			
Input Impedance	10 kΩ			
Output Impedance [6]	30 mΩ			
Cooling [7]	Convection			
	Interlock	Interlock Switch		
	DC Fault Detection			
Protection Features	Clip Detection			
	Over-Current / Over-Temperature Detection			
	Safe Start in Mute Mode			
Electrical				
Input Power				
Voltage	100-120 V AC or 220-240 V AC			
Frequency	48 to 62 Hz			
Physical				
Front Panel Display	Two row, four function keys LCD			
Dimensions (H x W x D)	3.5 x 17.3 x 14.6 in	9 x 44 x 37 cm		
Weight	8.5 lb	3.8 kg		
Input Connector	BNC Jack			
Output Connectors	Screw Terminals			
Interlock Connectors	Screw Terminals			
Supplied Accessories				
Power Cable				
Rack Mounting Brackets				
Rubber Feet				
Spare Fuses				

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- [2] at 4 Ω load impedance, 1 kHz, THD 0.1% [3] typical, over-current protection limited [4] at 4 Ω load impedance, 1 kHz, THD 0.04%
- [5] typical, THD + noise 10 Hz 20 kHz, 2 Ω lead, 50 W
 [6] at frequencies less than 1 kHz
 [7] 40 mm silent fan, automatically controlled

Related Products		
2025E	Modal Shaker, 58 N (13 lbf) pk sine force, 18 mm (.75 in) pk-pk stroke, through-hole armature design	
2060E	Modal Shaker, 267 N (60 lbf) pk sine force, 36 mm (1.4 in) pk-pk stroke, through-hole armature design	
2075E	Shaker, 334 N (75 lbf) pk sine force, 25.4 mm (1 in) pk-pk stroke, through-hole armature, 83 mm (3.25 in) table	
2100E11	Modal Shaker, 440 N (100 lbf) pk sine force, 25.4 mm (1 in) stroke, through-hole armature design	

Depth: 14.6 [37]



Outline Drawing

Dimensions are in inches [cm]



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