







## MODEL 2100E21-100

# SMARTAMP™ POWER AMPLIFIER

- Revolutionary green design provides 92% efficient, environmentally-friendly operation
- Silent operation provides for a noise-free test environment
- Supplies 100 W output power at 4 Ω load impedance
- Front panel, continuous gain adjustment up to 20 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<sup>™</sup> Model 2100E21-100 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 2100E21-100 is extremely lightweight - just 3.8 kg (8.5 lb), which is approximately one third of the weight of traditional shaker amplifiers.

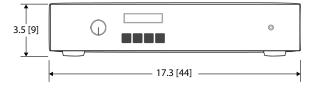
Performance		
Efficiency [1]	92%	
Output Voltage [2], max	21 V RMS	
Current Limit [3]	18 A peak	
Output Power <sup>[4]</sup>	100 W	
Distortion [5]	< 0.1%	
Frequency Response, +0 / -3 dB, 4 $\Omega$ load	0.4 to 40 000 Hz	
Max. Voltage Gain	20 dB	
Input Impedance	10 kΩ	
Output Impedance [6]	30 mΩ	
Cooling [7]	Convection	
	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
	BNC Jack	
Input Connector	BNC	Jack
Input Connector Output Connectors	BNC Screw Te	
		rminals
Output Connectors	Screw Te	rminals
Output Connectors Interlock Connectors	Screw Te	rminals
Output Connectors Interlock Connectors Supplied Accessories	Screw Te	rminals
Output Connectors Interlock Connectors Supplied Accessories Power Cable	Screw Te	rminals

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

Related Products		
2002E	Miniature Inertial Shaker, 9 N (2 lbf) pk sine force, 6 N (1.4 lbf) RMS random force (natural cooling). Includes cable, mounting screws and spare fuses.	
2004E	Miniature Shaker, 20 N (4.5 lbf) pk sine force, 5 mm (0.2 in pk-pk stroke. Includes trunnion mounting base and 2110G06 stinger kit.	
2007E	Miniature Shaker, 31 N (7 lbf) pk sine force, 13 mm (0.5 in) pk-pk stroke. Includes trunnion mounting base and 2110G06 stinger kit.	

#### Depth: 14.6 [37]



### **Outline Drawing**

Dimensions are in inches [cm]

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