



MODEL 2100E21-400

SMARTAMP™ 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

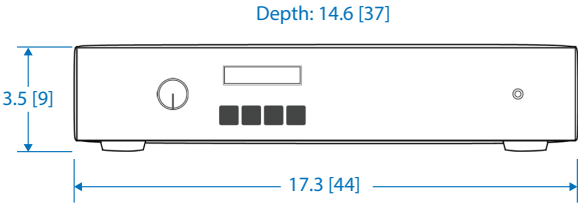
The SmartAmp™ Model 2100E21-400 offers a revolutionary green design, providing cool running, power thrifty, 92% efficient operation. The high performance, ultra-low noise digital amplifier also includes intelligent capabilities. In addition to an interlock switch for over-travel protection of the shaker 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	
Protection Features	Interlock Switch	
	DC Fault Detection	
	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		

[1] at full power output
 [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 load, 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
2025E-HF	Shaker, 13 lbf pk sine force, 0.5 in stroke, 2.125 in mounting platform with internally-threaded attachment points
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



Outline Drawing
 Dimensions are in inches [cm]