made for experts

Unit 14, The Bridge, Beresford Way
Chesterfield, Derbyshire, S41 9FG, UK
Tel: + 44 (0) 1246 452909
Fax: + 44 (0) 1246 452942
Web: www.etps.co.uk
Email: sales@etps.co.uk
Sales: 0800 612 95 75

ELPA-32611

High Power AC Electronic Load

Description

The ELPA-32611 series are designed to simulate real loads used in medium to high power AC applications. The standard range is comprised of 4 units that can sink up to 300V at 10.8kVA. Each Load has a high peak current capability of up to 50% above its continuous rating. The crest factor can be adjusted between 1.5 and 3.5. The power factor can also be adjusted in order to recreate capacitive and inductive loads. An isolated analogue current monitor output is provided to allow the waveform to be viewed on an external scope. Another benefit of these AC Loads is that they can also be used to sink DC Sources. This can often save laboratory space and the expense of purchasing a dedicated DC Load. The units are built with switchable automatic sense adjustment to counter the voltage drop in the load lines. Along with front panel control and display both IEEE 488.2 and RS232 interfaces are provided as standard. A host of protection features guard the unit against over power, voltage, current and temperature. A thermally controlled fan helps minimize noise pollution. Two sink levels can be preset and switched between. To aid production testing higher and upper limits can be set. Units are then automatically flagged GO or NG. These Loads are used in a variety of applications including power transformer, DC/AC Inverter, general R&D and laboratory work along with UPS output testing and ATE systems.

- Adjustable power factor & crest factor modes
- GPIB & RS232 with LabVIEW drivers
- Front panel memory function
- DC to 400Hz Operation
- Bank of 55 waveforms
- Isolated scope output

Selection Table

Part Number	Maximum Power	Maximum Voltage	Current Range	Dimensions (Width x Height x Depth)
ELPA-32611	3600VA	300Vrms / 300Vdc	0 - 36Arms	19" x 8U x 455mm*
ELPA-32612	5400VA	300Vrms / 300Vdc	0 - 54Arms	19" x 12U x 455mm*
ELPA-32613	7200VA	300Vrms / 300Vdc	0 - 72Arms	19" x 16U x 455mm*
ELPA-32615	10800VA	300Vrms / 300Vdc	0 - 108Arms	19" x 24U x 455mm*

*Shipped as 4U rackmounting modules. On request master & slaves can be optionally fitted and shipped in a cabinet.

Options Table

Code	Description
/0001	1m IEEE488.2 cable
/0002	2m IEEE488.2 cable
/0003	2m RS232 cable
/9931	Remote controller

made for experts

sales@etps.co.uk
0800 612 95 75

Technical Data

CC & Linear CC Mode	ELPA-32611	ELPA-32612	ELPA-32613	ELPA-32615
Range 1	0 - 18Arms	0 - 27Arms	0 - 36Arms	0 - 54Arms
Range 1 Resolution	4.5mA	6.75mA	9mA	13.5mA
Range 2	18 - 36Arms	27 - 54Arms	36 - 72Arms	54 - 108Arms
Range 2 Resolution	9.0mA	13.5mA	18mA	27mA
Low Current Accuracy	<10% of I_{range1} is ±2% of (setting + range)			
Standard Accuracy	±0.5% of (setting + range)			
Crest Factor (CC Mode only)	$\sqrt{2}$ to 3.5 | 1.5 to 1.9 | 3.2 to 3.4			

CR Mode (DC-70Hz)				
Range 1	1.667 - 6.668kΩ	1.111 - 4.444kΩ	0.833 - 3.333kΩ	0.556 - 2.224kΩ
Range 1 Resolution	0.148mS	0.056mS	0.3mS	0.003mS
Range 2	6.668 - 26.668kΩ	4.444 - 17.776kΩ	3.333 - 13.33kΩ	2.224 - 8.888kΩ
Range 2 Resolution	0.037mS	0.224mS	0.075mS	0.452mS
Accuracy	±0.5% of (setting + range)			

4½ DVM	
Range	0 - 300V
Resolution	0.1V
Accuracy	±0.5% (of reading + 0.2% of range)

4½ DAM				
Range	0 - 36A	0 - 54A	0 - 72A	0 - 108A
Resolution	0.01A	0.012A	0.01A	0.012A
Accuracy	±0.5% of (reading + range)			

Watt & VA Meter				
Range	3600W	5400W	7200W	10800W
Resolution	1W	1.2W	1.2W	1.2W
Accuracy	±0.5% of (reading + range)			
VA Meter	Vrms x Arms Correspond to Vrms and Arms			

Frequency Range	
Frequency Range	DC, 40Hz - 400Hz (CC Mode), DC - 400Hz (Linear CC & CR Mode)

Other				
I monitor (isolated)	9A/V	13.5A/V	18A/V	27A/V
Operating Temperature	0 - 40°C (100% to 25°C derating to 77% at 40°C)			

Power & Crest Factor Table

Waveform Bank	Sinewave	Sinewave	Sinewave	CF = 2	CF = 2.5	CF = 3.5	CF = 2	CF = 2.5	CF = 3.5	Square	DC
	0	1	2	3	4	5	6	7	8	9	10
A	$\sqrt{2}$	1.5	3.0	PF: - 0.85	PF: - 0.70	PF: - 0.50	PF: +0.85	PF: +0.70	PF: +0.50	1	$\sqrt{2}$dc
B	2	1.6	3.1	PF: - 0.80	PF: - 0.65	PF: - 0.45	PF: +0.80	PF: +0.65	PF: +0.45	1.1	2dc
C	2.5	1.7	3.2	PF: - 0.75	PF: - 0.60	PF: - 0.40	PF: +0.75	PF: +0.60	PF: +0.40	1.2	2.5dc
D	3.0	1.8	3.3	PF: - 0.70	PF: - 0.50	PF: - 0.35	PF: +0.70	PF: +0.50	PF: +0.35	1.3	3dc
E	3.5	1.9	3.4	PF: - 0.65	PF: - 0.40	PF: - 0.30	PF: +0.65	PF: +0.40	PF: +0.30	1.4	3.5dc
				Lagging Power Factor			Leadng Power Factor				