

# ELP-3310F

## DYNAMIC DC ELECTRONIC LOAD MODULES



POSITIVE PROBLEM SOLVING **+ =**

**These true dynamic loads offer an incredible degree of functionality at a very reasonable cost. Constant current, resistance, voltage and power operation are provided as standard.**

Dual ranges for CC and CR modes enables tight resolution at the lower end. Voltage, current and power values are simultaneously shown on the 4½ digit displays. The front panel voltage and ammeters have a 16 bit resolution and offer a high degree of accuracy. An adjustable short mode along with OCP and OPP tests are also built in.

- + CC, CR, CV, CP, Dynamic and Short Mode**
- + Large LCD Display with Scope Output**
- + 150 Store / Recall Memory**
- + OCP & OPP Test Function**
- + External Oscillator Input**
- + LabVIEW Drivers**

# ELP-3310F

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## FURTHER DETAILS

The load can be set to turn on and off at a preset voltage level making these units ideal for discharging batteries. An input for connecting an arbitrary waveform generator is provided to enable the unit to follow complex load patterns. Load currents can be viewed graphically by connecting a scope to the BNC connector on the front panel of the load.

The ELP-3310F are housed within the single slot, desktop ELP-3302F mainframe. Dual slot [ELP-3305F] and four slot [ELP-3300F] mainframes are also available. All F-series mainframes can be fitted with RS-232, LAN, USB or GPIB interface cards.

Common test values can be stored via the front panel in the non-volatile memory of the mainframe. These values can also be sequenced with time allowing frequent test procedures to be quickly implemented.

### SELECTION TABLE

Part Number	Max Power	Operation Voltage	Current Range	Module Weight	Dimensions [ W × H × D]
ELP-3310F	150W	60V	0 - 30A	3.5kg	108 × 143 × 405mm
ELP-3311F	300W	60V	0 - 60A	3.5kg	108 × 143 × 405mm
ELP-3312F	300W	250V	0 - 12A	3.5kg	108 × 143 × 405mm
ELP-3314F	300W	500V	0 - 12A	3.5kg	108 × 143 × 405mm
ELP-3315F	75W	60V	0 - 15A	3.5kg	108 × 143 × 405mm

### OPTIONS

CODE	DESCRIPTION
/3302F	Single slot mainframe (separate summary available)
/3305F	Dual slot mainframe (separate summary available)
/3300F	Four slot mainframe (separate summary available)
/LT	Mainframe selection includes IEEE488.2 (GPIB) interface card
/RS232	Mainframe selection includes RS-232 interface card
/LT+RS232	Mainframe selection includes RS-232 and IEEE488.2 interface card
/LAN	Mainframe selection includes LAN interface card
/USB	Mainframe selection includes USB interface card
/DSK	Disable short test function key
/0001	1m IEEE488.2 cable
/0002	2m IEEE488.2 cable
/0003	2m RS-232 cable
/9931	Remote controller

## TECHNICAL DATA

	ELP-3310F	ELP-3311F	ELP-3312F	ELP-3314F	ELP-3315F
Over Power Protection	≈ 157.5W	≈ 315W	≈ 315W	≈ 315W	≈ 78.75W
Over Current Protection	≈ 30A	≈ 63A	≈ 12A	≈ 12.6A	≈ 15.75A
Over Voltage Protection	≈ 60V	≈ 60V	≈ 262.5V	≈ 525V	≈ 63V
Over Temperature Protection	≈ 85°C				

### CC MODE

Range 1 [Resolution]	0 - 3A [0.05mA]	0 - 6A [0.1mA]	0 - 1A [0.268mA]	0 - 1.2A [0.02mA]	0 - 1.5A [0.0254mA]
Range 2 [Resolution]	0 - 30A [0.5mA]	0 - 60A [1mA]	0 - 10A [2.68mA]	0 - 12A [0.2mA]	0 - 15A [4.0mA]
Accuracy	± 0.1% of [setting + range]				

### CR MODE

Range 1	2 - 120kΩ	1 - 60kΩ	25 - 1500kΩ	50-3000kΩ	4 - 24kΩ
Range 1 Resolution	0.0083mΩ	0.0166mS	0.00066mΩ	0.00033mS	0.04166mS
Range 2	0.2-2kΩ	0.015 - 1Ω	0.08 - 25Ω	0.5 - 50Ω	0.02 - 4Ω
Range 2 Resolution	0.033mS	0.0166mΩ	0.4166mΩ	0.8333mΩ	0.0666mΩ
Accuracy	± 0.2% of [setting + range]				

### CV MODE

Range 1 [Resolution]	0 - 6V [0.1mV]	0 - 6V [0.1mV]	0 - 30V [0.5mV]	0 - 60V [1mV]	0 - 6V [0.1mV]
Range 2 [Resolution]	0 - 60V [1mV]	0 - 60V [1mV]	0 - 250V [10mV]	0 - 500V [10mV]	0 - 60V [1mV]
Accuracy	± 0.05% of [setting + range]				

### CP MODE

Range 1 [Resolution]	0 - 15W [0.25mW]	0 - 30W [1mW]	0 - 30W [1mW]	0 - 30W [1mW]	0 - 7.5W [0.000125W]
Range 2 [Resolution]	0 - 150W [2.5mW]	0 - 300W [10mW]	0 - 300W [10mW]	0 - 300W [10mW]	0 - 75W [0.00125W]
Accuracy	± 0.5% of [setting + range]				

### DYNAMIC OPERATION

Thigh & Tlow	50µSec to 9.999Sec				
Slew Rate 1	2.0 - 125mA/µsec	4 - 250mA/µsec	0.8 - 50mA/µsec	0.8 - 50mA/µsec	1 - 62.5mA/µsec
Slew Rate 2	20 - 1250mA/µsec	40 - 2500mA/µsec	8 - 0.5A/µsec	8 - 500mA/µsec	10 - 625mA/µsec
Accuracy	± [5% of setting] ± 10µS			± [10% of setting] ± 10µS	

### VOLTAGE READBACK

Range 1 [Resolution]	6V [0.0001V]	6V [0.0001V]	30V [0.001V]	60V [0.001V]	0 - 6V [0.0001V]
Range 2 [Resolution]	60V [0.001V]	60V [0.001V]	250V [0.01V]	500V [0.01V]	60V [0.001V]
Accuracy	± 0.025% of [reading + range]				

### CURRENT READBACK

Range 1 [Resolution]	3A [0.0001A]	6A [0.0001A]	1.2A [0.00002A]	1.2A [0.00002A]	1.5A [0.000025A]
Range 2 [Resolution]	30A [0.001A]	60A [0.001A]	12A [0.0002A]	12A [0.0002A]	15A [0.00025A]
Accuracy	± 0.1% of [reading + range]				

### OTHER

Current Monitor Output	Full scale 10V [isolated with load module]				
Accuracy	± 0.5% of [setting + range]				
Current Program Input	Full scale 10V [isolated with other load module]				
Programmable Short	Built in				
Load On Voltage	0.1 - 25V	0.1 - 25V	0.2 - 50V	0.4 - 100V	0.1 - 25V
Accuracy	± 1% of [setting + range]				
Load Off Voltage	0 - 25V	0 - 25V	0 - 50V	0 - 100V	0 - 25V
Accuracy	± 0.025% of [setting + range]				
Typical Short Resistance	0.02Ω	0.00833Ω	0.08Ω	0.5Ω	0.02Ω
Max. Short Current	30A	60A	10A	10A	15A

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ETPS Ltd must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ETPS Ltd specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.



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