

ELP-34105

COMPACT HIGH CURRENT DC LOAD



POSITIVE PROBLEM SOLVING **+ =**

This range of High Power Electronic Loads provides a high current sink capability of 1000Amps from 0.7V.

These units have two load ranges one at 0-100A and the other at 100-1000A with auto crossover in CC mode. The range comprises of 8 models from 5kW to 40kW all units can operate in CC, CV, CR, CP, CV+CC, CV+CP, MPPT, Dynamic and Short Modes. The current Slew Rate is adjustable for both ranges and to aid production testing to a pre-set value the unit is equipped with a GO/NG indicator. The LCD display simultaneously shows Voltage, Current & Power. The 5kW unit is supplied with a carry harness for ease of installation.

- + 9 Different Operating Modes as Standard**
- + Single Key OCP & OPP Test Function**
- + AC Input 115/230Vac Selectable**
- + Protection for OV, OC, OP & OT**
- + Simultaneous V, I & W Display**
- + High Current Sink at 1000A**

ELP-34105

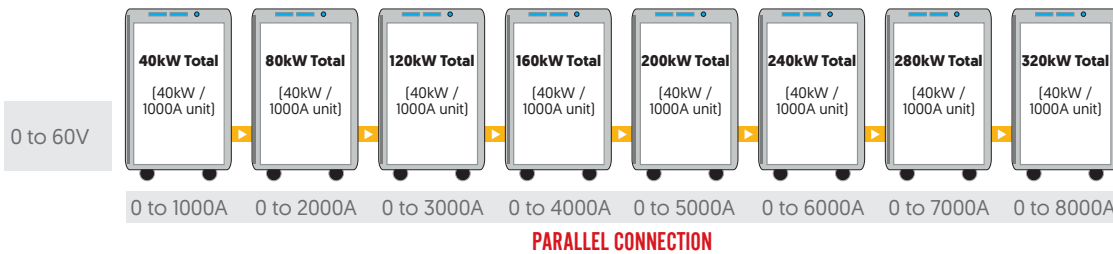
COMPACT HIGH CURRENT DC LOAD



SELECTION TABLE

Part Number	Range 1 Max Power	Range 1 Max Voltage	Range 1 Current	Range 2 Max Power	Range 2 Max Voltage	Range 2 Current
ELP-34105	5kW	60VDC	0 - 100A	5kW	60VDC	0 - 1000A
ELP-34110	10kW	60VDC	0 - 100A	10kW	60VDC	0 - 1000A
ELP-34115	15kW	60VDC	0 - 100A	15kW	60VDC	0 - 1000A
ELP-34120	20kW	60VDC	0 - 100A	20kW	60VDC	0 - 1000A
ELP-34125	25kW	60VDC	0 - 100A	25kW	60VDC	0 - 1000A
ELP-34130	30kW	60VDC	0 - 100A	30kW	60VDC	0 - 1000A
ELP-34135	35kW	60VDC	0 - 100A	35kW	60VDC	0 - 1000A
ELP-34140	40kW	60VDC	0 - 100A	40kW	60VDC	0 - 1000A

MASTER/SLAVE FUNCTIONALITY



Up to eight units from the ELP-34105 series can be arranged in parallel configurations. It is possible to connect 5kW to 40kW models, up to a maximum of 320kW. The diagram above shows eight 40kW models from the ELP-34105 family operating in parallel together. Each unit is able to operate independently, so that systems can be reconfigured, expanded or broken up as needs dictate. This approach is useful for test houses and research labs who regularly test different sized power devices. Individual units can be used for the day to day testing of multiple small devices, then grouped together for larger projects. When operating in master/slave operation, a number of test modes are not available. Please see the table below for more information.

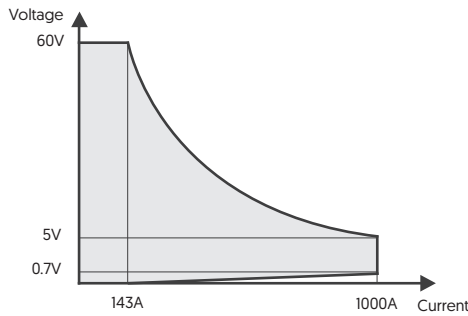
ELP-34105 Operating or Test Mode	Independent Unit	Units in Master/Slave
CC Mode	✓	✓
CV Mode	✓	✓
CR Mode	✓	✓
CP Mode	✓	✓
CV+CC Mode	✓	✗
CV+CP Mode	✓	✗
MPPT Mode	✓	✗
Dynamic Mode	✓	✓
Short Mode	✓	✗
Recall/Store	✓	✗
External I/O Interface	✓	✗
OCP	✓	✗
OPP	✓	✗
Auto Sequence	✓	✗
Battery Test 1	✓	✗
Battery Test 2	✓	✗
Battery Test 3	✓	✗
Battery Test 4	✓	✗
Battery Test 5	✓	✗



CHARACTERISED VALUES

The ELP-34105 series is able to operate at maximum current across most of its voltage range. This allows one system to test many different types of devices. When operating below 0.7V, the maximum amount of current that the load can sink decreases. The values for this derating at low voltages are provided below.

VOLTAGE	CURRENT
0.7V	1000A
0.6V	857A
0.5V	714A
0.4V	571A
0.3V	429A
0.2V	286A
0.1V	143A



HIGHLIGHTED STANDARD FEATURES



FRONT PANEL MEMORY

150-state memory is available as standard, which allows quick initialisation and limit-setting of the unit. This makes the ELP-34105 both dependable, and mobile as an on-site load tester.



2x^{4x} SEQUENCING FUNCTION

A sequencing function means that stored settings can be implemented against time, enabling the unit to carry out state-dependant and complex test routines without the need for a computer interface.



BATTERY DISCHARGE TESTS

The ELP-34105 series has a total of 5 battery discharge modes. These simplify test set up for users, whilst avoiding conditions which could result in permanent battery damage due to over or under voltage.

OPTIONS

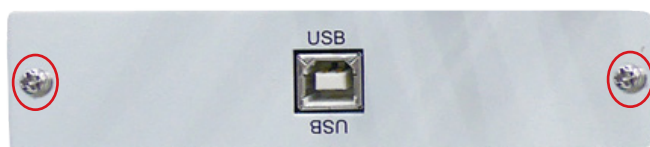
CODE	DESCRIPTION
/LT	IEEE488.2 (GPIB) interface card
/RS232	RS-232 interface card
/USB	USB interface card
/LAN	LAN interface card
/802	Analogue and digital control interfaces
/0001	1m IEEE 488.2 cable
/0002	2m IEEE 488.2 cable
/0003	2m RS-232 cable
/1KAxM	1000A load cable (1m - 5m available, please specify)

HIGHLIGHTED OPTION



RETROFITABLE INTERFACES

Should remote control be required then LAN, USB, RS-232 or GPIB cards can be specified. Interface cards can also be easily retro-fitted or even swapped in the field by the user, further expanding its capability.



TECHNICAL DATA

	ELP - 34105		ELP - 34110		ELP - 34115		ELP - 34120	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage (ON/OFF)	0.1 - 25V / 0 - 25V							
Min. Operation Voltage	0.1V at 100A	0.7V at 1000A	0.1V at 100A	0.7V at 1000A	0.1V at 100A	0.7V at 1000A	0.1V at 100A	0.7V at 1000A
Short Circuit Current	1000A							
Max. Power Consumption	600W		1000W		1450W		1900W	
Weight	100kg		130kg		170kg		220kg	
Operating Temperature	0 to 40°C, all measurements taken at 25°C± 5°C, except where noted							
Dimensions (W × H × D)	647 × 573 × 766mm		647 × 573 × 766mm		647 × 728 × 766mm		647 × 781 × 766mm	
Safety & EMC	CE							

CC MODE

Current Sink Value	0 - 100A	0 - 1000A	0 - 100A	0 - 1000A	0 - 100A	0 - 1000A	0 - 100A	0 - 1000A
Resolution	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA
Accuracy	± 0.1% of setting + 0.2% of range							

CR MODE

Resistance Sink Value	3600 - 0.06Ω	0.06 - 0.001Ω	3600 - 0.06Ω	0.06 - 0.001Ω	3600 - 0.06Ω	0.06 - 0.001Ω	3600 - 0.06Ω	0.06 - 0.001Ω
Resolution	277μS	0.001mΩ	277μS	0.001mΩ	277μS	0.001mΩ	277μS	0.001mΩ
Accuracy	± 0.2% of [setting + range]							

CV MODE

Voltage Sink Value	0 - 60V							
Resolution	1mV							
Accuracy	± 0.05% of [setting + range]							

CP MODE

Power Sink Value	0 - 500W	0 - 5kW	0 - 1kW	0 - 10kW	0 - 1.5kW	0 - 15kW	0 - 2kW	0 - 20kW
Resolution	8.34mW	83.4mW	16.7mW	167mW	25mW	250mW	33.4mW	334mW
Accuracy	± 0.5% of [setting + range]							

CV + CC MODE

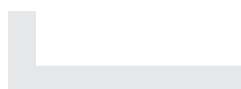
Range	0 - 60V	0 - 1000A	0 - 60V	0 - 1000A	0 - 60V	0 - 1000A	0 - 60V	0 - 1000A
Resolution	1mV	16.67mA	1mV	16.67mA	1mV	16.67mA	1mV	16.67mA
Accuracy	± 1.0% of [setting + range]							

CV + CP MODE

Range	0 - 60V	0 - 5kW	0 - 60V	0 - 10kW	0 - 60V	0 - 15kW	0 - 60V	0 - 20kW
Resolution	1mV	83.4mW	1mV	167mW	1mV	250mW	1mV	334mW
Accuracy	± 1.0% of [setting + range]							

MPPT MODE

Algorithm	P&O + Scanning							
Load Mode	CC, CR, CV [MPPT C, R, V]							
Sampling Interval	10ms-2000ms ; resolution 1ms							
P&O Interval	10ms-2000ms ; resolution 1ms							



TECHNICAL DATA

	ELP - 34105		ELP - 34110		ELP - 34115		ELP - 34120	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Over Power Protection	105%							
Over Current Protection	105%							
Over Voltage Protection	105%							
Over Temp. Protection	Yes							

5-DIGIT VOLTMETER

	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V
Range	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V
Resolution	0.1mV	1mV	0.1mV	1mV	0.1mV	1mV	0.1mV	1mV
Accuracy	± 0.025% of [setting + range]							

5-DIGIT AMMETER

	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A
Range	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A
Resolution	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA
Accuracy	± 0.1% of [setting + range]							

5-DIGIT POWERMETER

	0 - 500W	0 - 5kW	0 - 1kW	0 - 10kW	0 - 1.5kW	0 - 15kW	0 - 2kW	0 - 20kW
Range	0 - 500W	0 - 5kW	0 - 1kW	0 - 10kW	0 - 1.5kW	0 - 15kW	0 - 2kW	0 - 20kW
Resolution	0.01W	0.1W	0.01W	0.1W	0.01W	0.1W	0.1W	1W
Accuracy	± 0.125% of [setting + range]							

DYNAMIC OPERATION

Thigh & Tlow	0.150 - 9.999/99.99/999.9/9999ms		0.05 - 9.999/99.99/999.9/9999ms					
Resolution	0.001 / 0.01 / 0.1 / 1mS							
Accuracy	1µS / 10µS / 100µS / 1mS + 50ppm							
Slew Rate Range	66.4mA-4.15A/µs	664mA-41.5A/µs	66.4mA-4.15A/µs	664mA-41.5A/µs	66.4mA-4.15A/µs	664mA-41.5A/µs	66.4mA-4.15A/µs	664mA-41.5A/µs
Slew Rate Resolution	16.6mA / µs	166mA / µs	16.6mA / µs	166mA / µs	16.6mA / µs	166mA / µs	16.6mA / µs	166mA / µs
Minimum Rise Time	Typically 24µs							
Current Range	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A
Current Resolution	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA
Accuracy	± [0.1% of setting + 0.2% of range]							

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TECHNICAL DATA

	ELP - 34125		ELP - 34130		ELP - 34135		ELP - 34140	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage (ON/OFF)	0.1 - 25V / 0 - 25V							
Min. Operation Voltage	0.1V at 100A	0.7V at 1000A	0.1V at 100A	0.7V at 1000A	0.1V at 100A	0.7V at 1000A	0.1V at 100A	0.7V at 1000A
Short Circuit Current	1000A							
Max. Power Consumption	2350W		2800W		3250W		3700W	
Weight	280kg		340kg		390kg		430kg	
Operating Temperature	0 to 40°C, all measurements taken at 25°C± 5°C, except where noted							
Dimensions (W × H × D)	647 × 1041 × 766mm		647 × 1197 × 766mm		647 × 1353 × 766mm		647 × 1509 × 766mm	
Safety & EMC	CE							

CC MODE

Current Sink Value	0 - 100A	0 - 1000A	0 - 100A	0 - 1000A	0 - 100A	0 - 1000A	0 - 100A	0 - 1000A
Resolution	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA
Accuracy	± [0.1% of setting + 0.2% of range]							

CR MODE

Resistance Sink Value	3600 - 0.06Ω	0.06 - 0.001Ω	3600 - 0.06Ω	0.06 - 0.001Ω	3600 - 0.06Ω	0.06 - 0.001Ω	3600 - 0.06Ω	0.06 - 0.001Ω
Resolution	277μS	0.001mΩ	277μS	0.001mΩ	277μS	0.001mΩ	277μS	0.001mΩ
Accuracy	± 0.2% of [setting + range]							

CV MODE

Voltage Sink Value	0 - 60V							
Resolution	1mV							
Accuracy	± 0.05% of [setting + range]							

CP MODE

Power Sink Value	0 - 2.5kW	0 - 25kW	0 - 3kW	0 - 30kW	0 - 3.5kW	0 - 35kW	0 - 4kW	0 - 40kW
Resolution	41.7mW	417mW	50mW	500mW	56mW	560mW	64mW	640mW
Accuracy	± 0.5% of [setting + range]							

CV + CC MODE

Range	0 - 60V	0 - 1000A	0 - 60V	0 - 1000A	0 - 60V	0 - 1000A	0 - 60V	0 - 1000A
Resolution	1mV	16.67mA	1mV	16.67mA	1mV	16.67mA	1mV	16.67mA
Accuracy	± 1.0% of [setting + range]							

CV + CP MODE

Range	0 - 60V	0 - 25kW	0 - 60V	0 - 30kW	0 - 60V	0 - 35kW	0 - 60V	0 - 40kW
Resolution	1mV	417mW	1mV	500mW	1mV	560mW	1mV	640mW
Accuracy	± 1.0% of [setting + range]							

MPPT MODE

Algorithm	P&O + Scanning							
Load Mode	CC, CR, CV [MPPT C, R, V]							
Sampling Interval	10ms-2000ms ; resolution 1ms							
P&O Interval	10ms-2000ms ; resolution 1ms							



TECHNICAL DATA

	ELP - 34125		ELP - 34130		ELP - 34135		ELP - 34140	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Over Power Protection	105%							
Over Current Protection	105%							
Over Voltage Protection	105%							
Over Temp. Protection	Yes							

5-DIGIT VOLTMETER

	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V
Range	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V	0 - 6V	6 - 60V
Resolution	0.1mV	1mV	0.1mV	1mV	0.1mV	1mV	0.1mV	1mV
Accuracy	± 0.025% of [setting + range]							

5-DIGIT AMMETER

	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A
Range	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A
Resolution	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA
Accuracy	± 0.1% of [setting + range]							

5-DIGIT POWERMETER

	0 - 2.5kW	0 - 25kW	0 - 3kW	0 - 30kW	0 - 35kW	0 - 35kW	0 - 4kW	0 - 40kW
Range	0 - 2.5kW	0 - 25kW	0 - 3kW	0 - 30kW	0 - 35kW	0 - 35kW	0 - 4kW	0 - 40kW
Resolution	0.1W	1W	0.1W	1W	0.1W	1W	0.1W	1W
Accuracy	± 0.125% of [setting + range]							

DYNAMIC OPERATION

Thigh & Tlow	0.05 - 9.999 / 99.99 / 999.9 / 9999ms							
Resolution	0.001 / 0.01 / 0.1 / 1mS							
Accuracy	1µS / 10µS / 100µS / 1mS + 50ppm							
Slew Rate Range	66.4mA-4.15A/µs	664mA-41.5A/µs	66.4mA-4.15A/µs	664mA-41.5A/µs	66.4mA-4.15A/µs	664mA-41.5A/µs	66.4mA-4.15A/µs	664mA-41.5A/µs
Slew Rate Resolution	16.6mA / µs	166mA / µs	16.6mA / µs	166mA / µs	16.6mA / µs	166mA / µs	16.6mA / µs	166mA / µs
Minimum Rise Time	Typically 24µs							
Current Range	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A	0 - 100A	100 - 1000A
Current Resolution	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA	1.667mA	16.67mA
Accuracy	± [0.1% of setting + 0.2% of range]							

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“
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ETPS engineer electronic power supply and testing systems. Our problem solving skills provide the spark of innovation to some of the world's leading technology brands.



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POSITIVE PROBLEM SOLVING