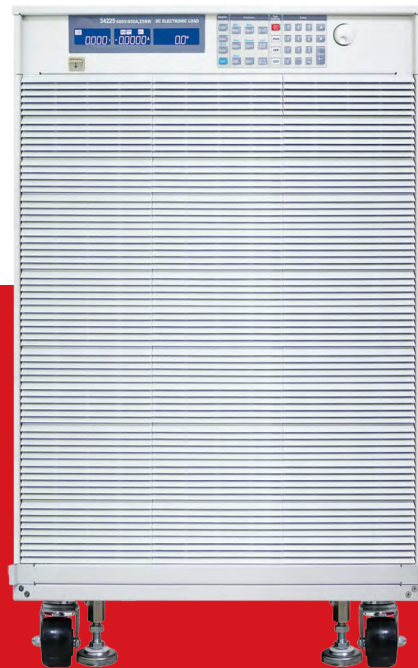


ELP-34205

HIGH CURRENT 600VDC ELECTRONIC LOADS



POSITIVE PROBLEM SOLVING **+ =**

With wide voltage and current ranges the ELP-34205 is an excellent series of general purpose electronic loads.

Dual setting and measurement ranges combined with 5 digit displays provide for high resolution. Dynamic operation with adjustable rise, fall and plateau times enable real world loads to be accurately simulated. Dedicated short circuit, OCP and OPP tests allow power supply behaviour and protection mechanisms to be characterised. Commonly used load set-ups can be easily and quickly saved and recalled from the front panel.

- + 9 Different Operating Modes**
- + 5 Digit Displays for V, I & W**
- + Short Circuit Test Function**
- + Adjustable Slew Rates**
- + Dual Setting Ranges**
- + 800VDC Option**

ELP-34205

HIGH CURRENT 600VDC ELECTRONIC LOADS

FURTHER DETAILS

A sequencing function means that stored settings can be implemented against time. This enables the unit to carry out test routines without the need for a computer interface.

Should remote control be required then LAN, USB, RS-232 or GPIB cards can be specified. These can also be easily retro-fitted in the field by the user.

Models with a lower current range that have a higher accuracy and resolution are available on request.

OPTIONS

CODE	DESCRIPTION
/9923	Programmable current waveform generator
/V800	Voltage range of load expanded from 600Vdc to 800Vdc
/LT	IEEE488.2 (GPIB) interface card
/RS232	RS-232 interface card
/USB	USB interface card
/LAN	LAN interface card
/801	Digital control interface and panel mount emergency stop
/802	Analogue and digital control interfaces
/803	Analogue and digital control interfaces with panel mount emergency stop
/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)

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-34205	5kW	600VDC	0 - 16A	5kW	600VDC	0 - 160A
ELP-34210	10kW	600VDC	0 - 32A	10kW	600VDC	0 - 320A
ELP-34215	15kW	600VDC	0 - 48A	15kW	600VDC	0 - 480A
ELP-34220	20kW	600VDC	0 - 64A	20kW	600VDC	0 - 640A
ELP-34225	25kW	600VDC	0 - 80A	25kW	600VDC	0 - 800A
ELP-34230	30kW	600VDC	0 - 96A	30kW	600VDC	0 - 960A
ELP-34250	50kW	600VDC	0 - 21A	50kW	600VDC	0 - 210A
ELP-34260	60kW	600VDC	0 - 24A	60kW	600VDC	0 - 240A

CHARACTERISED VALUES

ELP - 34205		ELP - 34210		ELP - 34215		ELP - 34220	
VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
20V	160A	20V	320A	20V	480A	20V	640A
18V	144A	18V	288A	18V	432A	18V	576A
16V	128A	16V	256A	16V	384A	16V	512A
14V	112A	14V	224A	14V	336A	14V	448A
12V	96A	12V	192A	12V	288A	12V	384A
10V	80A	10V	160A	10V	240A	10V	320A
8V	64A	8V	128A	8V	192A	8V	256A
6V	48A	6V	96A	6V	144A	6V	192A
4V	32A	4V	64A	4V	128A	4V	128A
2V	16A	2V	32A	2V	64A	2V	64A
1V	8A	1V	16A	1V	32A	1V	32A

ELP - 34225		ELP - 34230		ELP - 34250		ELP - 34260	
VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
20V	800A	20V	960A	20V	210A	20V	240A
18V	720A	18V	864A	18V	189A	18V	216A
16V	640A	16V	768A	16V	168A	16V	192A
14V	560A	14V	672A	14V	147A	14V	168A
12V	480A	12V	576A	12V	126A	12V	144A
10V	400A	10V	480A	10V	105A	10V	120A
8V	320A	8V	384A	8V	84A	8V	96A
6V	240A	6V	288A	6V	63A	6V	72A
4V	160A	4V	192A	4V	42A	4V	48A
2V	80A	2V	96A	2V	21A	2V	24A
1V	40A	1V	48A	1V	10A	1V	12A

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.

TECHNICAL DATA

	ELP - 34205		ELP - 34210		ELP - 34215		ELP - 34220	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage (ON/OFF)	0.4 - 100V / 0 - 100V							
Min Voltage at Full Current	20V at 160A		20V at 320A		20V at 480A		20V at 640A	
Short Circuit Current	160A		320A		480A		640A	
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 × 469 × 766mm		647 × 469 × 766mm		647 × 736 × 766mm		647 × 889 × 766mm	
Safety & EMC	CE							
OV, OC, OP Protection	105%							
Over Temp. Protection	Yes							

CC MODE

Range	16A	160A	32A	320A	48A	480A	64A	640A
Resolution	0.267mA	2.67mA	0.534mA	5.34mA	0.8mA	8mA	1.067mA	10.67mA
Accuracy	± [0.1% of setting + 0.2% of range]							

CR MODE

Range	15000 - 3.75Ω	3.75 - 0.0378Ω	12500 - 1.875Ω	1.875 - 0.0192Ω	15000 - 1.25Ω	1.25 - 0.0126Ω	11250-0.9375Ω	0.9375-0.0096Ω
Resolution	4.4μS	63μS	8.8μS	0.032mΩ	13.3μS	0.021mΩ	17.7μS	0.016mΩ
Accuracy	± 0.2% of [setting + range]							

CV MODE

Range	600V							
Resolution	10mV							
Accuracy	± 0.05% of [setting + range]							

CP MODE

Range	0.5kW	5kW	1kW	10kW	1.5kW	15kW	2kW	20kW
Resolution	8.334mW	83.34mW	16.7mW	167mW	25mW	250mW	33.4mW	334mW
Accuracy	± 0.5% of [setting + range]							

CV + CC MODE

Range	600V	160A	600V	320A	600V	480A	600V	640A
Resolution	10mV	2.67mA	10mV	5.34mA	10mV	8mA	10mV	10.67mA
Accuracy	± 0.5% of [setting + range]							

CV + CP MODE

Range	600V	5kW	600V	10kW	600V	15kW	600V	20kW
Resolution	10mV	83.34mW	10mV	167mW	10mV	250mW	10mV	334mW
Accuracy	± 0.5% 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 - 34205		ELP - 34210		ELP - 34215		ELP - 34220	
	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 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V
Range	0 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V
Resolution	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
Accuracy	± 0.025% of (reading + range)							

5-DIGIT AMMETER

	0 - 16A	16 - 160A	0 - 32A	32 - 320A	0 - 48A	48 - 480A	0 - 64A	64 - 640A
Range	0 - 16A	16 - 160A	0 - 32A	32 - 320A	0 - 48A	48 - 480A	0 - 64A	64 - 640A
Resolution	0.267mA	2.67mA	0.534mA	5.34mA	0.8mA	8mA	1.067mA	10.67mA
Accuracy	± 0.1% of (reading + range)							

5-DIGIT POWERMETER

	0.5kW	5kW	1kW	10kW	1.5kW	15kW	2kW	20kW
Range	0.5kW	5kW	1kW	10kW	1.5kW	15kW	2kW	20kW
Resolution	0.1W	1W	0.1W	1W	0.1W	1W	0.1W	1W
Accuracy	± 0.125% of (reading + 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	12.8-800mA/µs	128mA - 8A/µs	25.6mA-1.6A/µs	256mA-16A/µs	38.4mA-2.4A/µs	384mA-24A/µs	51.2mA-3.2A/µs	512mA-32A/µs
Slew Rate Resolution	3.2mA/µs	32mA/µs	6.4mA/µs	64mA/µs	9.6mA/µs	96mA/µs	12.8mA/µs	128mA/µs
Minimum Rise Time	Typically 20µs							
Current Range	0 - 16A	16 - 160A	0 - 32A	32 - 320A	0 - 48A	48 - 480A	0 - 64A	64 - 640A
Current Resolution	0.267mA	2.67mA	0.534mA	5.34mA	0.8mA	8mA	1.067mA	10.67mA
Accuracy	± [0.1% of setting + 0.2% of range]							

TECHNICAL DATA

	ELP - 34225		ELP - 34230		ELP - 34250		ELP - 34260	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage [ON/OFF]	0.4 - 100V / 0 - 100V				0.4 - 100V / 0 - 99V			
Min Voltage at Full Current	20V at 800A		20V at 960A		20V at 210A		20V at 240A	
Short Circuit Current	800A		960A		210A		240A	
Max. Power Consumption	2350W		2800W		5450W		6200W	
Weight	280kg		340kg		510kg		630kg	
Operating Temperature	0 to 40°C, all measurements taken at 25°C± 5°C, except where noted							
Dimensions [W × H × D]	647 × 1048 × 766mm		647 × 1201 × 766mm		853 × 1360 × 766mm		853 × 1513 × 766mm	
Safety & EMC	CE							
OV, OC, OP Protection	105%							
Over Temp. Protection	Yes							

CC MODE

Range	80A	800A	96A	960A	21A	210A	24A	240A
Resolution	1.334mA	13.34mA	1.6mA	16mA	0.35mA	3.5mA	0.4mA	4mA
Accuracy	± [0.1% of setting + 0.2% of range]							

CR MODE

Range	11250 - 0.75Ω	0.75 - 0.0078Ω	12500 - 0.625Ω	0.625-0.0066Ω	0.0286-2.857Ω	2.857 - 8751Ω	0.0834 - 2.5Ω	2.5 - 7500Ω
Resolution	22.2μS	0.013mΩ	26.6μS	0.011mΩ	47.7μΩ	5.83μS	41.7μΩ	6.66μS
Accuracy	± 0.2% of [setting + range]							

CV MODE

Range	600V							
Resolution	10mV							
Accuracy	± 0.05% of [setting + range]							

CP MODE

Range	2.5kW	25kW	3kW	30kW	5kW	50kW	6kW	60kW
Resolution	41.7mW	417mW	50mW	500mW	80mW	800mW	100mW	1W
Accuracy	± 0.5% of [setting + range]							

CV + CC MODE

Range	600V	800A	600V	960A	600V	210A	600V	240A
Resolution	10mV	13.34mA	10mV	16mA	10mV	3.5mA	10mV	4mA
Accuracy	± 1.0% of [setting + range]							

CV + CP MODE

Range	600V	25kW	600V	30kW	600V	50kW	600V	60kW
Resolution	10mV	417mW	10mV	500mW	10mV	800mW	10mV	1W
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 - 34225		ELP - 34230		ELP - 34250		ELP - 34260	
	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 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V
Range	0 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V	0 - 60V	60 - 600V
Resolution	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
Accuracy	± 0.025% of (reading + range)							

5-DIGIT AMMETER

	0 - 80A	80 - 800A	0 - 96A	96 - 960A	0 - 21A	21 - 210A	0 - 24A	24 - 240A
Range	0 - 80A	80 - 800A	0 - 96A	96 - 960A	0 - 21A	21 - 210A	0 - 24A	24 - 240A
Resolution	1.334mA	13.34mA	1.6mA	16mA	0.35mA	3.5mA	0.4mA	4mA
Accuracy	± 0.1% of (reading + range)							

5-DIGIT POWERMETER

	2.5kW	25kW	3kW	30kW	5kW	50kW	6kW	60kW
Range	2.5kW	25kW	3kW	30kW	5kW	50kW	6kW	60kW
Resolution	0.1W	1W	0.1W	1W	0.1W	1W	0.1W	1W
Accuracy	± 0.125% of (reading + 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	64mA - 4A/µs	640mA-40A/µs	76.8mA-4.8A/µs	768mA-48A/µs	16.8mA-1.05A/µs	168mA-10.5A/µs	19.2mA - 1.2A/µs	192mA-12A/µs
Slew Rate Resolution	16mA/µs	160mA/µs	19.2mA/µs	192mA/µs	4.2mA/µs	42mA/µs	4.8mA/µs	48mA/µs
Minimum Rise Time	Typically 20µs							
Current Range	0 - 80A	80 - 800A	0 - 96A	96 - 960A	0 - 21A	21 - 210A	0 - 24A	24 - 240A
Current Resolution	1.334mA	13.34mA	1.6mA	16mA	0.35mA	3.5mA	0.4mA	4mA
Accuracy	± [0.1% of setting + 0.2% of range]							



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