

ELP-34305

DUAL RANGE HIGH VOLTAGE DC LOADS



POSITIVE PROBLEM SOLVING **+ =**

The ELP-34305 series is a family of precision DC electronic loads for high voltage applications, such as renewable energy.

Dual setting and measurement ranges combined with 5 digit displays provide high resolution for both measurement and setting. In dynamic mode, adjustable rise, fall and plateau times allow testing of high voltage DC energy, from photovoltaic cells or high voltage batteries. Dedicated short circuit, OCP and OPP tests allow power supply behaviour and protection mechanisms to be characterised.

- + 9 Different Operation Modes**
- + 5 Digit Displays for V, I & W**
- + Overcurrent & Power Tests**
- + Short Circuit Test Function**
- + Adjustable Slew Rates**
- + Front Panel Memory**

ELP-34305

DUAL RANGE HIGH VOLTAGE DC LOADS

FURTHER DETAILS

150-state memory is available as standard, and allows quick initialisation and limit-setting of the unit, making it dependable and mobile as an on-site load tester.

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.

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.

OPTIONS

CODE	DESCRIPTION
/9923	Programmable current waveform generator
/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-34305	500W	1000VDC	0 - 5A	5kW	1000VDC	0 - 50A
ELP-34310	1kW	1000VDC	0 - 10A	10kW	1000VDC	0 - 100A
ELP-34315	1.5kW	1000VDC	0 - 15A	15kW	1000VDC	0 - 150A
ELP-34320	2kW	1000VDC	0 - 20A	20kW	1000VDC	0 - 200A
ELP-34325	2.5kW	1000VDC	0 - 25A	25kW	1000VDC	0 - 250A
ELP-34330	3kW	1000VDC	0 - 30A	30kW	1000VDC	0 - 300A
ELP-34335	3.5kW	1000VDC	0 - 35A	35kW	1000VDC	0 - 350A
ELP-34340	4kW	1000VDC	0 - 40A	40kW	1000VDC	0 - 400A
ELP-34350	5kW	1000VDC	0 - 52.5A	50kW	1000VDC	0 - 500A
ELP-34360	6kW	1000VDC	0 - 60A	60kW	1000VDC	0 - 600A

CHARACTERISED VALUES

ELP - 34305		ELP - 34310		ELP - 34315		ELP - 34320	
VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
20V	50A	20V	100A	20V	150A	20V	200A
18V	45A	18V	90A	18V	135A	18V	180A
16V	40A	16V	80A	16V	120A	16V	160A
14V	35A	14V	70A	14V	105A	14V	140A
12V	30A	12V	60A	12V	90A	12V	120A
10V	25A	10V	50A	10V	75A	10V	100A
8V	20A	8V	40A	8V	60A	8V	80A
6V	15A	6V	30A	6V	45A	6V	60A
4V	10A	4V	20A	4V	30A	4V	40A
2V	5A	2V	10A	2V	15A	2V	20A
1V	2.5A	1V	5A	1V	7.5A	1V	10A

ELP - 34325		ELP - 34330		ELP - 34335		ELP - 34340	
VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
20V	250A	20V	300A	20V	350A	20V	400A
18V	225A	18V	270A	18V	315A	18V	360A
16V	200A	16V	240A	16V	280A	16V	320A
14V	175A	14V	210A	14V	245A	14V	280A
12V	150A	12V	180A	12V	210A	12V	240A
10V	125A	10V	150A	10V	175A	10V	200A
8V	100A	8V	120A	8V	140A	8V	160A
6V	75A	6V	90A	6V	105A	6V	120A
4V	50A	4V	60A	4V	70A	4V	80A
2V	25A	2V	30A	2V	35A	2V	40A
1V	12.5A	1V	15A	1V	17.5A	1V	20A

ELP - 34350				ELP - 34360			
VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
20V	500A	8V	200A	20V	600A	8V	240A
18V	450A	6V	150A	18V	540A	6V	180A
16V	400A	4V	100A	16V	480A	4V	120A
14V	350A	2V	50A	14V	420A	2V	60A
12V	300A	1V	25A	12V	360A	1V	30A
10V	250A			10V	300A		

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 - 34305		ELP - 34310		ELP - 34315		ELP - 34320	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage [ON/OFF]	10.4 - 200V / 0 - 200V							
Min Voltage at Full Current	20V at 50A		20V at 100A		20V at 150A		20V at 200A	
Short Circuit Current	50A		100A		150A		200A	
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 × 577 × 766mm		647 × 577 × 766mm		647 × 736 × 766mm		647 × 889 × 766mm	
Safety & EMC	CE							
Protection [OV / OC / OP]	104% / 104% / 105%							
Over Temp. Protection	Yes							

CC MODE (AUTOMATIC RANGING APPLIES IN CC MODE)

Range	0 - 5A	0 - 50A	0 - 10A	0 - 100A	0 - 15A	0 - 150A	0 - 20A	0 - 200A
Resolution	0.08mA	0.8mA	0.16mA	1.6mA	0.25mA	2.5mA	0.32mA	3.2mA
Accuracy	± (0.1% of setting + 0.2% of range)							

CR MODE

Range	24000 - 20Ω	20 - 0.4008Ω	12000 - 10Ω	10 - 0.2004Ω	8000 - 6.666Ω	6.666-0.1344Ω	6000 - 5Ω	5 - 0.1008Ω
Resolution	0.833μS	0.334mΩ	1.666μS	0.167mΩ	2.5μS	0.112mΩ	3.33μS	0.084mΩ
Accuracy	± 0.2% of [setting + range]							

CV MODE

Range	20 - 1000V							
Resolution	16mV							
Accuracy	± 0.05% of [setting + range]							

CP MODE

Range	0.5kW	5kW	1kW	10kW	1.5kW	15kW	2kW	20kW
Resolution	8mW	80mW	16mW	160mW	25mW	250mW	32mW	320mW
Accuracy	± 0.5% of [setting + range]							

CV + CC MODE

Range	20 - 1000V	0 - 50A	20 - 1000V	0 - 100A	20 - 1000V	0 - 150A	20 - 1000V	0 - 200A
Resolution	16mV	0.8mA	16mV	1.6mA	16mV	2.5mA	16mV	3.2mA
Accuracy	± 0.5% of [setting + range]							

CV + CP MODE

Range	20 - 1000V	5kW	20 - 1000V	10kW	20 - 1000V	15kW	20 - 1000V	20kW
Resolution	16mV	80mW	16mV	160mW	16mV	250mW	16mV	320mW
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 - 34305		ELP - 34310		ELP - 34315		ELP - 34320	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Over Power Protection	105%							
Over Current Protection	104%							
Over Voltage Protection	104%							
Over Temp. Protection	Yes							
5-DIGIT VOLTMETER								
Range	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V
Resolution	1.6mV	16mV	1.6mV	16mV	1.6mV	16mV	1.6mV	16mV
Accuracy	± 0.025% of (reading + range)							
5-DIGIT AMMETER								
Range	0 - 5A	5 - 50A	0 - 10A	10 - 100A	0 - 15A	15 - 150A	0 - 20A	20 - 200A
Resolution	0.08mA	0.8mA	0.16mA	1.6mA	0.25mA	2.5mA	0.32mA	3.2mA
Accuracy	± 0.1% of (reading + range)							
5-DIGIT POWERMETER								
Range	0 - 0.5kW	0 - 5kW	0 - 1kW	0 - 10kW	0 - 1.5kW	0 - 15kW	0 - 2kW	0 - 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	4mA-0.25A/µs	40mA-2.5A/µs	8mA - 0.5A/µs	80mA - 5A/µs	12mA-0.75A/µs	0.12A - 7.5A/µs	16mA - 1A/µs	0.16A - 10A/µs
Slew Rate Resolution	1mA/µs	10mA/µs	2mA/µs	20mA/µs	3mA/µs	30mA/µs	4mA/µs	40mA/µs
Minimum Rise Time	Typically 20µs							
Current Range	0 - 5A	5 - 50A	0 - 10A	10 - 100A	0 - 15A	15 - 150A	0 - 20A	20 - 200A
Current Resolution	0.08mA	0.8mA	0.16mA	1.6mA	0.25mA	2.5mA	0.32mA	3.2mA
Accuracy	± (0.1% of setting + 0.2% of range)							

TECHNICAL DATA

	ELP - 34325		ELP - 34330		ELP - 34335	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage [ON/OFF]	10.4 - 200V / 0 - 200V					
Min Voltage at Full Current	20V at 250A		20V at 300A		20V at 350A	
Short Circuit Current	250A		300A		350A	
Max. Power Consumption	2350W		2800W		3250W	
Weight	280kg		340kg		390kg	
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		647 × 1360 × 766mm	
Safety & EMC	CE					
Protection [OV / OC / OP]	104% / 104% / 105%					
Over Temp. Protection	Yes					

CC MODE (AUTOMATIC RANGING APPLIES IN CC MODE)

Range	0 - 25A	0 - 250A	0 - 30A	0 - 300A	0 - 35A	0 - 350A
Resolution	0.4mA	4mA	0.5mA	5mA	0.56mA	5.6mA
Accuracy	± [0.1% of setting + 0.2% of range]					

CR MODE

Range	4800 - 4Ω	4 - 0.0804Ω	4000 - 3.333Ω	3.333 - 0.0672Ω	3428.4 - 2.857Ω	2.857 - 0.0576Ω
Resolution	4.166μS	0.067mΩ	5μS	0.056mΩ	5.84μS	0.048mΩ
Accuracy	± 0.2% of [setting + range]					

CV MODE

Range	20 - 1000V					
Resolution	16mV					
Accuracy	± 0.05% of [setting + range]					

CP MODE

Range	2.5kW	25kW	3kW	30kW	3.5kW	35kW
Resolution	40mW	400mW	50mW	500mW	56mW	560mW
Accuracy	± 0.5% of [setting + range]					

CV + CC MODE

Range	20 - 1000V	0 - 250A	20 - 1000V	0 - 300A	20 - 1000V	0 - 350A
Resolution	16mV	4mA	16mV	5mA	16mV	5.6mA
Accuracy	± 1.0% of [setting + range]					

CV + CP MODE

Range	20 - 1000V	25kW	20 - 1000V	30kW	20 - 1000V	35kW
Resolution	16mV	400mW	16mV	500mW	16mV	560mW
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 - 34325		ELP - 34330		ELP - 34335	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Over Power Protection	105%					
Over Current Protection	104%					
Over Voltage Protection	104%					
Over Temp. Protection	Yes					

5-DIGIT VOLTMETER

	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V
Range	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V
Resolution	1.6mV	16mV	1.6mV	16mV	1.6mV	16mV
Accuracy	± 0.025% of (reading + range)					

5-DIGIT AMMETER

	0 - 25A	25 - 250A	0 - 30A	30 - 300A	0 - 35A	35 - 350A
Range	0 - 25A	25 - 250A	0 - 30A	30 - 300A	0 - 35A	35 - 350A
Resolution	0.4mA	4mA	0.5mA	5mA	0.56mA	5.6mA
Accuracy	± 0.1% of (reading + range)					

5-DIGIT POWERMETER

	0 - 2.5kW	0 - 25kW	0 - 3kW	0 - 30kW	0 - 3.5kW	0 - 35kW
Range	0 - 2.5kW	0 - 25kW	0 - 3kW	0 - 30kW	0 - 3.5kW	0 - 35kW
Resolution	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	20mA - 1.25A/µs	0.2A - 12.5A/µs	24mA - 1.5A/µs	0.24A - 15A/µs	28mA - 1.75A/µs	0.28A - 17.5A/µs
Slew Rate Resolution	5mA/µs	50mA/µs	6mA/µs	60mA/µs	7mA/µs	70mA/µs
Minimum Rise Time	Typically 20µs					
Current Range	0 - 25A	25 - 250A	0 - 30A	30 - 300A	0 - 35A	35 - 350A
Current Resolution	0.4mA	4mA	0.5mA	5mA	0.56mA	5.6mA
Accuracy	± (0.1% of setting + 0.2% of range)					

TECHNICAL DATA

	ELP - 34340		ELP - 34350		ELP - 34360	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Load Voltage [ON/OFF]	10.4 - 200V / 0 - 200V		20 - 200V / 0 - 198.4V		20 - 200V / 0 - 198.4V	
Min Voltage at Full Current	20V at 400A		20V at 500A		20V at 600A	
Short Circuit Current	400A		500A		600A	
Max. Power Consumption	3700W		5450W		6200W	
Weight	430kg		510kg		630kg	
Operating Temperature	0 to 40°C, all measurements taken at 25°C± 5°C, except where noted					
Dimensions [W × H × D]	647 × 1513 × 766mm		853 × 1360 × 766mm		853 × 1513 × 766mm	
Safety & EMC	CE					
Protection [OV / OC / OP]	104% / 104% / 105%					
Over Temp. Protection	Yes					

CC MODE (AUTOMATIC RANGING APPLIES IN CC MODE)

Range	0 - 40A	0 - 400A	0 - 50A	0 - 500A	0 - 60A	0 - 600A
Resolution	0.64mA	6.4mA	0.8mA	8mA	1mA	10mA
Accuracy	± [0.1% of setting + 0.2% of range]					

CR MODE

Range	3000 - 2.5Ω	2.5 - 0.0504Ω	0.04 - 2Ω	2 - 2500Ω	0.0333 - 1.666Ω	1.666 - 2000Ω
Resolution	6.66μS	0.042mΩ	32μΩ	8μS	27.8μΩ	10μS
Accuracy	± 0.2% of [setting + range]					

CV MODE

Range	20 - 1000V					
Resolution	16mV					
Accuracy	± 0.05% of [setting + range]					

CP MODE

Range	4kW	40kW	5kW	50kW	6kW	60kW
Resolution	64mW	640mW	80mW	800mW	100mW	1W
Accuracy	± 0.5% of [setting + range]					

CV + CC MODE

Range	20 - 1000V	0 - 400A	20 - 1000V	0 - 500A	20 - 1000V	0 - 600A
Resolution	16mV	6.4mA	16mV	8mA	16mV	10mA
Accuracy	± 1.0% of [setting + range]					

CV + CP MODE

Range	20 - 1000V	40kW	20 - 1000V	50kW	20 - 1000V	60kW
Resolution	16mV	640mW	16mV	800mW	16mV	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 - 34340		ELP - 34350		ELP - 34360	
	RANGE 1	RANGE 2	RANGE 1	RANGE 2	RANGE 1	RANGE 2
Over Power Protection	105%					
Over Current Protection	104%					
Over Voltage Protection	104%					
Over Temp. Protection	Yes					
5-DIGIT VOLTMETER						
Range	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V	0 - 100V	100 - 1000V
Resolution	1.6mV	16mV	1.6mV	16mV	1.6mV	16mV
Accuracy	± 0.025% of (reading + range)					
5-DIGIT AMMETER						
Range	0 - 40A	40 - 400A	0 - 50A	50 - 500A	0 - 60A	60 - 600A
Resolution	0.64mA	6.4mA	0.8mA	8mA	1mA	10mA
Accuracy	± 0.1% of (reading + range)					
5-DIGIT POWERMETER						
Range	0 - 4kW	0 - 40kW	0 - 5kW	0 - 52kW	0 - 6kW	0 - 60kW
Resolution	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	32mA - 2A/µs	0.32A - 20A/µs	40mA - 2.5A/µs	400mA - 25A/µs	48mA - 3A/µs	480mA - 30A/µs
Slew Rate Resolution	8mA/µs	80mA/µs	10mA/µs	100mA/µs	12mA/µs	120mA/µs
Minimum Rise Time	Typically 20µs					
Current Range	0 - 40A	40 - 400A	0 - 50A	50 - 500A	0 - 60A	60 - 600A
Current Resolution	0.64mA	6.4mA	0.8mA	8mA	1mA	10mA
Accuracy	± (0.1% of setting + 0.2% of range)					



“
WE ARE
POSITIVE
PEOPLE
”

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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