

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 5 models from 5kW to 30kW 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.

- + 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**

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FURTHER DETAILS

The units have 150 memory locations with auto sequence capability to speed up changes of test parameters.

A full set of optional interfaces are available including IEEE, RS-232, USB & LAN LabVIEW drivers are also available.

The LCD display simultaneously shows Voltage, Current & Power.

The 5kW unit is supplied with a carry harness for ease of installation.

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 |

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) |

CHARACTERISED VALUES

| ELP - 34105 | | ELP - 34110 | | ELP - 34115 | | ELP - 34120 | |
|-------------|---------|-------------|---------|-------------|---------|-------------|---------|
| VOLTAGE | CURRENT | VOLTAGE | CURRENT | VOLTAGE | CURRENT | VOLTAGE | CURRENT |
| 0.7V | 1000A | 20V | 1000A | 20V | 1000A | 20V | 1000A |
| 0.6V | 857A | 18V | 857A | 18V | 857A | 18V | 857A |
| 0.5V | 714A | 16V | 714A | 16V | 714A | 16V | 714A |
| 0.4V | 571A | 14V | 571A | 14V | 571A | 14V | 571A |
| 0.3V | 429A | 12V | 429A | 12V | 429A | 12V | 429A |
| 0.2V | 586A | 10V | 586A | 10V | 586A | 10V | 586A |
| 0.1V | 143A | 8V | 143A | 8V | 143A | 8V | 143A |

| ELP - 34125 | | ELP - 34130 | |
|-------------|---------|-------------|---------|
| VOLTAGE | CURRENT | VOLTAGE | CURRENT |
| 0.7V | 1000A | 20V | 1000A |
| 0.6V | 857A | 18V | 857A |
| 0.5V | 714A | 16V | 714A |
| 0.4V | 571A | 14V | 571A |
| 0.3V | 429A | 12V | 429A |
| 0.2V | 586A | 10V | 586A |
| 0.1V | 143A | 8V | 143A |

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 - 34105 | | ELP - 34110 | | ELP - 34115 | |
|------------------------|--|---------------|-------------------|---------------|-------------------|---------------|
| | 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 |
| Short Circuit Current | 1000A | | | | | |
| Max. Power Consumption | 600W | | 1000W | | 1450W | |
| Weight | 100kg | | 130kg | | 170kg | |
| 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 | |
| Safety & EMC | CE | | | | | |
| CC MODE | | | | | | |
| Current Sink Value | 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 |
| 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 |
| Resolution | 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 |
| Resolution | 8.34mW | 83.4mW | 16.7mW | 167mW | 25mW | 250mW |
| Accuracy | ± 0.5% of [setting + range] | | | | | |
| CV + CC MODE | | | | | | |
| Range | 0 - 60V | 0 - 1000A | 0 - 60V | 0 - 1000A | 0 - 60V | 0 - 1000A |
| Resolution | 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 |
| Resolution | 1mV | 83.4mW | 1mV | 167mW | 1mV | 250mW |
| 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 | |
|---------------------------|--|------------------|---------------------------------------|--------------------|---------------------|--------------------|
| | 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 | | | | | | |
| Range | 0 - 6V | 6 - 60V | 0 - 6V | 6 - 60V | 0 - 6V | 6 - 60V |
| Resolution | 0.1mV | 1mV | 0.1mV | 1mV | 0.1mV | 1mV |
| Accuracy | ± 0.025% of [setting + range] | | | | | |
| 5-DIGIT AMMETER | | | | | | |
| Range | 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 |
| Accuracy | ± 0.1% of [setting + range] | | | | | |
| 5-DIGIT POWERMETER | | | | | | |
| Range | 0 - 500W | 0 - 5kW | 0 - 1kW | 0 - 10kW | 0 - 1.5kW | 0 - 15kW |
| Resolution | 0.01W | 0.1W | 0.01W | 0.1W | 0.01W | 0.1W |
| 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 | 24mA - 1.5A / µs | 240mA - 15A / µs | 66.4mA - 4.15A / µs | 664mA - 41.5A / µs | 66.4mA - 4.15A / µs | 664mA - 41.5A / µs |
| Slew Rate Resolution | 6mA / µs | 60mA / µs | 16.6mA / µs | 166mA / µs | 16.6mA / µs | 166mA / µs |
| Minimum Rise Time | Typically 66.7µs | | Typically 24µs | | | |
| Current Range | 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 |
| Accuracy | ± [0.1% of setting + 0.2% of range] | | | | | |

TECHNICAL DATA

| | ELP - 34120 | | ELP - 34125 | | ELP - 34130 | |
|------------------------|--|---------------|--------------------|---------------|--------------------|---------------|
| | 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 |
| Short Circuit Current | 1000A | | | | | |
| Max. Power Consumption | 1900W | | 2350W | | 2800W | |
| Weight | 220kg | | 280kg | | 340kg | |
| Operating Temperature | 0 to 40°C, all measurements taken at 25°C± 5°C, except where noted | | | | | |
| Dimensions [W × H × D] | 647 × 781 × 766mm | | 647 × 1041 × 766mm | | 647 × 1197 × 766mm | |
| Safety & EMC | CE | | | | | |
| CC MODE | | | | | | |
| Current Sink Value | 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 |
| 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 |
| Resolution | 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 - 2kW | 0 - 20kW | 0 - 2.5kW | 0 - 25kW | 0 - 3kW | 0 - 30kW |
| Resolution | 33.4mW | 334mW | 41.7mW | 417mW | 50mW | 500mW |
| Accuracy | ± 0.5% of [setting + range] | | | | | |
| CV + CC MODE | | | | | | |
| Power Sink Value | 0 - 60V | 0 - 1000A | 0 - 60V | 0 - 1000A | 0 - 60V | 0 - 1000A |
| Resolution | 1mV | 16.67mA | 1mV | 16.67mA | 1mV | 16.67mA |
| Accuracy | ± 1.0% of [setting + range] | | | | | |
| CV + CP MODE | | | | | | |
| Power Sink Value | 0 - 60V | 0 - 20kW | 0 - 60V | 0 - 25kW | 0 - 60V | 0 - 30kW |
| Resolution | 1mV | 334mW | 1mV | 417mW | 1mV | 500mW |
| 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 - 34120 | | ELP - 34125 | | ELP - 34130 | |
|-------------------------|-------------|---------|-------------|---------|-------------|---------|
| | 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 |
|------------|-------------------------------|---------|--------|---------|--------|---------|
| Range | | | | | | |
| Resolution | 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 |
|------------|-----------------------------|-------------|----------|-------------|----------|-------------|
| Range | | | | | | |
| Resolution | 1.667mA | 16.67mA | 1.667mA | 16.67mA | 1.667mA | 16.67mA |
| Accuracy | ± 0.1% of [setting + range] | | | | | |

5-DIGIT POWERMETER

| | 0 - 2kW | 0 - 20kW | 0 - 2.5kW | 0 - 25kW | 0 - 3kW | 0 - 30kW |
|------------|-------------------------------|----------|-----------|----------|---------|----------|
| Range | | | | | | |
| Resolution | 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 |
| Slew Rate Resolution | 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 |
| Current Resolution | 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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**WE ARE
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PEOPLE**
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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