

# ELP/DCM97 series programmable DC electronic load

1800 - 3600 W load



## FEATURES

- Six high speed operation modes: CC,CR,CV,CW,CC+CV,CR+CW
- High-luminance VFD screen with 2 lines & 4 channels display channels
- Battery testing and short-circuit function
- Available of dynamic testing and rising edge and falling edge setting
- External current waveform monitor terminal
- Power-on-self-test, software calibration and standard rack mount
- Over current, over voltage, over power, over heat, reversed protection
- 1000/1200 V on request polarity
- Soft start time setting, carrying the power supplier according to the voltage value set
- Supporting external trigger input and output
- Supporting remote voltage compensation and multidata storage
- Communication mode: GPIB/RS232/RS485/USB (Option)
- Customer specific models on request

| Model  | ELP/DCM9715 |                | ELP/DCM9715B   |                | ELP/DCM9716    |                | ELP/DCM9716B   |                |                |
|--|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Input Rating   | Power       | 1800 W         |                | 1800 W         |                | 2400 W         |                | 2400 W         |                |
|  | Current     | 0 - 240 A      |                | 0 - 120 A      |                | 0 - 240 A      |                | 0 - 120 A      |                |
|  | Voltage     | 0 - 150 V      |                | 0 - 500 V      |                | 0 - 150 V      |                | 0 - 500 V      |                |
| CC Mode  | Range       | 0 - 24 A       | 0 - 240 A      | 0 - 12 A       | 0 - 120 A      | 0 - 24 A       | 0 - 240 A      | 0 - 12 A       | 0 - 120 A      |
|  | Resolution  | 1 mA           | 10 mA          | 0,1 mA         | 1 mA           | 0,1 mA         | 10 mA          | 0,1 mA         | 10 mA          |
|  | Accuracy    | 0,05%+0,05%FS  | 0,1%+0,05%FS   | 0,05%+0,05%FS  | 0,1%+0,05%FS   | 0,05%+0,05%FS  | 0,1%+0,05%FS   | 0,05%+0,05%FS  | 0,1%+0,05%FS   |
| CV Mode  | Range       | 0,1 - 19.999 V | 0,1 - 150 V    | 0,1 - 19.999 V | 0,1 - 500 V    | 0,1 - 19.999 V | 0,1 - 150 V    | 0,1 - 19.999 V | 0,1 - 500 V    |
|  | Resolution  | 1 mV           | 10 mV          | 1 mV           | 10 mV          | 1 mV           | 10 mV          | 1 mV           | 10 mV          |
|  | Accuracy    | 0,03%+0,02%FS  | 0,03%+0,02%FS  | 0,03%+0,02%FS  | 0,03%+0,05%FS  | 0,03%+0,02%FS  | 0,03%+0,02%FS  | 0,03%+0,02%FS  | 0,03%+0,05%FS  |
| CR Mode (Voltage and current input value > 10% full messument)       | Range       | 0,03 - 10 K Ω  | 0,03 - 5 K Ω   | 0,03 - 10 K Ω  | 0,03 - 5 K Ω   | 0,3 - 10 K Ω   | 0,3 - 5 K Ω    | 0,03 - 10 K Ω  | 0,03 - 5 K Ω   |
|  | Resolution  | 16 bit         | 16 bit         | 16 bit         | 16 bit         | 16 bit         | 16 bit         | 16 bit         | 16 bit         |
|  | Accuracy    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    |
| CW Mode (Voltage and current input value > 10% full messument)       | Range       | 0 - 1800 W     | 0 - 1800 W     | 0 - 1800 W     | 0 - 1800 W     | 0 - 2400 W     | 0 - 2400 W     | 0 - 2400 W     | 0 - 2400 W     |
|  | Resolution  | 1 mW           | 10 mW          | 1 mW           | 10 mW          | 1 mW           | 10 mW          | 1 mW           | 10 mW          |
|  | Accuracy    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    |
| V Measurement  | Voltage     | 0 - 19.999 V   | 0 - 150 V      | 0 - 19.999 V   | 0 - 500 V      | 0 - 19.999 V   | 0 - 150 V      | 0 - 19.999 V   | 0 - 500 V      |
|  | Resolution  | 1 mV           | 10 mV          | 1 mV           | 10 mV          | 1 mV           | 10 mV          | 1 mV           | 10 mV          |
|  | Accuracy    | 0,015%+0,03%FS | 0,015%+0,03%FS | 0,015%+0,03%FS | 0,015%+0,05%FS | 0,015%+0,03%FS | 0,015%+0,03%FS | 0,015%+0,03%FS | 0,015%+0,05%FS |
| I Measurement  | Current     | 0 - 24 A       | 0 - 240 A      | 0 - 12 A       | 0 - 120 A      | 0 - 24 A       | 0 - 240 A      | 0 - 12 A       | 0 - 120 A      |
|  | Resolution  | 0,1 mA         | 1 mA           | 0,1 mA         | 1 mA           | 0,1 mA         | 1 mA           | 0,1 mA         | 1 mA           |
|  | Accuracy    | 0,03%+0,05%FS  | 0,1%+0,1%FS    | 0,03%+0,05%FS  | 0,1%+0,05%FS   | 0,03%+0,05%FS  | 0,1%+0,05%FS   | 0,03%+0,05%FS  | 0,1%+0,08%FS   |
| W Measurement (Voltage and current input value > 10% full messument) | Watt        | 100 W          | 1800 W         | 100 W          | 1800 W         | 100 W          | 2400 W         | 100 W          | 2400 W         |
|  | Resolution  | 1 mW           | 10 mW          | 1 mW           | 10 mW          | 1 mW           | 10 mW          | 1 mW           | 10 mW          |
|  | Accuracy    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    | 0,1%+0,1%FS    |

|                             |   |
|-----------------------------|---|
| <b>Battery Test</b>         | Battery Input: 0,5 - 120 V; Max. Measurement: Capacy = 999 AH; Resolution = 0,1 mA; Time Range = 15 - 32 HS |
| <b>Dynamic Test</b>         | Transition List: 0 - 25 kHz; 2,5 A/uS; T1 & T2: 60 uS - 999 S; Accuracy: +/- 15 % offset + 10 % FS          |
| <b>CC soft-startup Time</b> | 1 mS; 2 mS; 5 mS; 10 mS; 20 mS; 50 mS; 100 mS; 200 mS; Accuracy: +/- 15 % offset + 10 % FS                  |

|               |               |                  |         |                |         |                |         |                |         |
|---------------|---------------|------------------|---------|----------------|---------|----------------|---------|----------------|---------|
| Short Circuit | Current CC    | = 26,4 A         | = 264 A | = 13,2 A       | = 132 A | = 26,4 A       | = 264 A | = 13,2 A       | = 132 A |
|               | Voltage CV    | 0 V              |         | 0 V            |         | 0 V            |         | 0 V            |         |
|               | Resistance RC | = 6 mΩ           |         | = 50 mΩ        |         | = 6 mΩ         |         | = 50 mΩ        |         |
| Temperature   | Operating     | 0 - 40 °C        |         | 0 - 40 °C      |         | 0 - 40 °C      |         | 0 - 40 °C      |         |
|               | Nonoperating  | -10 °C - 70 °C   |         | -10 °C - 70 °C |         | -10 °C - 70 °C |         | -10 °C - 70 °C |         |
| Dimension     | WxHxD (mm)    | 19" x 4U x 538.5 |         |                |         |                |         |                |         |
| Weight        | Kg            | 31,6             |         |                |         |                |         |                |         |

| Model  | ELP/DCM9716E |                      | ELP/DCM9717         |                      | ELP/DCM9717B        |                      | ELP/DCM9717C        |                      |                     |
|--|--------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| Input Rating   | Power        | 3000 W               |                     | 3600 W               |                     | 3600 W               |                     | 3600 W               |                     |
|  | Current      | 0 - 480 A            |                     | 0 - 240 A            |                     | 0 - 120 A            |                     | 0 - 500 A            |                     |
|  | Voltage      | 0 - 150 V            |                     | 0 - 150 V            |                     | 0 - 500 V            |                     | 0 - 150 V            |                     |
| CC Mode  | Range        | 0 - 48 A             | 0 - 480 A           | 0 - 24 A             | 0 - 240 A           | 0 - 12 A             | 0 - 120 A           | 0 - 50 A             | 0 - 500 A           |
|  | Resolution   | 1 mA                 | 10 mA               | 1 mA                 | 10 mA               | 1 mA                 | 10 mA               | 0,1 mA               | 10 mA               |
|  | Accuracy     | 0,05%+0,1%FS         | 0,05%+0,15%FS       | 0,05%+0,05%FS        | 0,1%+0,05%FS        | 0,05%+0,05%FS        | 0,1%+0,05%FS        | 0,1%+0,05%FS         | 0,15%+0,1%FS        |
| CV Mode  | Range        | 0,1 - 19.999 V       | 0,1 - 150 V         | 0,1 - 19.999 V       | 0,1 - 150 V         | 0,1 - 19.999 V       | 0,1 - 500 V         | 0,1 - 19.999 V       | 0,1 - 150 V         |
|  | Resolution   | 1 mV                 | 10 mV               | 1 mV                 | 10 mV               | 1 mV                 | 10 mV               | 1 mV                 | 10 mV               |
|  | Accuracy     | 0,03%+0,02%FS        | 0,03%+0,02%FS       | 0,03%+0,02%FS        | 0,03%+0,02%FS       | 0,03%+0,02%FS        | 0,03%+0,05%FS       | 0,03%+0,02%FS        | 0,03%+0,02%FS       |
| CR Mode (Voltage and current input value > 10% full messument)       | Range        | 0,03 - 10 K $\Omega$ | 0,03 - 5 K $\Omega$ | 0,03 - 10 K $\Omega$ | 0,03 - 5 K $\Omega$ | 0,03 - 10 K $\Omega$ | 0,03 - 5 K $\Omega$ | 0,03 - 10 K $\Omega$ | 0,03 - 5 K $\Omega$ |
|  | Resolution   | 16 bit               | 16 bit              | 16 bit               | 16 bit              | 16 bit               | 16 bit              | 16 bit               | 16 bit              |
|  | Accuracy     | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,2%+0,15%FS        |
| CW Mode (Voltage and current input value > 10% full messument)       | Range        | 0 - 3000 W           | 0 - 3000 W          | 0 - 3600 W           | 0 - 3600 W          | 0 - 3600 W           | 0 - 3600 W          | 0 - 3600 W           | 0 - 3600 W          |
|  | Resolution   | 1 mW                 | 10 mW               | 1 mW                 | 10 mW               | 1 mW                 | 10 mW               | 1 mW                 | 10 mW               |
|  | Accuracy     | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,2%+0,15%FS        |
| V Measurement  | Voltage      | 0 - 19.999 V         | 0 - 150 V           | 0 - 19.999 V         | 0 - 150 V           | 0 - 19.999 V         | 0 - 500 V           | 0 - 19.999 V         | 0 - 150 V           |
|  | Resolution   | 1 mV                 | 10 mV               | 1 mV                 | 10 mV               | 1 mV                 | 10 mV               | 1 mV                 | 10 mV               |
|  | Accuracy     | 0,015%+0,03%FS       | 0,015%+0,03%FS      | 0,015%+0,03%FS       | 0,015%+0,03%FS      | 0,015%+0,03%FS       | 0,015%+0,05%FS      | 0,015%+0,03%FS       | 0,015%+0,03%FS      |
| I Measurement  | Current      | 0 - 48 A             | 0 - 480 A           | 0 - 24 A             | 0 - 240 A           | 0 - 12 A             | 0 - 120 A           | 0 - 50 A             | 0 - 500 A           |
|  | Resolution   | 0,1 mA               | 1 mA                | 0,1 mA               | 1 mA                | 0,1 mA               | 1 mA                | 0,1 mA               | 1 mA                |
|  | Accuracy     | 0,05%+0,1%FS         | 0,1%+0,15%FS        | 0,03%+0,08%FS        | 0,1%+0,08%FS        | 0,03%+0,08%FS        | 0,1%+0,08%FS        | 0,1%+0,05%FS         | 0,15%+0,1%FS        |
| W Measurement (Voltage and current input value > 10% full messument) | Watt         | 100 W                | 3000 W              | 100 W                | 3600 W              | 100 W                | 3600 W              | 100 W                | 3600 W              |
|  | Resolution   | 1 mW                 | 10 mW               | 1 mW                 | 10 mW               | 1 mW                 | 10 mW               | 1 mW                 | 10 mW               |
|  | Accuracy     | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,1%+0,1%FS         | 0,1%+0,1%FS          | 0,2%+0,15%FS        |

|                             |   |
|-----------------------------|---|
| <b>Battery Test</b>         | Battery Input: 0,5 - 120 V; Max. Measurement: Capacity = 999 AH; Resolution = 0,1 mA; Time Range = 1S - 32 HS |
| <b>Dynamic Test</b>         | Transition List: 0 - 25 kHz; 5 A/uS; T1 & T2: 60 uS - 999 S; Accuracy: +/- 15 % offset + 10 %FS               |
| <b>CC soft-startup Time</b> | 1 mS; 2 mS; 5 mS; 10 mS; 20 mS; 50 mS; 100 mS; 200 mS; Accuracy: +/- 15 % offset + 10 %FS                     |

|               |               |                  |         |                  |         |                  |         |                  |         |
|---------------|---------------|------------------|---------|------------------|---------|------------------|---------|------------------|---------|
| Short Circuit | Current CC    | = 52,8 A         | = 528 A | = 26,4 A         | = 264 A | = 13,2 A         | = 132 A | = 55 A           | = 550 A |
|               | Voltage CV    | 0 V              |         | 0 V              |         | 0 V              |         | 0 V              |         |
|               | Resistance RC | = 3,8 m $\Omega$ |         | = 8 m $\Omega$   |         | = 45 m $\Omega$  |         | = 3,8 m $\Omega$ |         |
| Temperature   | Operating     | 0 - 40 °C        |         | 0 - 40 °C        |         | 0 - 40 °C        |         | 0 - 40 °C        |         |
|               | Nonoperating  | -10 °C - 70 °C   |         | -10 °C - 70 °C   |         | -10 °C - 70 °C   |         | -10 °C - 70 °C   |         |
| Dimension     | WxHxD (mm)    | 19" x 4U x 538,5 |         | 19" x 8U x 538,5 |         | 19" x 8U x 538,5 |         | 19" x 8U x 538,5 |         |
| Weight        | Kg            | 31,6             |         | 70               |         | 70               |         | 70               |         |