

## Product Datasheet - Technical Specifications



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### Your contact

**Technical and commercial sales, price information,  
quotations, demo/test equipment, consulting:**

Tel.: **+49 - 81 41 - 52 71-0**

FAX: **+49 - 81 41 - 52 71-129**

E-Mail: [sales@meilhaus.com](mailto:sales@meilhaus.com)

Downloads:  
[www.meilhaus.com/en/infos/download.htm](http://www.meilhaus.com/en/infos/download.htm)

**Meilhaus Electronic GmbH** | Tel. **+49 - 81 41 - 52 71-0**  
Am Sonnenlicht 2 | Fax **+49 - 81 41 - 52 71-129**  
82239 Alling/Germany | E-Mail [sales@meilhaus.com](mailto:sales@meilhaus.com)

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# ELP/DCM98 series programmable DC electronic load

20 - 100 kW load



## FEATURES

- Six high speed operation modes: CC,CR,CV,CW,CC+CV,CR+CV
- 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/DCM9836		ELP/DCM9836B		ELP/DCM9837		ELP/DCM9837B	
Input Rating	Power	20.000 W		20.000 W		35.000 W		35.000 W	
	Current	0 - 500 A		0 - 240 A		0 - 500 A		0 - 240 A	
	Voltage	0 - 150 V		0 - 500 V		0 - 150 V		0 - 500 V	
CC Mode	Range	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A
	Resolution	1 mA	10 mA	1 mA	10 mA	1 mA	10 mA	1 mA	10 mA
	Accuracy	0,1%+0,05%FS	0,15%+0,1%FS	0,05%+0,05%FS	0,1%+0,05%FS	0,1%+0,05%FS	0,15%+0,2%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 - 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	0,3 - 10 K Ω	0,3 - 5 K Ω	0,3 - 10 K Ω	0,3 - 5 K Ω	0,3 - 10 K Ω	0,3 - 5 K Ω	0,3 - 10 K Ω	0,3 - 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	0,2%+0,15%FS	0,1%+0,1%FS	0,1%+0,1%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%FS
CW Mode (Voltage and current input value > 10% full messument)	Range	0 - 7500 W	0 - 20.000 W	0 - 12.000 W	0 - 20.000 W	0 - 7500 W	0 - 35.000 W	0 - 12.000 W	0 - 35.000 W
	Resolution	1 mW	100 mW	1 mW	100 mW	10 mW	100 mW	10 mW	100 mW
	Accuracy	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,1%+0,1%FS	0,1%+0,1%FS	0,2%+0,15%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 - 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%+0,03%FS
I Measurement	Current	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A
	Resolution	0,1 mA	1 mA	0,1 mA	1 mA	1 mA	10 mA	0,1 mA	10 mA
	Accuracy	0,1%+0,05%FS	0,15%+0,1%FS	0,1%+0,05%FS	0,1%+0,05%FS	0,1%+0,05%FS	0,15%+0,2%FS	0,1%+0,05%FS	0,15%+0,1%FS
W Measurement (Voltage and current input value > 10% full messument)	Watt	100 W	20.000 W	100 W	20.000 W	100 W	35.000 W	100 W	35.000 W
	Resolution	1 mW	100 mW	1 mW	100 mW	1 mW	100 mW	1 mW	100 mW
	Accuracy	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,1%+0,1%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%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; 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	= 55 A	= 550 A	= 26,4 A	= 264 A	= 55 A	= 550 A	= 26,4 A	= 264 A
	Voltage CV	0 V		0 V		0 V		0 V	
	Resistance RC	= 4 mΩ		= 8 mΩ		= 3,5 mΩ		= 6 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)	2000 x 700 x 700		2000 x 700 x 700		2000 x 700 x 700		2000 x 700 x 700	
Weight	Kg	370		370		370		700	

Model		ELP/DCM9838		ELP/DCM9838B		ELP/DCM9839		ELP/DCM9839B	
Input Rating	Power	50.000 W		50.000 W		50.000 W		100.000 W	
	Current	0 - 500 A		0 - 240 A		0 - 240 A		0 - 240 A	
	Voltage	0 - 150 V		0 - 500 V		0 - 500 V		0 - 500 V	
CC Mode	Range	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A
	Resolution	1 mA	10 mA	1 mA	10 mA	1 mA	10 mA	1 mA	10 mA
	Accuracy	0,1%+0,05%FS	0,15%+0,2%FS	0,1%+0,05%FS	0,15%+0,1%FS	0,1%+0,05%FS	0,15%+0,2%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 - 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%+0,02%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	0,3 - 10 K $\Omega$	0,3 - 5 K $\Omega$	0,3 - 10 K $\Omega$	0,3 - 5 K $\Omega$	0,3 - 10 K $\Omega$	0,3 - 5 K $\Omega$	0,3 - 10 K $\Omega$	0,3 - 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	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,1%+0,1%FS
CW Mode (Voltage and current input value > 10% full messument)	Range	0 - 7500 W	0 - 50.000 W	0 - 7500 W	0 - 50.000 W	0 - 7500 W	0 - 50.000 W	0 - 12.000 W	0 - 100.000 W
	Resolution	10 mW	100 mW	10 mW	100 mW	10 mW	100 mW	10 mW	100 mW
	Accuracy	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%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 - 150 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%+0,03%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 - 50 A	0 - 500 A	0 - 50 A	0 - 500 A	0 - 50 A	0 - 500 A	0 - 24 A	0 - 240 A
	Resolution	1 mA	10 mA	1 mA	10 mA	1 mA	10 mA	0,1 mA	1 mA
	Accuracy	0,1%+0,05%FS	0,15%+0,2%FS	0,1%+0,05%FS	0,15%+0,2%FS	0,1%+0,05%FS	0,15%+0,2%FS	0,1%+0,05%FS	0,15%+0,1%FS
W Measurement (Voltage and current input value > 10% full messument)	Watt	100 W	50.000 W	100 W	50.000 W	100 W	50.000 W	100 W	100.000 W
	Resolution	1 mW	100 mW	1 mW	100 mW	1 mW	100 mW	1 mW	10 mW
	Accuracy	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,2%+0,15%FS	0,1%+0,1%FS	0,15%+0,1%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	= 55 A	= 550 A	= 26,4 A	= 264 A	= 55 A	= 550 A	= 26,4 A	= 264 A
	Voltage CV	0 V		0 V		0 V		0 V	
	Resistance RC	= 3 m $\Omega$		= 8 m $\Omega$		= 3 m $\Omega$		= 3,2 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)	2000 x 700 x 700		2000 x 700 x 700		2000 x 700 x 700		600 x 1880 x 600 x 6	
Weight	Kg	1050		370		1050		2100	