



EPS - Datasheet

Series EPS/EL 9000B-HP 2U

EPS's programmable electronic high performance loads »EPS/EL 9000B HP« series are especially suitable for test systems and industrial controls due to their compact construction of a 19" enclosure with 2 height units (2U). The result is a space saving of 33%. The DC input range features new voltages up to 750V, currents up to 170A at power ratings with 2400W. Apart from basic functions of electronic loads, set point curves can be produced in the integrated function generator (sine, rectangular, triangular and other curve types). Arbitrary curves can even be stored on and uploaded from a USB flash drive.

In the battery test mode, a battery can be discharged with a constant current, - power or - resistance until the battery voltage reaches an adjustable final discharge voltage. If this threshold is exceeded, the load input is automatically switched off (deep discharge protection). The discharge time and consumed charge (Wh, Ah) are measured and displayed. An integrated MPP tracking function simulates solar inverters in 4 different processes.

For remote control using a PC or PLC the devices are provided as standard with a USB-B slot on the rear side as well as a galvanically isolated fast analog interface.

Via optional plug-in interface modules other digital interfaces such as Ethernet/CAT, Profibus/Net, ModBus TCP, CANopen, CAN and more can be added. These enable the devices to be connected to standard industrial buses simply by changing or adding a small module. The configuration, if at all necessary, is simple. Thus the loads may, for example, be operated with other loads or even other types of equipment or controlled by a PC or PLC, all using the digital interfaces. The control software EPS/PC for Windows allows remote control of multiple similar or different devices (optional, up to 20). It has a clear display for all set and actual values, as well as direct input mode of SCPI and ModBus commands and a firmware update function.

In addition the devices offer the possibility to connect to compatible power supplies via a Shared Bus, in order to create a so-called two-quadrants system. This operation mode uses the source-sink principle for testing devices, components and other parts in many industrial areas. A genuine master-slave connection with totalling of the slave units is also provided as standard. Operating in this way allows up to 16 units to be combined to a single system with a total power of up to 38,4 kW at 2720 A.

All models have a FPGA/DSP based digital control. These enable an exact and fast measurement and display of actual values.

As an option are preconfigured cabinet systems and Multicontrol (Controlling up to 20 units at the same time) possible, too.

Energy Efficiency: Temperature regulated fans

Scope of delivery:

EI. Load

AC mains cord

Share-Bus plug

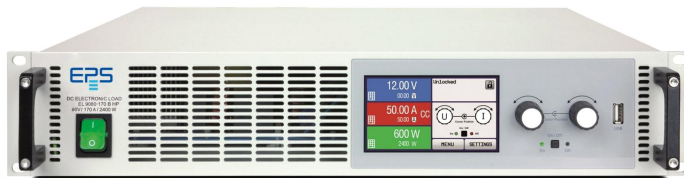
Remote sense plug

USB-cable 1.8m

Set DC-terminal cover(s)

USB stick "Manual, Drivers&Tools incl. Software"

EPS/EL 9500-15B-HP 2U Electronic Load



EPS/EL9000B-HP_front

General data

| | |
|----------------------------|-------------------------------|
| Technology | Switching |
| Operation modes | CC.CV.CP.CR |
| Mains | 90-264 VAC |
| Input frequency | 45-65Hz |
| Input Current Limitation | Standard |
| Display | HMI TFT Touch Panel |
| Voltage resolution | 0,01V |
| Voltage accuracy | $\leq 0,1\%$ |
| Voltage Stability Load | $< 0,05\%$ (1-100%) |
| Rise time Voltage | $< 50\mu\text{s}$ (10-90% L.) |
| Current Resolution | 0,01 A |
| Current Accuracy | $\leq 0,2\%$ |
| Current Stability Load | $< 0,1\%$ (1-100%) |
| Rise time Current | $< 23\mu\text{s}$ (10-90% N.) |
| Power Accuracy | $< 0,5\%$ N. |
| Overheat protection | Standard |
| Isolation In-/Output | 2500V max. |
| Isolation Output/Enclosure | $\pm 400\text{V}$ max. |
| Parallel operation | Master/Slave |
| Current sharing | Standard |
| Cooling | Fan |
| Operation temperature | 0-50°C |
| Storage temperature | -20...70°C |
| Humidity | $< 80\%$ n.c |
| Attitude | 2000m /NN |

| | |
|--------------------|------------|
| Design | 19 inch |
| Standards | EN61010-1 |
| Power fail | Standard |
| Function generator | +arbitrary |
| Memory | 5 Profile |

Interfaces

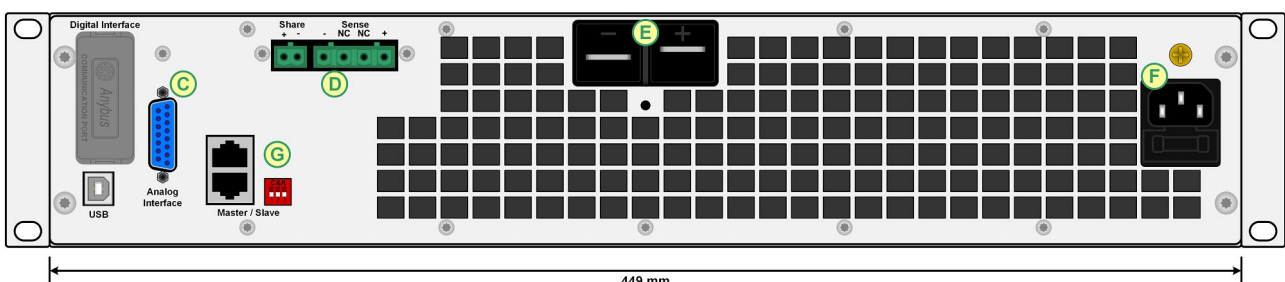
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|--------------------|-------------------------------------|
| Analog Isolation | Standard (intern) |
| Accuracy Interface | 0-5V <0,4% / 0-10V <0,2% |
| Remote Control | U/I/P/R |
| Input Signal | Intern/extern, Input on/off, R mode |
| USB Interface | Standard |
| RS232 Interface | Option EPS/IF-AB R |
| CAN Interface | Opt.EPS/IF-AB-CAN/Co |
| Profibus | Option EPS/IF-AB-PBUS |
| Ethernet Interface | Standard, Opt.IF-ETH2P |
| Ethercat Interface | Option EPS/IF-AB-ECT |
| Software | Standard EPS/PC, Option EPS/MC |

Technical data

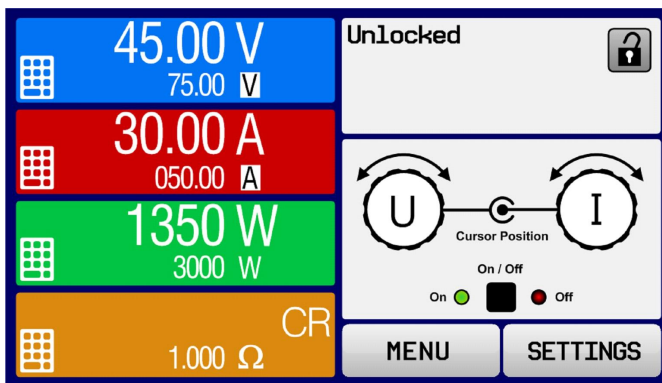
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|-------------------------------|----------------------|
| Input Power | 600W, derating >30°C |
| Input Voltage | 0-500 VDC |
| Input Current | 0-15 A |
| Resistance Adjustment Range 1 | 3-1000 Ohm |
| Resistance Resolution Range 1 | 0,001 Ohm |
| Remote Sensing | max. 5% Unenn |
| Dimensions in mm (WxHxD) | 482 x 88 x 464 |
| Weight | 12 kg |
| Order code | 300150 |

Options

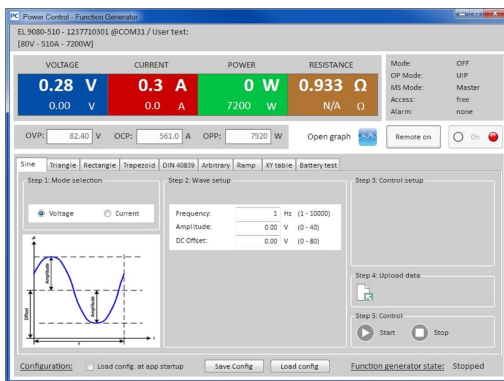
| | |
|----------|----------------------------------------------|
| Option 1 | Calibration EPS/EL 9000B/DT CAL |
| Option 2 | Extended Warranty 2 / 3 / 5 years EPS/G2/3/5 |



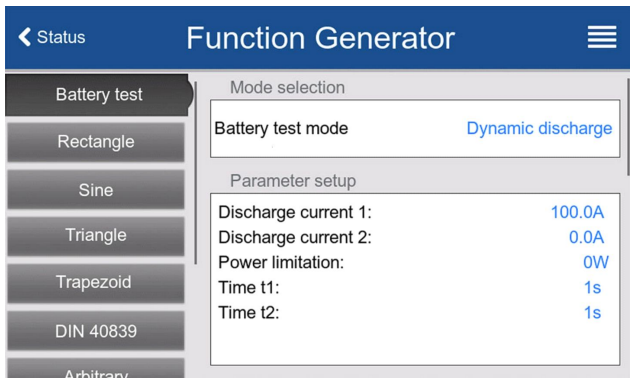
EPS/EL9000B-HP_rear



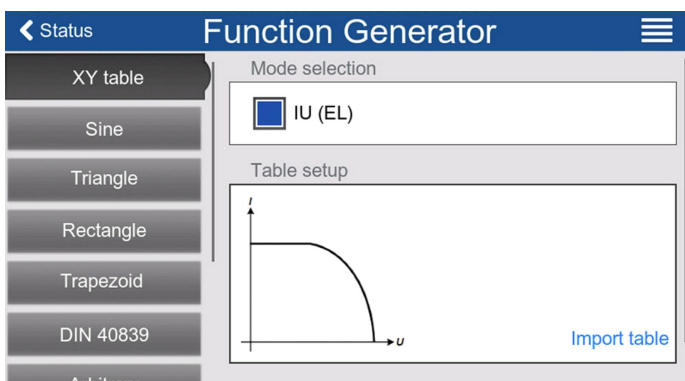
EPS/EL 9000B TFT_HMI Touch panel



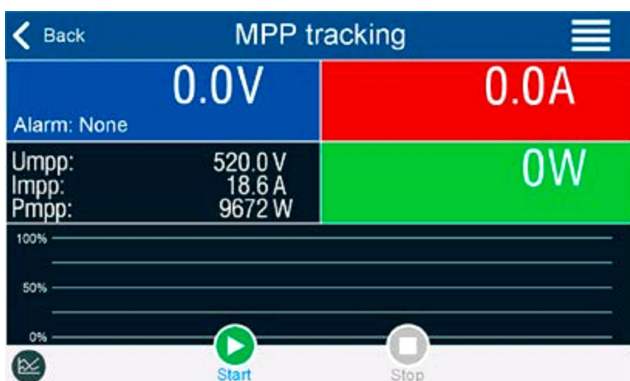
EPS_PowerControl Software



EPS_Battery dynamic-discharge-function



EPS_XY-Tabelle -table



EPS_MPP Tracking