



# HE-LAB / HP 3 – 63 kW

## The strong performers



### The DC-Source HE-LAB / HP

Designed for heavy industrial applications, the HE-LAB/HP has proven itself wherever highest power is required - in test fields, at testing of components in power electronics, at testing of circuit breakers or solar inverters, in the development of inverters, as a replacement for batteries and generally in all tasks in industry and electronics production where high currents and power is required.

### Operating modes

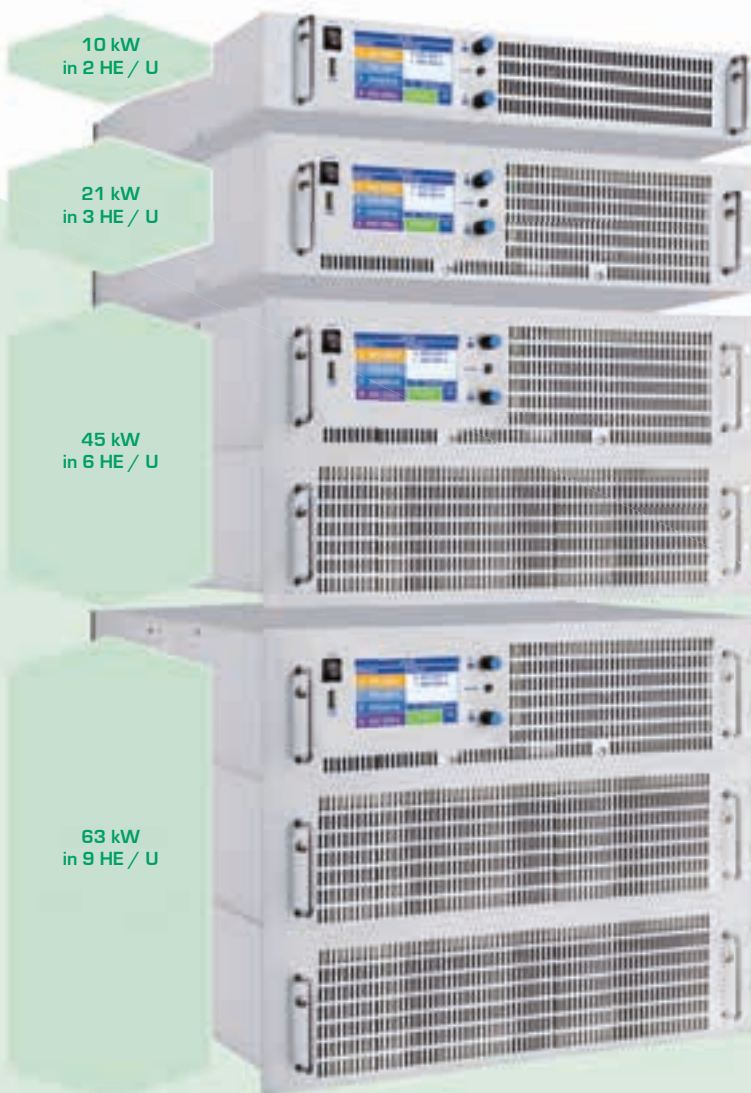
While in the UI mode the setting values for voltage and current are passed directly to the switching regulators without additional digital control, in the UIP mode fixed upper limits for voltage, current and power can be entered. In UIR mode, however, the device maintains its internal resistance at the set value - a feature that is particularly interesting for inverter tests or at tests of loads with high start-up current.

- Indications via graphic color display
- Simple operation via front panel
- Constant current, voltage, resistance and Power operation
- $U_{max}$  and  $I_{max}$  by the user adjustable, to limit output voltage or current
- Memory locations for freely programmable U/I curves
- UI, UIP, UIR mode, simulation of PV characteristics
- Analogue interface galvanically isolated with selectable level: 0...5 V or 0...10 V
- Soft interlock for external release
- Storable U/I curves (sequential control)
- Script control: Programming of sequences and characteristic curves from the optional memory card
- Data log function: Current operating values are in an adjustable interval on the optional memory card saved.
- Digital interfaces like IEEE488, RS232/485, USB and LAN optionally available
- Special versions on request

### Power up to 1.4 MW (special versions)

up to 1,4 MW to 1.500 V to 50 kA 19" x 24 HE Rack

Based on the proven HE-LAB / SMS and HE-LAB / HP power parts we manufacture individual systems. Active parallel connection enables higher power, which we install in a turnkey system. Special voltages and dynamic changes are possible as well as special enclosure versions.



- 3 - 63 kW in one unit
- Greater power through master / slave
- Voltage from 15 V to 1.500 V
- Currents up to 2.250 A per unit



AC-Input	
Input voltage	1P / 230 V <sub>AC</sub>
	3P / 200 V <sub>AC</sub>
	3P / 400 V <sub>AC</sub>
	3P / 440 V <sub>AC</sub>
	3P / 480 V <sub>AC</sub>
Input frequency	47...63 Hz

EMV and safety standards	
Safety standard	EN 60950
Interference emission	EN 61000-6-4:2007
Noise immunity	EN 61000-6-2:2005
Measuring, control and laboratory equipment	EN 61010-1:2010

DC-Output	
Settling time	< 3 ms (typ.)
Ripple	< 0,5 % (typ.)
Stability	±0,05 %, ±20 mV
Programming accuracy	0,1 %
Isolation AC - DC	3.000 V
Overvoltage protection	0...120 % V <sub>max</sub>
Safety devices	OC/OV/OT/OP
Grid control	±0,02 % FS
Load control	±0,05 % FS

Programming and control	
Control system	Control panel, RS232, LAN, Analog 0...5 V/0...10 V

Environmental conditions	
Cooling	Exhauster
Operating temperature	0...50°C
Storage temperature	-20...70°C
Humidity	< 80 %
Operating height	< 2.000 m
Vibration	10...55 Hz/1 min 2G XYZ
Schock	< 20 G

Options	
HE-LAB opt/DC	Input 250...750 V <sub>DC</sub>
HE-LAB opt/ATE	Without manual operation
HE-LAB opt/LT IEEE	Interface IEEE488
HE-LAB opt/LTRS485	Interface RS485
HE-LAB opt/USB	Interface USB
HE-LAB opt/SD	SD card slot
HE-LAB opt/E	Reduced functions
HE-LAB opt/LOCKAC	Interlock according to machine directionlines for mains input
HE-LABopt/LOCKDC	Interlock according to machine directionlines for DC access