

## EPS - Datasheet

### Series EPS/PUB 10000 4U

www The EPS's Electronic Power Supplies of the »EPS/PUB 10000 4U« series are so-called bidirectional ATE devices, incorporating the function of a laboratory power supply (source) and an electronic load (sink) into one unit. They allow for easy setup of applications according to the source-sink principle with a minimum of required hardware and cabling. Switching between source and sink operation is seamless and without delay at zero point.

The sink feature furthermore includes an energy recovery function, similar to the one in series EPS/PUL 10000, which inverts the consumed DC energy with an efficiency of up to 96,5% and feeds it back into the local mains. DC voltages between 0-60V and 0-2000V, output currents between 0-40A and 0-1000A and output power ratings up to 30kW - 1920kW are available.

The devices in series EPS/PUB 10000 4U represent matching models to series E/PSB 10000 4U or E/PSBE 10000 4U. They serve as extension modules, so called power units, which are intended to build master-slave systems with higher total power. Devices from series E/PSB 10000 or E/PSBE 10000, which both have a TFT touch display, can serve as master unit, but all EPS/PUB 10000 4U can also serve as master for other 10000 series power supplies should the control be solely remote.

All models are controlled by microprocessors for fast and exact measurement of actual values (FPGA, latest SiC technology).

For remote control the devices are provided as standard with Ethernet, USB port on the back as well as a galvanically isolated analog interface. Via optional plug-in interface modules, other digital interfaces such as Profibus, ProfiNet, Modbus TCP, CAN, CANopen, EtherCAT or RS232 can be added. These enable the devices to be connected to standard industrial buses simply by replacing or adding a small module. The configuration, if necessary at all, is simple. Thus the power supplies may, for example, be operated with other power supplies or even other types of equipment or controlled by a PC or PLC, all using the digital interfaces.

Further options are a grid and system protection, an insulation monitor, function generator, a water cooling system, pre-assembled cabinet systems, extended warranty and calibration with protocol.

The bidirectional devices are CE, UL as well as CSA certified.

Energy efficiency: Energy recovery, high efficiency, temperature controlled fans, water cooling system

Scope of delivery:

Power Supply Unit

Test report

AC connector plug (clamp type)

Set for AC cable strain relief

Set DC terminal cover

2x Plug for Remote Sense

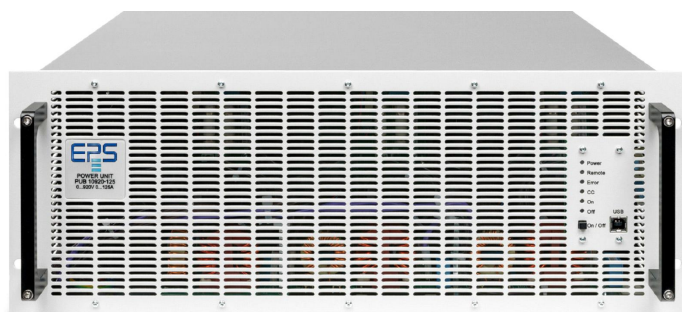
Terminal cover sense

USB cable 1,8m

USB-Stick with documentation and Software

## EPS/PUB 10060-1000 4U Bidirectional DC-Power Supply+energy recovery

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EPS/PUB\_10000\_4U

### General data

Behavior	Bidirectional
Technology	Switching
Operation modes	CV. CC. CP. CR
Mains	380V/400V/480V AC +-10% 3ph., 208V derating 18 kW
Input frequency	45-66Hz
Power factor	>0,99
Power feed back	Standard
Display	./.
Voltage Stability Load	<0,01% fs
Voltage Stability Mains	<0,01% (+-10%)
Response time Voltage	<2 ms (10-100%)
Rise time Voltage	max.10 ms (10-90%)
Current Stability Load	<0,1% (0-100%)
Current Stability Mains	<0,01% (+-10%)
Rise time Current	max.2ms (10-90%)
Output Current Limitation	Standard
Internal Resistance Regulation	Standard
Overvoltage category	2
Overheat protection	Standard
Isolation In-/Output	3750VDCmax
Isolation Output/Enclosure	neg.+600V DC, pos.+600V DC max.
Protection class	1
Parallel operation	Master-Slave
Current sharing	Standard (BNC)
Cooling	Fan, Opt.WC-30kW

Operation temperature	0-50°C
Storage temperature	-20...70°C
Humidity	<=80% n.c
Attitude	<=2000m
Design	19 inch
Standards	EN/UL/CSA-C22.2 61010-1,EN55011 cl.B,EN61326-1
Power fail	Standard
Alarmmanagement	Standard
Function generator	Opt.EPS/MC
Output Preset	Standard
Capacity	25380µF

### **Interfaces**

Analog Isolation	Standard, max.725VDC
Accuracy Interface	0-10V <= 0.2%; 0-5V <=0.4%
USB Interface	Standard
RS232 Interface	Option EPS/IF-AB R
CAN Interface	Opt.EPS/IF-AB-CAN/O
Profibus	Option EPS/IF-AB PB
Ethernet Interface	Standard, Opt.IF-ETH1P/2P
Ethercat Interface	Option EPS/IF-AB-ECT
Software	Standard EPS/PC, Option EPS/MC

### **Technical data**

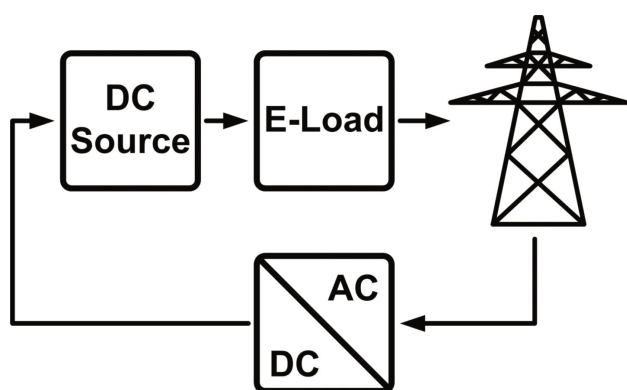
Output Voltage	0-60 VDC
Output Current	0-1000 A
Output Power	30kW / 18kW derating
Input Current	56A@400V
Efficiency	95,1%
Ripple U	320 mVpp(20Mhz)/25 mVrms(300k)
Ripple I	<=240mArms (E-Last/load)
Resistance Adjustment Range 1	0,003-5 Ohm
Remote Sensing	Standard
Dimensions in mm (WxHxD)	483 x 177 x 668
Weight	~50 kg
Order code	202250

### **Options**

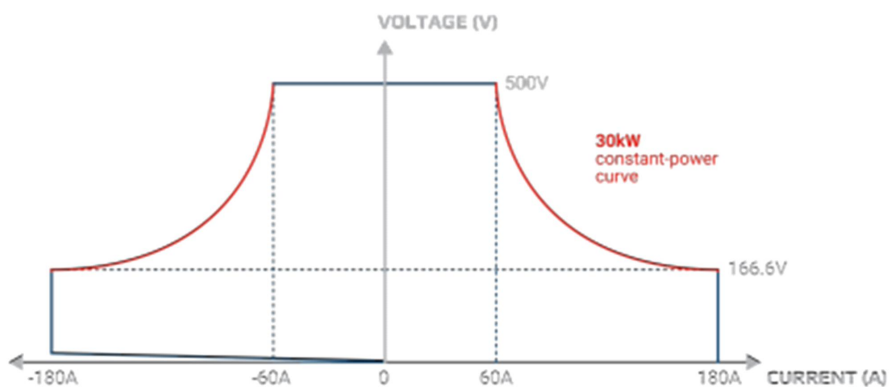
Option 1	Calibration with protocol EPS/I10000 CAL
Option 2	Extended Warranty 2 / 3 / 5 years EPS/G2/3/5
Option 3	E115035 Grid and System protection
Option 4	EPS/BNC Cable Share-Bus connection cable
Option 5	EPS/SL 4x 2x AWG Master-Slave patch cable
Option 6	Battery simulation Licence EPS/BS-LI / LEAD



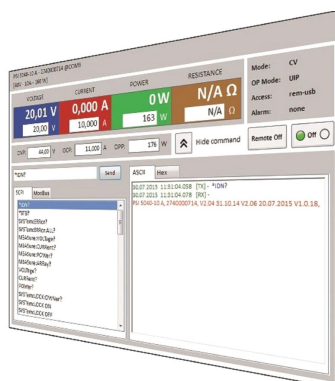
EPS/PUx 10000\_4U rear



EPS/graphics\_backfeed



Autoranging 2 Quadrant



EPS/PC\_Software



EPS/PUx 10000 Rack rear

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