EPS - Datasheet

Series EPS/ELR 10000 4U

The electronic high performance loads »EPS/ELR 10000« of EPS Electronic Power Supplies are especially suitable for test systems and industrial controls due to their compact construction of a 19" enclosure (4U). The DC input range features new voltages up to 2000V, currents up to 1000A at power ratings with 30kW. Apart from basic functions of electronic loads, set point curves can be produced in the integrated function generator (sine, rectangular, triangular). The new FPGA/DSP based control circuit provides additional features like a function and arbitrary generator, a table based regulation circuit for the control of dynamic load profiles or the simulation of non-linear internal resistances, like the ones of batteries or LED chains.

The energy recovery function converts the supplied DC energy into a synchronous sine current and feeds it back into the 400V or optional 208V mains. Here an efficiency of up to 94,5% will be reached. In common system, the energy from burn-in tests and battery capacity tests is radiated into the environment. This energy can be recovered with this unit. In the battery test mode, even 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 (Ah) are measured and displayed
or alternatively recorded on a USB stick.
The big colored TFT resistive touch panel offers a different and intuitive kind of manual handling compared to other devices.
For the remote control using a PC or PLC there are already two interfaces built-in (1x fast Analog, 1x USB), which can also be extended by optional, pluggable and retrofittable, digital interface modules for RS232, RS485, CAN, CANopen, EtherCAT, Profibus as well as a GPIB interface. The front side USB port Typ A makes it possible, to build an independent "stand-alone" test system. For the connection of standard USB sticks up to 32 GB, values tables for the function generator (UI and IU functions) may be loaded or 100 arbitrary function sequences can be loaded or saved.

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 using the digital interfaces. In addition the devices offer the possibility to connect the compatible power supplies via a Shared Bus, in order to create a so-called two-quadrant 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 the units to be combined to a single system with a total power of 1,08MW at 36000A.

A further option are the preconfigured cabinet systems.

Energy Efficiency: Energy recovery, high efficiency, temperature regulated fans

Scope of delivery:
El. Load Recovery
AC-plug 5 pole
Share-Bus plug
Remote sense plug
USB-cable 1.8m
Set DC-terminal cover(s)
Share/sense terminal cover (750V)
Set for strain relief
USB-Stick with manual and Software

EPS/ELR 10060-1000-HP
Electronic Load with mains backfeed

EPS/ELR 10000 4U

General datas

Technology	Switching
Operation modes	CC.CV.CP.CR
Mains	342-528V AC, L2,L3,PE
Input frequency	45-66Hz
Input Current Limitation	Standard
Power feed back	Standard
Display	HMI TFT Touch Panel
Voltage resolution	0,01 V
Voltage accuracy	<0,2%
Voltage Stability Mains	<0,05% Umax
High Speed	Standard
Current Resolution	0,1 A
Current Accuracy	<0,2%
Current Stability Mains	<0,15% Imax
Rise time Current	<50µs (10-90% Imax.)
Response time Current	<0,6ms (10-90% ⌂VDC)
Power Accuracy	<1,0% Pnom
Overheat protection	Standard
Parallel operation	Standard
Current sharing	Standard
Cooling	Fan
Operation temperature	0-50°C
Storage temperature	-20...70°C
Humidity	<80% n.c
Attitude	2000m /NN

Series EPS/ELR 10000 4U

Design	19 inch
Standards	EN60950, EN50160 (class 2)
Power fail	Standard
Alarmmanagement	Standard
Function generator	+arbitrary
Memory	5 Profile

Interfaces

Analog Isolation	Standard (intern)
Accuracy Interface	<0,2% Imax (0-10V)
Remote Control	U / I / P
Input Signal	Intern/extern,Input on/off,R mode
USB Interface	Standard
RS232 Interface	Option EPS/IF-AB R
RS485 Interface	Option EPS/IF-AB-MB1P
CAN Interface	Opt.EPS/IF-AB-Co/CAN
Profibus	Option EPS/IF-AB-PBUS
Ethernet Interface	Option EPS/IF-AB-ETH1P
Ethercat Interface	Option EPS/IF-AB-ECT
Software	Standard EPS/PC

Technical datas

Input Power	0-30000W
Input Voltage	0-60 VDC
Input Current	0-1000 A
Efficiency	<=92,5%
Resistance Adjustment Range 1	0,006-10 Ohm
Resistance Resolution Range 1	0,001 Ohm
Remote Sensing	Standard
Dimensions in mm (WxHxD)	483 x 177 x 670
Weight	44kg
Order code	124400

Options

Option 1	Mains monitoring module EPS/ELR ENS (BISI)
Option 2	Device Net Interface EPS/IF-AB DN
Option 3	Modbus Interface 2 EPS/IF-AB MB2P
Option 4	Interface Ethernet 2 EPS/IF-AB-ETH2P
Option 5	Interface ProfiNET EPS/IF-AB PN1/2P
Option 6	Water cooling EPS/WC

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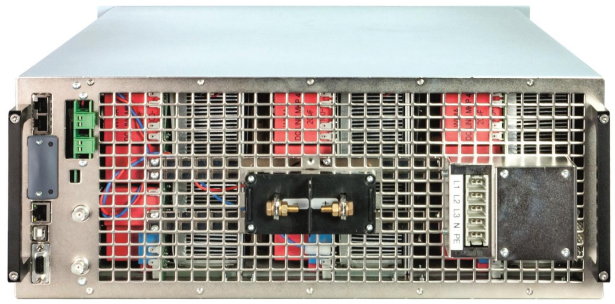

EPS 10000_rear

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