EPS - Datasheet

Series EPS/ACS

EPS's bidirectional AC/AC and DC sources »EPS/ACS« are built after the newest state of the art and can be used for the complete simulation of all the technical grids from DC up to 500 HZ, optionally up to 15000 Hz, continuous adjustment of the Voltage and Current, AC, DC as well AC and DC-Output both together. High power outputs, a low distortion factor and an outstanding stability also make harmonic and flicker tests possible even during strong variation in load. The microprocessor-controlled sinusoidal oscillator input with galvanic isolation (option) produces an accurate, stable Voltage and frequency.

The output are programmable from 0 up to 300 VAC or 0 up to 425 VDC in the standard-version. Or as an option from 0 up to 700 VAC and 0 up to 1000 VDC respectively. The AC output is already isolated. The series is available with one or three phase output power from 400 VA up to 18000 VA and the maximum output current is 40A eff. (The 3 phase system consists of a 19" control unit with 3U and 3 modules each with blank panel).
The units are 25% Power overloadable for short time and can provide high peak currents up to 120A. All parameters can be controlled with a RS232-interface or optionally with a GPIB, USB or Ethernet Interface. The appliances have proven themselves in the development, licensing offices and in the production over many years. Through the linear power-output stage the operation is possible under difficult load applications and allows a phase-triggered switching ON and OFF. Its proven, linear power amplifier ensures safe feeding of the load. This opens up a wide range of applications in the areas of commercial grids, public grids and aircraft on-board grids from laboratory testing to series production. Also, the devices are especially suitable for grid simulation of solar inverters. As a protection device we have provided Overvoltage-, Overcurrent, Overload and Overtemperature Protection.

Further test applications:
-Power fluctuation automotive components
-Battery charge/discharge
-Pulse plating
-Ripple overlap storage elements
-Durability test AC+DC motors
-Phase shift Helmholtz coils
-Characteristic solenoid valves
-Contact resistance breakers+relays
In addition, a variable setting of the phase angle between the phases whether single-, three- or multi-phase networks is possible. The AC voltage can also be superimposed with a DC component as an Offset.

Already the Standard model has a Load recovery of 20% and can optionally be extended to 100% by a load module.

The optional 3-phase-simulation can be done with a signal generator, to meet the special requirements of the avionic; as well 20 sequences.
With the new "Wave Player", it is possible to generate arbitrary curves. In many cases, this function replaces complex arbitrary function generators. Currently, 30 curves can be stored on the Wave Player (SD card). With this option, e.B. also the EN 61000-3-14 (generation of network harmonics and interruptions) can be covered.

Energy efficiency: New switching technology, load feed-back, temperature regulated fans

Scope of delivery:
AC+DC source
Mains Cable (CEE, up to 2.2kVA)
USB Stick (Operation Manual, Software)

Series EPS/ACS

EPS/ACS 13800-3P
AC/AC and DC Power Source regenerative

EPS/ACS/Front

General data

Technology	Switching/linear
Operation modes	CV,CC
Mains	334-456 VAC 3ph,N,PE
Input frequency	45-65 Hz
Power factor	ca.0.75
Display	Digital VFD
Voltage resolution	0,1V
Voltage accuracy	0,2%
Voltage Stability Load	0,1%
Voltage Stability Mains	0,1%
Current Resolution	0,025%
Current Accuracy	0,2% eff.
Output Current Limitation	Standard (U,I,P)
Power Accuracy	0,2% fs/Phase
Overheat protection	Standard
Isolation In-/Output	3750V AC
Isolation Output/Enclosure	700V AC
Cooling	Fan
Operation temperature	0-40°C
Design	19 inch
Standards	EN61010-1:2011-07,EN55011,EN61000-6-4:2011-09
Memory	Standard

Interfaces

Series EPS/ACS

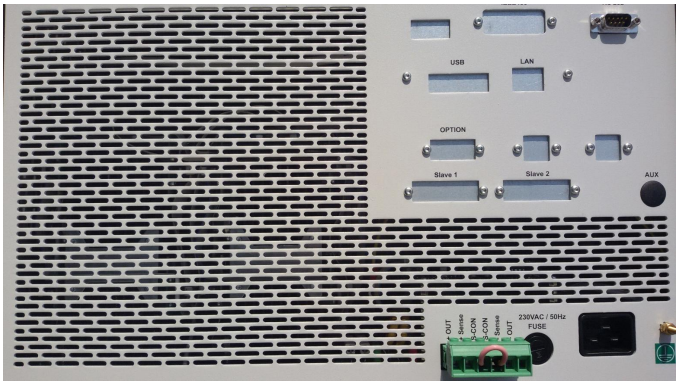
Accuracy Interface	0,1% (U)
USB Interface	Option EPS/ACS-USB
RS232 Interface	Standard
GBIP Interface	Option EPS/ACS-IEEE
Ethernet Interface	Option EPS/ACS-LAN
Software	Option EPS/ACS-WAVE

Technical data

Output Voltage	0-300VAC,L-N/0-520VAC,L-L
Output Voltage 2	0-425V DC
Output Current	30Aeff/100App@0-150V
Output Current 2	15Aeff/50Ap@150-300V
Output Power	13800VA,17250VA 1min
Crest factor	3,3
Distortion	<0,2%
Output Frequency	1-500Hz
Frequency Accuracy	0,1 Hz
Remote Sensing	Standard
Dimensions in mm (WxHxD)	19" x 1600+133 x 590
Weight	207 kg
Order code	400012

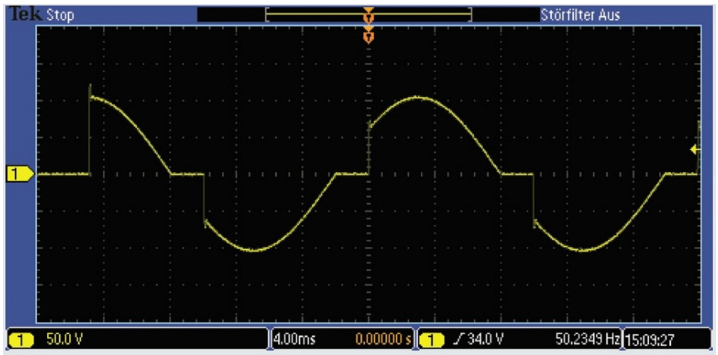
Options

Option 1	Voltage range 0-500VAC/700VDC EPS/ACS-HV
Option 2	Voltage range 0-700VAC/1000VDC on request
Option 3	Frequency range 0-1/2/15kHz EPS/ACS-F1/2/FX
Option 4	Arbitrary Waveplayer EPS/ACS-WAVE
Option 5	External Oscillator Input EPS/ACS-T
Option 6	Load module EPS/R13800



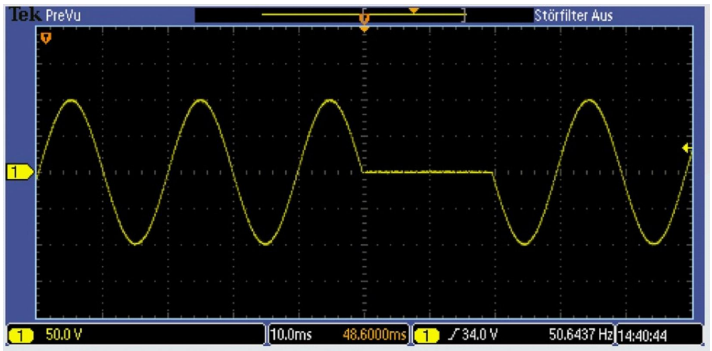
EPS/ACS rear

Series EPS/ACS



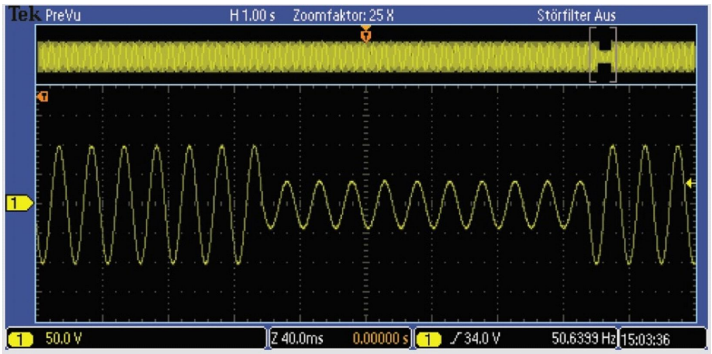
Simulation of phase controlled modulator

EPSACS Simulation Ph. control modulator



Voltage drop for one supply period acc. EN61000-4-11

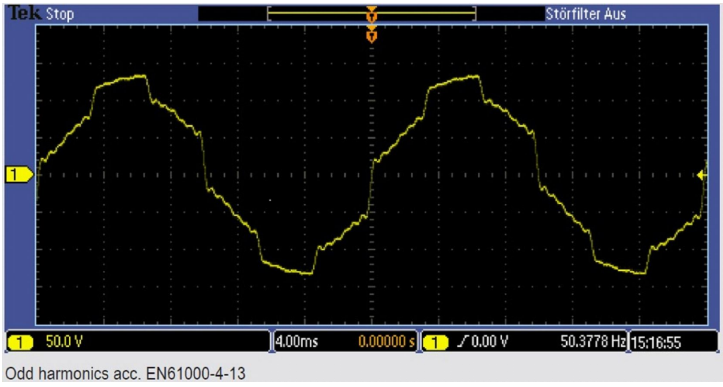
EPS/ACS Voltage drop EN61000-4-11



40 % voltage drop for several supply periods acc. EN61000-4-11

EPS/ACS 40% Voltage drop EN61000-4-11

Series EPS/ACS



EPS/ACS Odd harmonics EN61000-4-13

Subject to modification without notice, errors and omissions excepted

EPS Stromversorgung GmbH
Electronic Power Supplies
Alter Postweg 101, 86159 Augsburg/Germany
Tel.: +49 (0) 821 570451-0
E-mail: sales@eps-germany.de
www.eps-germany.de