



## 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 can be adjusted 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 adjusted 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)

**EPS/ACS 4800-3P**  
**AC/AC and DC Power Source regenerative**

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EPS/ACS/Front

**General data**

|                            |   |
|----------------------------|---|
| Technology                 | Switching/linear                              |
| Operation modes            | CV,CC   |
| Mains                      | 193-264 VAC 1ph.                              |
| Input frequency            | 45-65 Hz                                      |
| Power factor               | ca.0.75                                       |
| Display                    | Digital VFD                                   |
| Voltage resolution         | 0,2%  |
| Voltage accuracy           | 0,1%  |
| Voltage Stability Load     | 0,1%  |
| Voltage Stability Mains    | 0,1%  |
| Current Resolution         | 0,2%  |
| Current Accuracy           | 0,1%  |
| 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

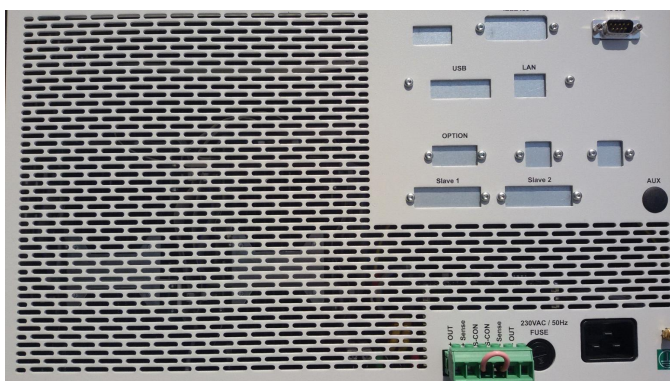
|                    |                     |
|--------------------|---------------------|
| Accuracy Interface | 0,1% (U)            |
| USB Interface      | Option EPS/ACS-USB  |
| RS232 Interface    | Standard            |
| GBIP Interface     | Option EPS/ACS-IEEE |
| Ethernet Interface | Option EPS/ACS-LAN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

**Technical data**

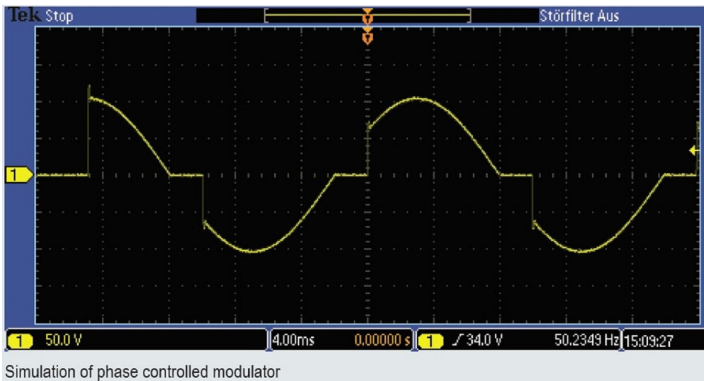
|                          |                           |
|--------------------------|---------------------------|
| Output Voltage           | 0-300VAC,L-N/0-520VAC,L-L |
| Output Voltage 2         | 0-425V DC                 |
| Output Current           | 12Aeff/40App@0-150V       |
| Output Current 2         | 6Aeff/20App@150-300V      |
| Output Power             | 4800 VA (2770VA L-L)      |
| 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 800+133 x 590       |
| Weight                   | 111 kg                    |
| Order code               | 400009                    |

**Options**

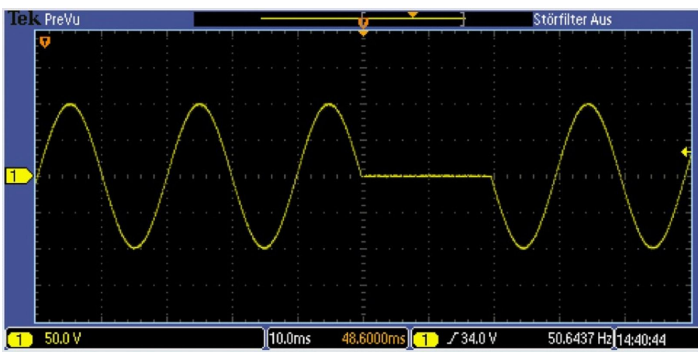
|          |   |
|----------|---|
| Option 1 | Voltage range 0-500VAC/700VDC EPS/ACS-HV    |
| Option 2 | Voltage range 0-700VAC/1000VDC on request   |
| Option 3 | Frequency range 0-1/2/15kHz EPS/ACS-F1/2/FX |
| Option 4 | Arbitrary Waveplayer EPS/ACS-WAVE 3         |
| Option 5 | External Oscillator Input EPS/ACS-T         |
| Option 6 | Load module EPS/R4800                       |



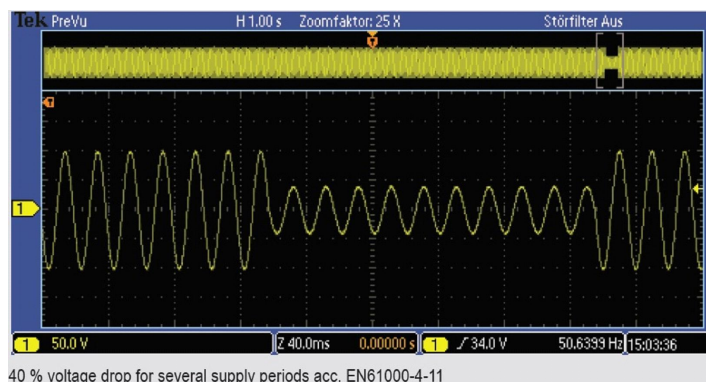
EPS/ACS rear



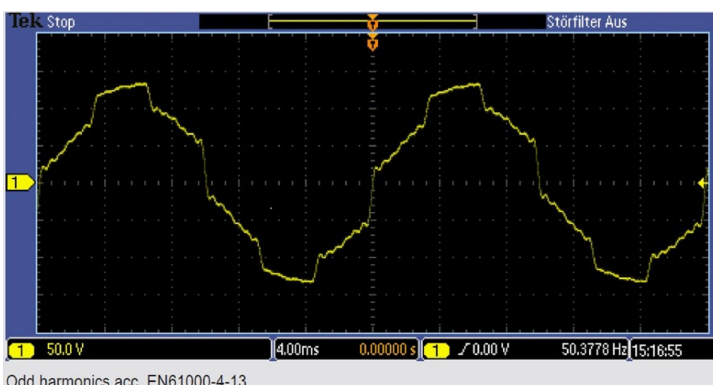
EPSACS Simulation Ph. control modulator



EPS/ACS Voltage drop EN61000-4-11



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



Odd harmonics acc. EN61000-4-13

EPS/ACS Odd harmonics EN61000-4-13

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Subject to modification without notice, errors and omissions excepted

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