

Features:

- ❑ Broad range of output voltages and currents
- ❑ Generating of harmonics
- ❑ Advanced DSP technology
- ❑ Low harmonic distortion
- ❑ High accuracy and stability
- ❑ Direct operating with broad range of linear and non-linear loads
- ❑ Full automation
- ❑ High efficiency
- ❑ Multilevel system of safeguards



The PS2 Power Source was designed to be used as a reference alternating current and voltage source in the electricity meter testing systems.

The basic functional parts of the PS2 Power Source are:

- ◆ Voltage Integrated Source VIS,
- ◆ Current Integrated Source CIS,

The power stages of the power source are made with PWM technology, which ensures high efficiency and what follows very small thermal loss.

The internal DSP controlled digital feedback loops ensure stability in time, quick setting time of required parameters and low non-linear distortions of the output current and voltage signals. Additional precise regulation systems make the PS2 Power Source able to handle correctly and directly loads of a broad range of characters, from pure capacitive loads, through resistive to inductive ones. This

feature makes it unnecessary to use any external load character compensators.

Thanks to a broad range of output voltages and currents, a possibility of setting any phase angle, generating of harmonics for every channel independently, the PS2 Power Source ensures efficiency in testing of all types of energy meters while retaining all required electrical parameters.

Operation reliability and safety are provided by a number of multilevel safeguards and separating transformers. Thanks to complete automatic settings and adjustments the PS2 Power Source is a highly reliable device and guarantees continuity of work.

In case of using the PS2 Power Source for work with stationary meter test equipment, it should be equipped additionally with ACU-3000 Control Unit for three-phase system and ACU-1000 for single-phase system. Its main tasks are: detecting of short-circuits between voltage and current circuits, controlling emergency switches, controlling tariff system, signaling presence of dangerous voltage on suspension racks and others.

Technical specification

The basic executions of the PS2 Power Source are listed in the table below. It is possible to arrange them to individual needs and demands.

Operating range		
Output voltage range (Phase-Neutral)	1 x 30 ÷ 350 V* 3 x 30 ÷ 350 V*	PS2-1xxx PS2-3xxx
Output current range	1 x 1mA ÷ 120 A* 3 x 1mA ÷ 120 A*	PS2-1xxx PS2-3xxx
Voltage output power for linear loads	400 VA* 1200 VA* 2600 VA*	PS2-x0xx PS2-x1xx PS2-x3xx
Current output power for linear loads	600 VA* 1600 VA* 3000 VA*	PS2-xx0x PS2-xx1x PS2-xx3x
Frequency of the fundamental component	45 Hz ÷ 65 Hz*	
Harmonics	preprogrammed acc. to norms + user programmable	
Phase angle range (independently for each voltage and current signal)	0° ÷ 360°	
Accuracy		
Resolution of output current/voltage adjustment	0.002%	
Resolution of phase angle adjustment	0.001°	
Resolution of frequency adjustment	0.001Hz	
Typical stability of the output current (T _{int} =150 s)	<< 0.005%	
Typical stability of the output voltage (T _{int} =150 s)	<< 0.005%	
The accuracy of the output voltage/current adjustment	≤ 0.02%	PS2-xxx4
	≤ 0.01%	PS2-xxx2
	≤ 0.01%	PS2-xxx1
The accuracy of phase angle adjustment	0.02°	PS2-xxx4
	0.01°	PS2-xxx2
	0.01°	PS2-xxx1
The accuracy of frequency adjustment	0.001Hz	
Total Harmonic Distortion (THD) of the output voltage and current	< 0.3%	
Functionality		
Efficiency of the output power stages	> 85%	
Protection	overcurrent, overvoltage, short circuit, open circuit, thermal, earth leakage	
Construction	19" standard cassette system	
Control	isolated RS422/RS232	

* other values available on request