

Electronic Load with Mains Feedback, (green Load)

Made in Europe 

Power Recycling Electronic DC Load Series PRL 2000

Feedback of the DC energy into the AC-mains
Burn-In Load
Solar Applications
Battery-Service



The PRL2000 is an electronic DC-Load. Compared to conventional loads this device offers the possibility to convert the input energy into a mains synchronous AC voltage and feed this back into the 230 V AC 50Hz mains.

Normally the energy from Burn-in tests and Battery capacity tests is radiated into the environment. This energy can be recovered with this unit. This reduces both energy and cooling costs.

The electronic load can operate in all standard operating models like constant current, constant resistance or constant power. The actual values are indicated on digital displays and are available externally as 0...10 V monitor signals.

For greater input power, two or more units can operate in parallel.

To observe safety rule on the single phase unit, the electronic load is equipped with a processor controlled mains supervision device. This consists of two redundant modules controlling voltage, frequency and the impedance of the mains connection.

Input:

Input voltage	230V AC -15/+10%, 50Hz \pm 0,2Hz
Rated current	7.5A sine wave
Idling-consumption	ca. 50VA
Load voltage	0 - 60 V DC
Load current	up to 80A DC cont.
Power	up to 2000 Watt cont.

Operating Modes:

Constant current	A constant
Constant resistance	R constant
Constant power	P constant

Connection Conditions:

Feed Back of the DC energy into the AC-mains	
The form of the feed back AC power is a sine wave	
Rated voltage AC	$195,5V < U_n < 253V$
Rated frequency	$49,8 \text{ Hz} < f < 50,2 \text{ Hz}$
Mains impedance	$Z < 1,25$
Mains impedance jump	$< 0,5$

Efficiency:

DC-in AC-out	up to 85 %
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Regulation:

Current at $V_{IN} 3 - 60 \text{ V}$	$< 0.1 \%$
Current at $V_{MAIN} \pm 10\%$	$< 0.01 \%$
Power at $V_{IN} 3 - 60 \text{ V}$	$< 0.2 \%$
Power at $V_{MAIN} \pm 10\%$	$< 0.01 \%$
Ripple current	$100\text{mA}_{pp} (100\text{MHz}) \text{ typ. } 50\text{mA}_{pp}$

Protection:

Overvoltage protection

Safety:

Safety standard	conform to EN 60950
Input-Output-Case isolated	

EMC:

Input immunity	conform to EN 50082-1
Input EMI filter	conform to EN 50082-1

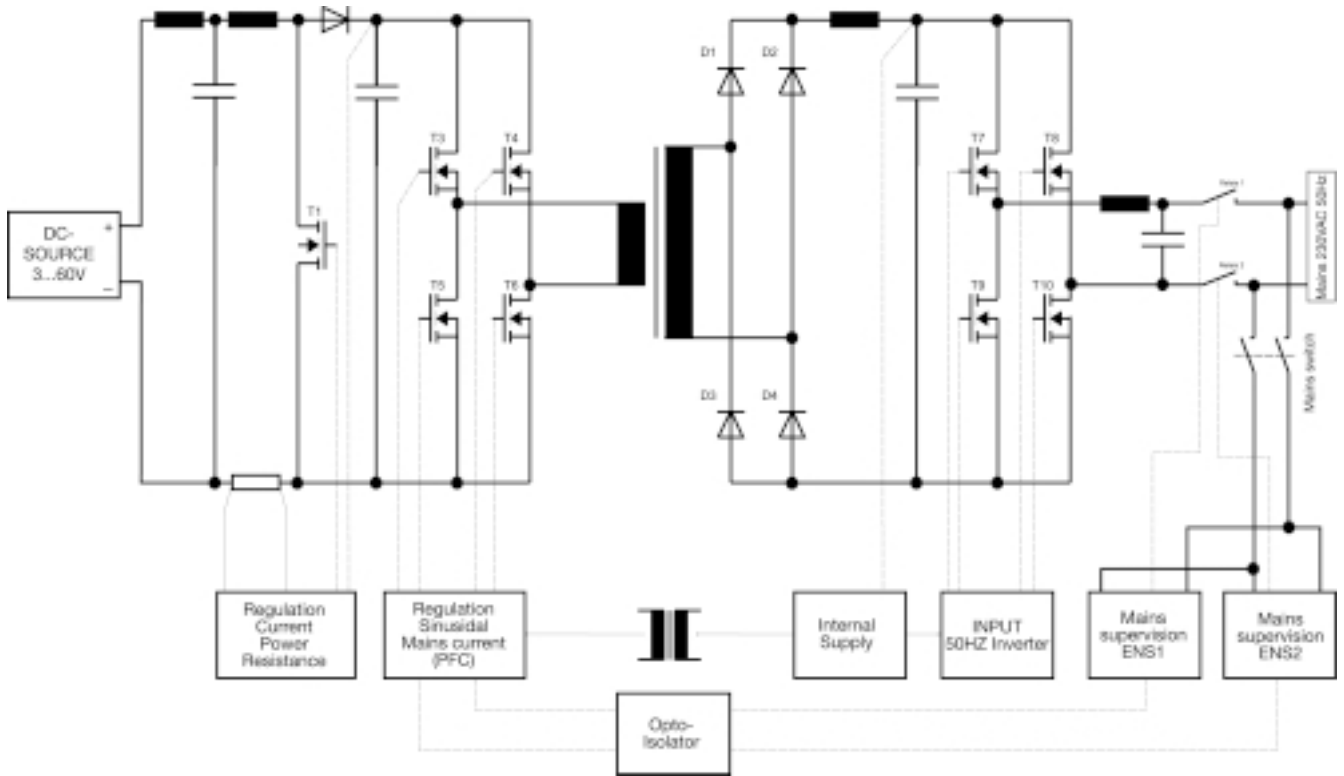
Operating and Control:

Extensive supervision functions	
Programming analog	ext. Voltage (reference - U_L) $0 - 10V \cong 0 - A_{max}, R_{max}, P_{max}$ IEEE 488.2
Programming digital	same units
Parallel operation	rotary current mains
Operation on a three Phase mains	star connection where the neutral line (N) must be connected unconditional LED digital for voltage/power
Instruments and current/resistance Present functions	Constant R-, A-, P- preset

Physical Specification:

Dimensions	w: 19", h: 3U, d: 466mm
Weight	16 kg

Schematic Diagram for
Zentro-Elektrik PRL2000 Power Recycling Electronic DC Load



options:

Load voltage 0 - 70 VDC
19" rack mounting brackets