

# SERIES PRR



Model PRR 28-36M

**Kepco's PRR are 1000 Watt rack mounted laboratory systems power supplies that offer the low cost and very high dependability of ferroresonant voltage stabilization.**

The ferroresonant stabilizing technique provides extraordinary isolation from a wide variety of source noise. It is inherently short-circuit proof and cannot expose delicate loads to overvoltage hazards. Hence no crowbar, fuses, or bounding circuits are needed.

Ferroresonant power supplies use no noise-producing switches or oscillators. Voltage setting is independent of delicate control settings or diode references and requires no comparators, references, or limiters. Efficiency is 70-80%.

## FEATURES

- Fixed output, 1000 watt. Rack mount, industrial power.
- Ferroresonant voltage stabilization.
- High efficiency 70-80%.
- No overvoltage risk.
- Current limited.



## PRR MODEL TABLE

MODEL	d-c OUTPUT		LOAD EFFECT CURVE (Fig. 1)	LOAD EFFECT: VOLTS INCREASE		RIPPLE rms(1) mV
	VOLTS	AMPS		100%-50% LOAD	100%-25% LOAD	
PRR 12-77M	12	0-77	1	0.75	1.5	50
PRR 24-42M	24	0-42	2	1.0	2.0	30
PRR 28-36M	28	0-36	2	1.0	2.0	25
PRR 48-22M	48	0-22	3	1.5	2.5	10

(1) These are maximum rms values. The curves provide typical data.

## PRR STATIC SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
Accuracy	±2%	Nominal source, +30°C after ½ hour warmup
	Add 1% at turn-on	Cold start
Source Effect	±0.5%	Typical
Source Frequency Effect	1-1.5%	For 1% frequency change
Temperature Effect	0.05% per °C	0-50°C
Time Effect	1%	8 hour drift
Efficiency	70-80%	Max load
Temperature	-40°C to +85°C	Storage
	-20°C to +55°C	Operating
Load Effect	See plot Fig. 1	
Ripple and Noise	See plot Fig. 2	



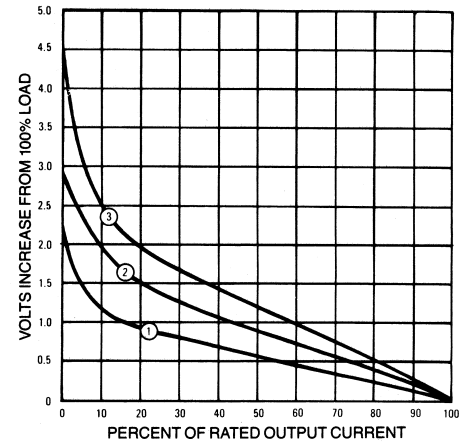
## PRR GENERAL SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
<b>INPUT</b>		
Voltage	105-135V a-c(1)	
Current	13A rms at 125V a-c	
Frequency	60Hz ± 5%(1)	
<b>OUTPUT</b>		
d-c Output	Ferroresonant	
Type of Stabilizer	Voltage stabilizer	Fixed setting
Current Limiting	125-150% of rated load	Automatic; value depends on source voltage level
Isolation Voltage	600V (d-c or peak)	Output to ground
Leakage Current, Output to Ground	50 microamperes max	rms at 115V a-c
	500 microamperes max	p-p at 115V a-c
Series Connection	600V	Max. voltage off ground
Parallel Connection	Possible for identical units	Use suitable diodes for redundancy conditions, and derate total current ~10% to allow for imbalance
OVP	Not required	Inherent in ferroresonant design
<b>DYNAMICS</b>		
Transient Recovery	200 milliseconds	50-100% step-load current
Output Impedance	Determine from slope of plotted load effect curves $Z_0 = \Delta E_0 / \Delta I_0$ (2)	Figure 1
<b>MECHANICAL</b>		
Input Connections	Detachable IEC type 3-wire	
Output Connections	Two heavy duty bus bars	At the rear
Meters	Two 2½" horizontal	Front panel analog
Mounting (in standard 19" rack)	All models	Mounting "ears" supplied
Cooling	Forced air blower	Exhaust to right, facing the panel
Dimensions inches (HxWxD)	6³¹⁄₃₂ x 19 x 13⁷⁄₁₆	
	177.0 x 482.6 x 341.3	
Finish: Fed Std. 595	Gray, color 26440	Front panel
Weight	82lbs (37.3Kg)	Packed for shipment

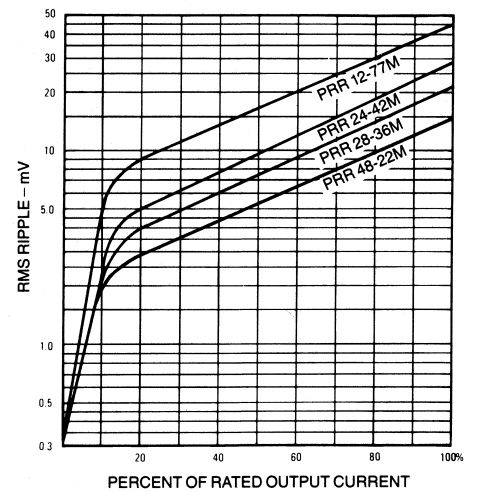
(1) PRR operate from 115V a-c 60Hz only. For operation from 230V a-c 50Hz, please consult factory.

(2) Above 10KHz, add the effect of an equivalent 2µH series inductance.

**FIGURE 1**  
Typical Load Effect Curves for PRR Models



**FIGURE 2**  
Typical Output Ripple Curves for PRR Models



## OUTLINE DIMENSIONAL DRAWINGS

Fractional dimensions in light face type are in inches, **dimension in bold face type are in millimeters.**  
Tolerance: ± 1/64" (0.4) between mounting holes; ± 1/32" (0.8) other dimensions. Panels: Per Mil. Std. 189.

