

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	



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PRR GENERAL SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
INPUT		
Voltage	105-135V a-c(1)	
Current	13A rms at 125V a-c	
Frequency	60Hz ± 5%(1)	
OUTPUT		
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
DYNAMICS		
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
MECHANICAL		
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)	6¾ ₃₂ x 19 x 13¾ ₁₆	
	mm	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

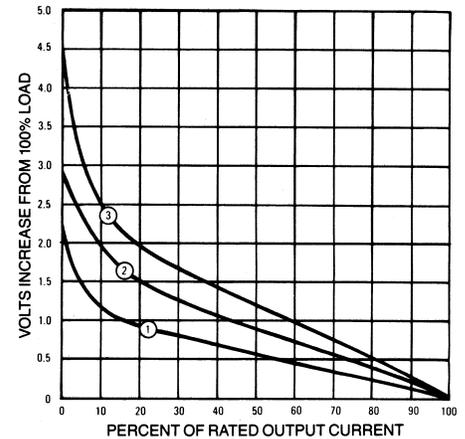
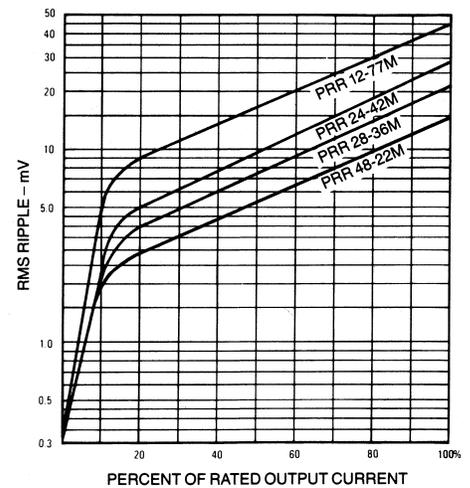


FIGURE 2
Typical Output Ripple Curves for PRR Models



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.

