

Regulated DC Power Supplies

PR-A SERIES

18V/1.2A

PR18-1.2A

18V/3A

PR18-3A

18V/5A

PR18-5A

36V/1.2A

PR36-1.2A

36V/3A

PR36-3A

70V/1A

PR70-1A

250V/0.42A

PR250-0.42A

OUTLINE

The PR-A Series of series-regulated CV/CC power supplies were designed to provide a compact power supply package with high performance, and ensure excellent reliability as well as excellent design. Seven types are available for a variety of requirements, three 18 V types, two 36 V types, one 70 V type and one 250 V type. Whether used individually or connected in series or parallel for greater capacity, the PR-A Series ensures excellent performance. These power supplies are housed in a compact rack-mount package and can be used on the bench top as well.

Applications

- R&D.
- System incorporation.
- Production lines.
- School and education.
- Protection technology.
- Aging.



PR-A SERIES

FEATURES

Low Ripple, Low Noise

Series regulation achieves extremely low ripple and noise, as well as a very low temperature coefficient and excellent electrical characteristics.

Series Operation, Parallel Operation

Several power supplies can be connected in series to boost output voltage capability, or in parallel to boost output current capability. In addition, with the parallel connection method, master-slave setup lets you control the output from just one of the connected supplies.

OUTPUT ON/OFF Switching

The output can be switched on and off with a switch on the front panel.

CV/CC LED indicators

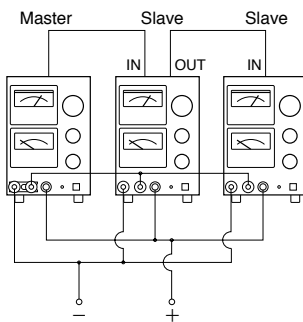
The green LED lights during CV operation and the red LED lights during CC operation.

Floating Output Method

Because the output terminals are floating, operation is possible as either a positive or negative power supply.

PR-A Series Parallel-Connected Operation

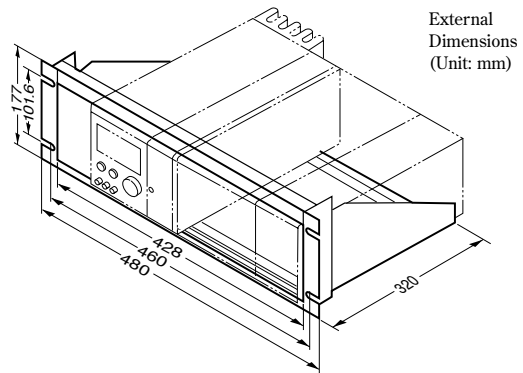
It is possible to connect several of the same model of PR-A Series power supplies in parallel to increase current capability. Output is controlled from one master unit.



PR-A Series Optional Equipment

■ Rack Mount Adapter for PR-A Series

RK-604E (EIA)



■ Blank Panel

- RB-604A (1/2 rack width)
- RB-604B (1/3 rack width)
- RB-604C (1/4 rack width)
- RB-604D (1/6 rack width)
- RB-604E (1/12 rack width)

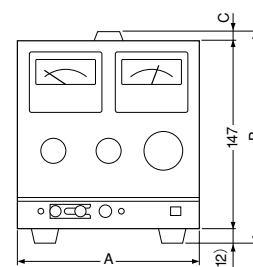
REGULATED DC POWER SUPPLIES

SPECIFICATIONS

Model	PR18-1.2A	PR18-3A	PR18-5A
Output voltage (continuously variable, with coarse and fine adjustments)	0 to 18V		
Output current (continuously variable)	0 to 1.2A	0 to 3A	0 to 5A
Voltage regulation characteristics			
Line regulation (with respect to $\pm 10\%$ variation in AC)	0.01%+2mV (3.8mV)		
Load regulation (with respect to change from 0 to 100%)	0.01%+2mV (3.8mV)		0.01%+3mV (4.8mV)
Ripple/noise (10Hz to 1MHz)	0.5mVrms		
Ripple peak (p-p)	2mVp-p		
Transient response (output current : 5% to 100%)	100 μ s Typ		
Temperature coefficient	150ppm/ $^{\circ}$ C Typ		
Current regulation characteristics			
Line regulation (with respect to $\pm 10\%$ variation in AC)	2mA		
Load regulation (with respect to change from 0 to 100%)	10mA		15mA
Ripple/noise (10Hz to 1MHz)	2.4mArms	6.0mArms	10mArms
Ripple peak (p-p)	3.6mA p-p	12mA p-p	15mA p-p
Temperature coefficient	500ppm/ $^{\circ}$ C Typ		
Meter			
Voltmeter (2.5 % f.s.)	18V		
Ammeter (2.5 % f.s.)	1.2A	3A	5A
Functions			
Series operation (independent control)	Series operation (with in groundable voltage limits)		
Parallel operation (master-slave)	Single-control parallel operation (only for power supplies of the same model)		
Output			
Polarity	Positive or negative side groundable		
Terminal color	+ (red), - (white), and GND (black)		
Groundable voltage limit	$\pm 250V$ DC		
Operating environment			
Temperature/humidity for characteristics in spec.	0 to 40 $^{\circ}$ C, 10 to 85%RH		
Cooling system	Natural draft		
Power consumption VA/W (100V AC, $\pm 20\%$)	Approx. 60VA/45W	Approx. 125VA/100W	Approx. 200VA/165W
Power requirement	100V $\pm 10\%$ AC, 50/60Hz, 120V/220V/240V $\pm 10\%$ (max. 250V AC)		
Case dimensions (W \times H \times D) mm	104 \times 147 \times 186	104 \times 147 \times 224	138 \times 147 \times 239
Maximum dimensions (W \times H \times D) mm	108 \times 161 \times 200	108 \times 167 \times 265	142 \times 167 \times 290
Weight	Approx. 3.8kg	Approx. 5.3kg	Approx. 7.0kg
Accessories	Instruction manual $\times 1$		

■ Case dimensions (Unit : mm)

Model	A	B	C	D	E	Size
PR18-1.2A	104	161	—	108	200	S
PR18-3A	104	167	8	108	265	M
PR18-5A	138	167	8	142	290	L
PR36-1.2A	104	161	—	108	200	S
PR36-3A	138	167	8	142	290	L
PR70-1A	104	167	8	108	265	M
PR250-0.42A	138	167	8	142	290	L



PR-A SERIES

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REGULATED DC POWER SUPPLIES

	PR36-1.2A	PR36-3A	PR70-1A	PR250-0.42A
	0 to 36V		0 to 70V	0 to 250V
	0 to 1.2A	0 to 3A	0 to 1A	0 to 0.42A
	0.01%+2mV (5.6mV)		0.01%+2mV (9mV)	0.01%+2mV (27mV)
	0.01%+2mV (5.6mV)		0.01%+2mV (9mV)	0.01%+2mV (27mV)
			1mVrms	2.5mVrms
	10mA	15mA		10mA
	2.4mAmps	6.0mAmps	2.0mAmps	
	4.5mA _{p-p}	12mA _{p-p}	6.0mA _{p-p}	
	36V		70V	250V
	1.2A	3A	1A	0.42A
				±500V DC
	Approx. 105VA/73W	Approx. 225VA/170W	Approx. 140VA/110W	Approx. 200VA/155W
	internally switchable			
	104×147×186	138×147×239	104×147×224	138×147×239
	108×161×200	142×167×290	108×167×265	142×167×290
	Approx. 4.4kg	Approx. 7.0kg	Approx. 5.5kg	Approx. 7.0kg

