

# PI-250

## Portable Current Power Supply



- Portable Light Weight Current Voltage Supply
- Motor Overload Testing
- Ground Fault Testing
- Motor Overload Testing
- Circuit Breaker Testing

### INTRODUCTION

A high current test set is designed with high current, low voltage outputs used for many purposes, including primary injection testing of direct acting low voltage circuit breakers, motor overload relays, current transformers and heat runs. It also can be used as a general purpose adjustable voltage or current source. The front panel displays provide simple indication of output current, time, and system status. The keyboard provides easy control of output.

### DESCRIPTION

The **PI-250** Portable Current Power Supply incorporates the flexibility to provide unequalled capability in a portable package. The **PI-250** used alone, on 120 VAC supplies, generates continuous current of 250 amps with peak maximum output 750 amps through a breaker and 1000 amps into a short. The unit is housed in rugged metal case enclosure which weighs no more than 35 pounds, allowing one person easy mobility. Basic operation is very simple, and the proven instrumentation provides optimal output control and measurement.

The **PI-250** is a versatile and technologically advanced primary injection test set capable of testing circuit breakers, motor overload relays, and ground fault trip devices, magnetic, thermal or solid state. The test set can also be used on high current applications like ratio transformers, and heat runs.

The PI-250 features digital readout of current and time enhanced by digital signal processing. Automatic pulse (memory) mode provides fast and accurate evaluation of output current pulses as short as one half cycle.

The PI-250 incorporates a PIC microcontroller with a precision A/D converter and special firmware for true-RMS continuous and pulse current reading with high accuracy. It also utilizes a sophisticated current sensing system for more reliable current latch mode operation and better timing accuracy. An LED 4 digit readout for current in eight ranges from 5.000 A to 1000 A full scale with automatic overrange detection reduces the chance of operator error. An integral autoranging timer with LED readout provides four digits in seconds or cycles mode, with a resolution of 0.001 second or 0.1 cycle. The entire metering and control package is combined on a single PCB which can be removed and replaced very easily, for efficient maintenance and repair.

The PI-250 provides four output taps which range from 0-3.5 volts at 200 amps to 0-130 volts at 5 amps, continuous, and pulse output up to 5x. The convenient quick welding connectors of heavy cables for high current, and the lower current outputs use heavy duty binding posts which accommodate banana plugs and smaller wires.

The unit is housed in a rugged, lightweight aluminum case with a water-resistant seal, and a removable lid which has room for storage of power cord and output leads. The front panel is a durable plastic overlay which can be wiped clean easily and safely, and the tactile keypad provides long-lasting and reliable operation with positive operator feedback.

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## Portable Current Power Supply



### SPECIFICATIONS

**Input:** 120 VAC +/- 10%, 50/60 Hz  
600 VA Continuous, 3 kVA Peak

**CURRENT RANGES:**  
0-5.000 / 10.00 / 25.00 / 50.00 / 100.0 / 250.0 /  
500.0 / 1000 Amperes

**Output:**

3 VAC	200 A	Continuous	
	400 A	10 min on	10 min off
	600 A	90 sec on	3 min off
	1000 A	0.2 sec on	2 min off

**CURRENT ACCURACY:**  
+/- 0.5% Reading + 0.5% Range + 1 Digit  
(Continuous)  
+/- 1.0% Reading + 1.0% Range + 1 Digit  
(Pulse > 0.01 sec)

6 VAC	100 A	Continuous	
	200 A	10 min on	10 min off
	300 A	90 sec on	3 min off
	500 A	0.2 sec on	2 min off

**TIMER RANGES:**  
0-9.999 / 99.99 / 999.9 / 9999 Seconds  
0-999.9 / 9999 Cycles

24 VAC	25 A	Continuous	
	50 A	10 min on	10 min off
	75 A	90 sec on	3 min off
	125 A	0.2 sec on	2 min off

**TIMER ACCURACY:**  
+/- 0.005 sec +/- 0.005% of reading +/- 1 count

120 VAC	5 A	Continuous	
	10 A	10 min on	10 min off
	15 A	90 sec on	3 min off
	25 A	0.2 sec on	2 min off

#### DIMENSIONS AND NET WEIGHT

Height: 12.0 in. (178 mm)  
Width: 13.0 in. (483 mm)  
Depth: 9.0 in. (152 mm)  
Weight: 35 lb. (4.55 kg)

#### STANDARD ACCESSORIES

Remote Initiate cable	1	S-B143
Contact Leads	1 pair	S-A108
High current leads	1 pair	
Cable Lug Adapter	2 pcs	