

Data Sheet

IPM 3000N

True rms Power Clamp Meter

1. HVAC Application :

- ◆ Use MAX/MIN/Recording in the temperature mode to assess efficiency.
- ◆ Measure flame safeguard device current draw.
- ◆ Analyze temperature and voltage or current data with the aid of the time stamp.
- ◆ Insulation test up to 100M Ω .

ELECTRICAL SPECIFICATIONS (23°C \pm 5°C)

AC Current (50Hz to 400Hz) : Trms

Range	Resolution	Accuracy	Sensitivity	Overload Protection
99.99A	10mA	$\pm 2\% \pm 20$ dgts (50, 60Hz)	0.10A	1000A
999.9A	100mA	$\pm 4\% \pm 20$ dgts (40~400Hz)	1.0A	

μ A Trms : (AC+DC) (Burden Voltage : 5mV/ μ A)

Range	Resolution	Accuracy	Sensitivity	Overload Protection
99.99 μ A	10nA	$\pm 1\% \pm 20$ dgts	0.20 μ A	600V
999.9 μ A	100nA		2.0 μ A	

AC Voltage (50Hz to 400Hz) : Trms

Range	Resolution	Accuracy	Sensitivity	Overload Protection
999.9mV	0.1mV	$\pm 1\% \pm 20$ dgts (50, 60Hz) $\pm 2\% \pm 20$ dgts (40~400Hz)	2.0mV	600V
9.999V	1mV		0.020V	
99.99V	10mV		0.20V	
600.0V	100mV		2V	

DC Voltage

Range	Resolution	Accuracy	Sensitivity	Overload Protection
999.9mV	0.1mV	$\pm 1.0\% \pm 20$ dgts	2.0mV	600V
9.999V	1mV		0.020V	
99.99V	10mV		0.20V	
600.0V	100mV		2V	

Resistance (Continuity<40 Ω on the 999.9 Ω range) :

Range	Resolution	Accuracy	Overload Protection
999.9 Ω	100m Ω	1% ± 10 dgts	600V
9.999k Ω	1 Ω		
99.99k Ω	10 Ω		
999.9k Ω	100 Ω		

M Ω :

Range	Resolution	Accuracy	Overload Protection
9.999M Ω	1k Ω	5% ± 10 dgts	600V
99.99M Ω	10k Ω		

Diode (Continuity<40mV) :

Range	Resolution	Accuracy	Overload Protection
2.000V	1mV	$\pm 2\% \pm 1$ dgt	600V

2. Electrical Application :

- ◆ Check for energized circuits and balance loads.
- ◆ 1 ϕ /3 ϕ (3P3W/3P4W) Power analyzer.
- ◆ Capture motor in-rush current readings.
- ◆ Determine peak power demand periods.
- ◆ Check motor run/start capacitor values.

Capacitance :

Range	Resolution	Accuracy	Overload Protection
10.000 μ F	1nF	1.5% ± 5 dgts	600V
100.00 μ F	10nF		
1000.0 μ F	100nF		
7000 μ F	1 μ F	2.5% ± 15 dgts	

Temperature (K-Type thermocouple) :

Range	Resolution	Accuracy	Overload Protection
-50°C to 900°C	0.1°C	1% ± 1 °C	30V _{AC} or 60V _{DC}
-58°F to 1000°F	0.1°F	1% ± 2 °F	

1 ϕ /3 ϕ TRUE Power (kW): (PF>0.5 or θ <60°)

Range	Resolution	Accuracy	Overload Protection
60.00kW (<100A)	10W	$\pm 5\%$ rdg ± 20 dgts (50, 60Hz)	600V ac / 1000A ac
600.0kW (>100A)	100W		

1 ϕ /3 ϕ Horse Power (HP): (PF>0.5 or θ <60°)

Range	Resolution	Accuracy	Overload Protection
80.00HP (<100A)	0.01HP	$\pm 5\%$ rdg ± 20 dgts (50, 60Hz)	600V ac / 1000A ac
800.0HP (>100A)	0.1HP		

1 ψ /3 ψ Apparent Power (kVA):

Range	Resolution	Accuracy	Overload Protection
60.00kVA (<100A)	10VA	$\pm 2.5\%$ rdg ± 20 dgts	600VAC / 1000AAC
600.0kVA (>100A)	100VA		

1 ψ /3 ψ Phase Angle : (50Hz, 60Hz)

Range	Resolution	Accuracy	Sensitivity
-60° to 0° to +60°	0.1°	± 6.0 °	ACV>100V, ACA>10A

Frequency :

Range	Resolution	Accuracy	Sensitivity
40Hz/1kHz	0.1Hz	$\pm 0.5\%$ rdg ± 2 dgts	ACV>1.2V, ACA>6A

