

FEATURES

- 10 000 count dual display LCD
- True rms current & voltage measurement
- True and apparent power and phase angle measurement (kW, kVA, ϕ)
- Dual display options (kW+PF, kVA+ ϕ , V+A, A+Hz, V+Hz)
- 1000 Aac current range to check motor & compressor current consumption
- 40 mm clamp diameter
- Min/Max with elapsed time to capture motor inrush current readings
- Data hold facility
- 1 nF to 3500 μ F capacitance range suits run/start capacitor checks
- 1 kHz frequency measurement range
- Diode and continuity test
- μ A range to measure flame sensor current
- 900 $^{\circ}$ C range Type K thermocouple input socket
- Analyse time-stamped temperature and power data

RS PRO Clamp Meter- IPM3000N Power Clamp Meter

RS Stock No.: 123-2241



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

RS PRO IPM3000N HVAC Clamp meter, 1000 A

From the trusted RS PRO brand, this IPM3000N is a great value 1000 A ac power meter with features designed to suit HVAC and electrical maintenance applications. The clamp meter features a wide clamping jaw that can fit easily around power cables, presenting an efficient way to measure amps and volts in various kinds of electrical devices.

General Specifications

| | |
|---------------------|--|
| Product Range | Clamp Meter |
| Model Number | IPM3000N |
| Clamp Meter Type | Power Clamp |
| Functions Measured | AC Current, AC Voltage, Capacitance, DC Voltage, Frequency, Power, Resistance, Temperature |
| Display Type | LCD |
| Overload Protection | Yes |
| True RMS | Yes |
| Data Hold | Yes |
| Applications | Commercial/ Residential electricians |

Measurement

| Parameter | Range | Accuracy | Resolution |
|-----------------------|--------------------------------------|---|------------------|
| Absolute Current (AC) | 1kA ac | $\pm(2\% \text{ rdg} + 20\text{dgts})$ | 10mA |
| Absolute Voltage (AC) | 600V ac | $\pm(1\% \text{ rdg} + 20\text{dgts})$ | 100 μ V |
| Absolute Voltage (DC) | 600V dc | $\pm(1\% \text{ rdg} + 20\text{dgts})$ | 100 μ V |
| Capacitance | 1 nF to 3500 μ F | 2.5% $\pm 15\text{dgts}$ | 1 μ F |
| Diode Test | 2.000V | $\pm 2\% \pm 1\text{dgt}$ | 1mV |
| Frequency | 40Hz/1kHz | $\pm 0.5\% \text{rdg} \pm 2\text{dgts}$ | 0.1Hz |
| Absolute Resistance | 100M Ω | 1% $\pm 10\text{dgts}$ | 100 Ω |
| Absolute Temperature | -50 $^{\circ}$ C to 900 $^{\circ}$ C | 1% $\pm 1^{\circ}$ C | 0.1 $^{\circ}$ C |

Electrical Specifications

| | |
|-----------------------------------|--------------|
| Power Source | Battery |
| Safety Category Level and Voltage | CAT III 600V |

Mechanical Specifications

| | |
|------------------------|-----------------|
| Jaw Capacity (Busbars) | 40mm |
| Maximum Conductor Size | 51mm |
| Dimensions | 228 x 76 x 39mm |

| | |
|--------|-------|
| Width | 76mm |
| Length | 228mm |
| Height | 39mm |
| Weight | 465 g |

Approvals

| | |
|---------------------------|--------------------------------|
| Compliance/Certifications | EN61010-1 IEC 1010-2-032 |
| Declarations | RoHS Certificate of Compliance |

Accessories Includes

| Item Name | Qty |
|-----------------|-----|
| Test leads | 1 |
| Crocodile clips | 2 |
| Case | 1 |
| 9 V PP3 battery | 1 |
| Instructions | 1 |

Similar Products

| Stock No. | RS# 123-1984 | RS# 123-3222 | RS#123-3229 | RS# 123-3233 |
|-----------------------|--|---|---|--|
| Model Number | RS330 | ICM136R | ICM135R | ICMA7-4 |
| Clamp Meter Type | AC/DC Clamp Meter | Multifunction Clamp | Multifunction Clamp | Multifunction Clamp |
| Clamping Diameter | Opening 0.9" (23mm) approx | | | |
| Functions Measured | AC Current, AC Voltage, Continuity, DC Voltage, Diode Test, Resistance | AC Current, AC Voltage, Continuity, DC Current, DC Voltage, Diode Test, Frequency, Resistance | AC Current, AC Voltage, Continuity, DC Voltage, Diode Test, Frequency, Resistance | AC Current, AC Voltage, Continuity, DC Voltage, Diode Test, Resistance |
| Display Type | LCD | LCD | LCD | |
| Sampling Rate | | 1.5 times/sec | 1.5 times/sec | 2.5 times/sec |
| Absolute Current (AC) | 400A ac | 600A ac | 600A ac | 200A ac |
| Absolute Current (DC) | 600V dc | 600A dc | | |
| Absolute Voltage (AC) | 600V ac | 600V ac | 600V ac | 600V ac |
| Absolute Voltage (DC) | 600V dc | 600V dc | 600V dc | 600V dc |
| Continuity Threshold | Threshold <120Ω; Test current < 1mA | | | |
| Diode Test | Test current of 0.3mA typical; Open circuit voltage 1.5V DC typical. | Yes | Yes | Yes |

| | | | |
|-------------------------|--|-----------------------------------|---|
| Frequency Range | | 20Hz~400Hz | |
| Temperature coefficient | | 0.2×(spec. Acc'y)/°C <18°C, >28°C | 0.2 x (Specified accuracy) / °C, < 18°C, > 28°C |

ELECTRICAL SPECIFICATIONS (23 °C ±5 °C)**AC Current (50Hz to 400Hz) : Trms**

| Range | Resolution | Accuracy | Sensitivity | Overload Protection |
|--------|------------|------------------------|-------------|---------------------|
| 99.99A | 10mA | ±2% ±20dpts (50, 60Hz) | 0.10A | 1000A |
| 999.9A | 100mA | ±4% ±20dpts (40~400Hz) | 1.0A | |

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

| Range | Resolution | Accuracy | Sensitivity | Overload Protection |
|---------|------------|-------------|-------------|---------------------|
| 99.99µA | 10nA | ±1% ±20dpts | 0.20µA | 600V |
| 999.9µA | 100nA | | 2.0µA | |

AC Voltage (50Hz to 400Hz) : Trms

| Range | Resolution | Accuracy | Sensitivity | Overload Protection |
|---------|------------|--|-------------|---------------------|
| 999.9mV | 0.1mV | ±1% ±20dpts (50, 60Hz) ±2% ±20dpts (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 | ±1.0% ±20dpts | 2.0mV | 600V |
| 9.999V | 1mV | | 0.020V | |
| 99.99V | 10mV | | 0.20V | |
| 600.0V | 100mV | | 2V | |

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

| Range | Resolution | Accuracy | Overload Protection |
|---------|------------|------------|---------------------|
| 999.9Ω | 100mΩ | 1% ±10dpts | 600V |
| 9.999kΩ | 1Ω | | |
| 99.99kΩ | 10Ω | | |
| 999.9kΩ | 100Ω | | |

MΩ:

| Range | Resolution | Accuracy | Overload Protection |
|---------|------------|------------|---------------------|
| 9.999MΩ | 1kΩ | 5% ±10dpts | 600V |
| 99.99MΩ | 10kΩ | | |

Diode (Continuity<40mV) :

| Range | Resolution | Accuracy | Overload Protection |
|--------|------------|-----------|---------------------|
| 2.000V | 1mV | ±2% ±1dgt | 600V |

Capacitance :

| Range | Resolution | Accuracy | Overload Protection |
|----------|------------|--------------|---------------------|
| 10.000µF | 1nF | 1.5% ±5dpts | 600V |
| 100.00µF | 10nF | | |
| 1000.0µF | 100nF | | |
| 7000µF | 1µF | 2.5% ±15dpts | |

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 | ±5%rdg ±20dgts (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 | ±5%rdg ±20dgts (50, 60Hz) | 600V ac / 1000A ac |
| 800.0HP (>100A) | 0.1HP | | |

1 ϕ /3 ϕ Apparent Power (kVA):

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

1 ϕ /3 ϕ 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 | ±0.5%rdg ±2dgts | ACV>1.2V, ACA>6A |