



# Generation Two Phoenix True RMS Clamp-On Meter



## Functions

- True RMS
- Capacitance 4000 $\mu$ F
- AC/DC Current 2000 $\mu$ A
- AC Current (Clamp) 400A
- Non-contact voltage 24 to 600V AC
- Volts 750V AC/1000V DC
- Resistance 40M $\Omega$
- Frequency/ Duty cycle
- Continuity
- Diode test
- Min/Max
- Temperature range: (K-Type) -22° to 752°F

## Features

- Dual display
- Detachable clamp head
- Input jack lock
- Worklight
- Low battery display lock
- High contrast backlit display
- Magnetic mount
- User temperature calibration
- Test lead storage
- Test lead holder on clamp head
- Auto power off
- Compatible with common industry accessory heads
- 3-Year limited warranty



## Applications

Average-responding units like the PHOENIX: PRIME and PRO, are widely used and work well for linear electrical loads. However, when the loads are nonlinear, like those of an adjustable-frequency drive, or semiconductors, they require the accuracy of a True RMS meter like the PHOENIX: PRO+ to correctly measure the distorted sign-waves. In these situations a True RMS meter will provide a correct reading on the distorted wave-form where an average-responding meter may result in error readings up to 40%.





### Includes

- Test leads (ATL59)
- K-Type temperature probe (ATT29)
- Batteries 2 (AAA)
- Manual
- Zippered pouch

## Specifications

### AC Amps Measurement - Jaw Input (45Hz to 400Hz)

| Range | Resolution | Accuracy          | Overload Protection |
|-------|------------|-------------------|---------------------|
| 40A   | 0.01A      | ±(2.9% + 15 dgts) | 400A                |
| 400A  | 0.1A       | ±(1.9% + 8 dgts)  |                     |

\*DL389 45Hz to 400Hz True RMS (Crest factor <3:1)

### DC Low Amps Measurement (test lead input)

| Range  | Resolution | Accuracy         | Overload Protection |
|--------|------------|------------------|---------------------|
| 400µA  | 0.01µA     | ±(1.2% + 3 dgts) | 2000µA / 600V RMS   |
| 2000µA | 0.1µA      |                  |                     |

### AC Low Amps Measurement (test lead input)

| Range  | Resolution | Accuracy         | Overload Protection |
|--------|------------|------------------|---------------------|
| 400µA  | 0.01µA     | ±(2.0% + 5 dgts) | 2000µA / 600V RMS   |
| 2000µA | 0.1µA      | ±(1.5% + 5 dgts) |                     |

\*DL389 45Hz to 400Hz True RMS (Crest factor <3:1)

### DC Volts Measurement

| Range | Resolution | Accuracy          | Overload Protection |
|-------|------------|-------------------|---------------------|
| 400mV | 0.1mV      | ±(0.5% + 4 dgts)  | 1000V RMS           |
| 4V    | 1mV        |                   |                     |
| 40V   | 10mV       |                   |                     |
| 400V  | 100mV      |                   |                     |
| 1000V | 1V         | ±(0.8% + 10 dgts) |                     |

### AC Volts Measurement

| Range | Resolution | Accuracy         | Overload Protection |
|-------|------------|------------------|---------------------|
| 400mV | 0.1mV      | ±(2.0% + 5 dgts) | 750V RMS            |
| 4V    | 1mV        |                  |                     |
| 40V   | 10mV       |                  |                     |
| 400V  | 100mV      |                  |                     |
| 750V  | 1V         |                  |                     |

\*DL389 45Hz to 400Hz True RMS (Crest factor <3:1)

### Resistance Measurement

| Range | Resolution | Accuracy | Overload Protection |
|-------|------------|----------|---------------------|
| 400Ω  | 100mΩ      | ±1.0% +4 | 600V                |
| 4kΩ   | 1Ω         |          |                     |
| 40kΩ  | 10Ω        |          |                     |
| 400kΩ | 100Ω       |          |                     |
| 4MΩ   | 1kΩ        |          |                     |
| 40MΩ  | 10kΩ       | ±2.0% +4 |                     |

### Capacitance Measurement

| Range  | Resolution | Accuracy         | Overload Protection |
|--------|------------|------------------|---------------------|
| 40nF   | 0.01nF     | ±(3.5% + 6 dgts) | 600V RMS            |
| 400nF  | 0.1nF      |                  |                     |
| 4µF    | 0.001µF    |                  |                     |
| 40µF   | 0.01µF     |                  |                     |
| 400µF  | 0.1µF      |                  |                     |
| 4000µF | 1µF        |                  |                     |

### Temperature Measurement

| Range                           | Resolution    | Accuracy                           | Overload Protection |
|---------------------------------|---------------|------------------------------------|---------------------|
| -22° to 14°F<br>(-30° to -10°C) | 0.1°F (0.1°C) | ±(1.0% + 5.4°F)<br>±(1.0% + 3.0°C) | 30V RMS             |
| 15° to 752°F<br>(-9° to 400°C)  | 0.1°F (0.1°C) | ±(1.0% + 3.6°F)<br>±(1.0% + 2.0°C) |                     |

### Frequency Measurement

| Range    | Resolution | Accuracy         | Overload Protection |
|----------|------------|------------------|---------------------|
| 9.999Hz  | 0.001Hz    | ±(0.1% + 4 dgts) | 600V RMS            |
| 99.99Hz  | 0.01Hz     |                  |                     |
| 999.9Hz  | 0.1Hz      |                  |                     |
| 9.999kHz | 1Hz        |                  |                     |
| 99.99kHz | 10Hz       |                  |                     |
| 199.9kHz | 100Hz      |                  |                     |

Minimum Frequency: 0.5Hz, DC V offset should be zero

Sensitivity: >10% of each AC Volt range except 4V (>20%) range only

### Duty (%) Cycle Measurement

| Range         | Accuracy                  | Overload Protection |
|---------------|---------------------------|---------------------|
| 01. to 99.90% | ±(0.2% per kHz + 0.1%) +5 | 600V RMS            |

0.5Hz to 100kHz (pulswidth > 2µ sec)

### Continuity Measurement

| Open Circuit voltage <0.44V  | Overload Protection |
|------------------------------|---------------------|
| Threshold Approximately <50Ω | 600V                |

### Diode Test

| Range | Open Circuit Voltage | Test Current (typical) | Overload Protection |
|-------|----------------------|------------------------|---------------------|
| 2.0V  | < 2.4V DC            | 0.25mA                 | 600V                |

## Downloads



Manual



Data Sheet

H26-494



0 53533 150575 7

Made in KOREA