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## ***Electrical Specifications***

Current Range: 100 mA to 1000 A ac rms (2000 A instantaneous peak).

### **⚠ Warning**

**To avoid potential thermal burns from the jaws when measuring currents equal to or greater than 800 A ac rms in the ambient temperature range of 30 to 50° C (86 to 122° F), limit the measurement cycle to a measurement time of 5 minutes or less, followed by a cooling time of 15 minutes or more.**

**Output Signal:** mV output signal (2 V peak max). 3 ranges, switch selectable on handle.

**Influence of Temperature:** < 0.1% per °C for temperatures from -10 to 18° C and from 28 to 50° C.

**Usable Frequency Range:** 5 Hz to 100 kHz. (See Appendix A for typical response curves.)

### **Load Impedance**

**Required instrument input impedance:** > 1 MΩ in parallel with up to 47 pF

**di/dt max:** 10 A/μs

**Ampere Second Product:**<sup>1</sup> 1.0

**Rise or fall time:** < 40 μs

<sup>1</sup>To avoid the inaccurate readings that result from core saturation, the Ampere Second Product should not be exceeded. If the average amplitude times the duration of a given current pulse does not exceed 1.0 Ampere Second Product, the probe will be linear and specified accuracies will apply.

**i1000s***Users Manual***Table 2. Input Ranges and Accuracy**

Switch Position	Input Range	Accuracy*
100 mV/A	100 mA to 10 A (20 A instantaneous peak)	3% of reading $\pm$ 10 mV
10 mV/A	100 mA to 100 A (200 A instantaneous peak)	2% of reading $\pm$ 5 mV
1 mV/A	1 A to 1000 A (2000 A instantaneous peak)	1% of reading $\pm$ 1 mV

\*Accuracies and Phase Shifts are given for 48 Hz to 65 Hz; an ambient temperature of 23° C  $\pm$  5° C, relative humidity of 20 to 75%, conductor centered in jaw window, no DC component, no external current carrying conductor, magnetic field < 40 A/m and 1 M $\Omega$ /47 pF oscilloscope or meter input impedance.

**Table 3. Maximum Phase Shift**

100 mV/A		10 mV/A		1 mV/A	
0.1 to 0.5 A	NA	0.1 to 5 A	N/A	1 to 50 A	N/A
0.5 to 2 A	NA	5 to 20 A	15°	50 to 200 A	3°
2 to 10 A	15°	20 to 100 A	10°	200 to 1000 A	2°

Accuracies and Phase Shifts are given for 48 Hz to 65 Hz; an ambient temperature of 23° C  $\pm$  5° C, relative humidity of 20 to 75%, conductor centered in jaw window, no DC component, no external current carrying conductor, magnetic field < 40 A/m and 1 M $\Omega$ /47 pF oscilloscope or meter input impedance.

**Working Voltage (Clamp jaws to Ground):**

600 V ac rms on Overvoltage Category III circuits per IEC 1010-1 : 1990 and IEC 1010-2-032.

**Float Voltage (Output cable and connector to Ground):**

600 V ac rms on Overvoltage Category III circuits per IEC 1010-1 : 1990 and IEC 1010-2-032.

**Influence of Adjacent Conductor:**

< 1.0 mA/A ac

**Influence of Conductor Position in Jaw Opening:**

< 0.5 % of reading from 10 Hz to 5 kHz  
< 4.0 % of reading from 5 kHz to 40 kHz  
< 10.0 % of reading from 40 kHz to 100 kHz.

**Operating Temperature:**

-10 to 50° C (14 to 122° F); 100 mA to 800 A ac rms continuous, 800 to 1000 A ac rms for 5 minutes On, 15 minutes Off.

-10 to 30° C (14 to 86° F); 100 mA to 1000 A ac rms continuous

**Storage Temperature:**

-40 to 71° C (-40 to 160° F)

**Relative Humidity:**

0 to 85% (10 to 30°C); 0 to 75% (30 to 40°C); 0 to 45% (40 to 50°C)

## ***Mechanical Specifications***

**Maximum Cable Diameter:**

2.13 inches (54 mm)

**Dimensions:**

4.37 x 8.50 x 1.77 inches (111 x 216 x 45 mm)

**Weight:**

1.21 lbs (550 g)

**Output Cable:**

63 inches (1.6 m) PVC-insulated lead with insulated BNC connector.

**Enclosure Protection:**

IP 40 (IEC 529)

**Drop Test:**

1 meter per IEC 68-2-32

**Mechanical Shock:**

100 G per IEC 68-2-27.

**Vibration:**

5/55/5 Hz, no less than 0.25 mm per IEC 68-2-6.