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:[1] 1.0

Rise or fall time: < 40 µs

[1] 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.

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 ± 10 mV
10 mV/A	100 mA to 100 A (200 A instantaneous peak)	2% of reading ± 5 mV
1 mV/A	1 A to 1000 A (2000 A instantaneous peak)	1% of reading ± 1 mV
*Accuracies and Phase Shifts are given for 48 Hz to 65 Hz; an ambient temperature of 23° C ± 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 MΩ/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 ± 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 MΩ/47 pF oscilloscope or meter input impedance.					

Working Voltage (Clamp jaws to Ground):

600 V ac rms on Measurement Category III, Pollution Degree 2 circuits per EN/IEC 61010-1 and EN/IEC 61010-2-032.

Float Voltage (Output cable and connector to Ground):

600 V ac rms on Measurement Category III, Pollution Degree 2 circuits per EN/IEC 61010-1 and EN/IEC 61010-2-032.

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 to 40 kHz
< 10.0 % of reading from 40 to 100 kHz.

Operating Temperature:
-10 °C to +50 °C (14 °F 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 °C to +30 °C (14 °F to 86 °F); 100 mA to 1000 A ac rms continuous

Storage Temperature:
-40 °C to +71 °C (-40 °F to +160 °F)

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

Altitude:
Operating: 2000 m

Mechanical Specifications

Maximum Cable Diameter:
2.13 inches (54 mm)

Dimensions:
4.37 in. x 8.50 in. x 1.77 in. (111 mm x 216 mm 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)

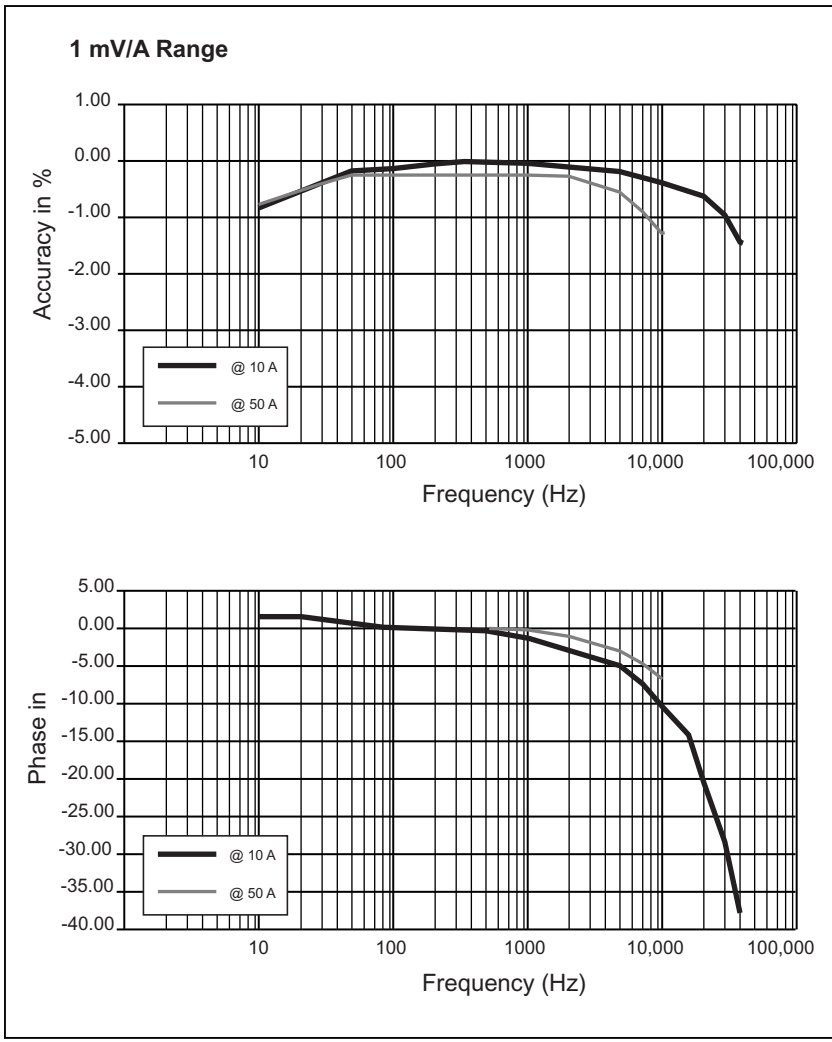
Drop Test:
1 meter per IEC 68-2-32

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.

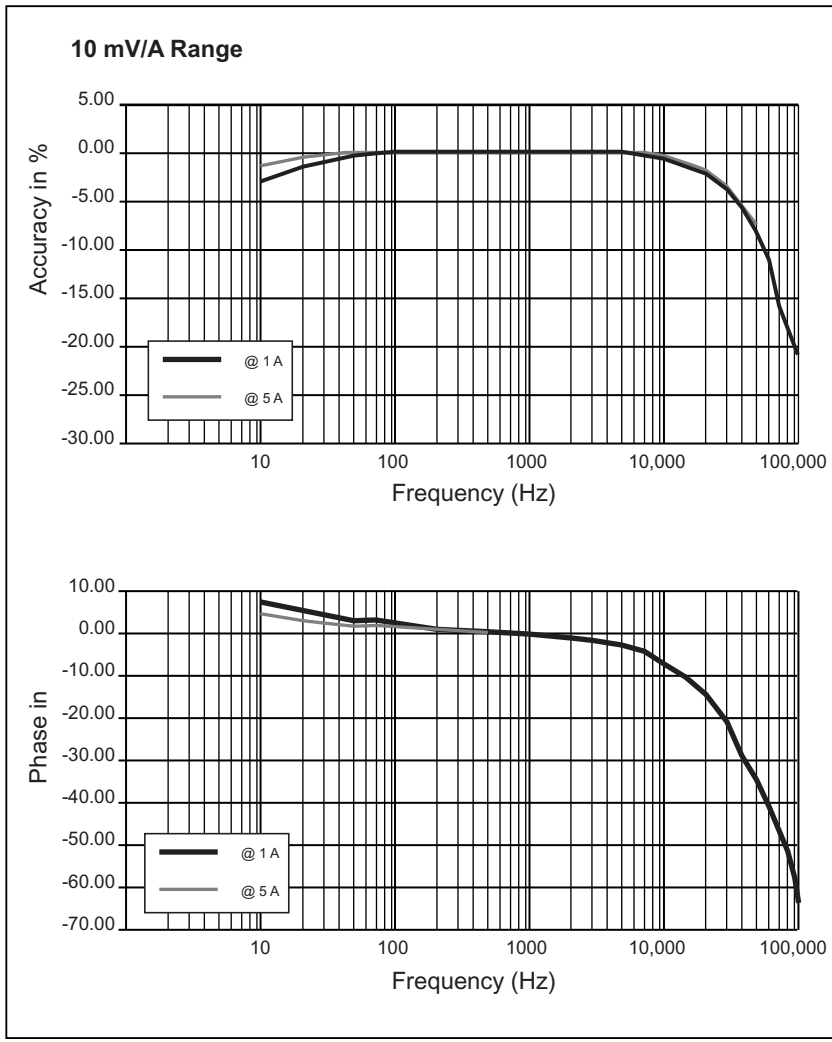
Typical Response Curves

Typical response curves are shown in Figure 2.



aef07f.eps

Figure 2. Typical Response Curves



aef08f.eps

Figure 2. Typical Response Curves (cont)

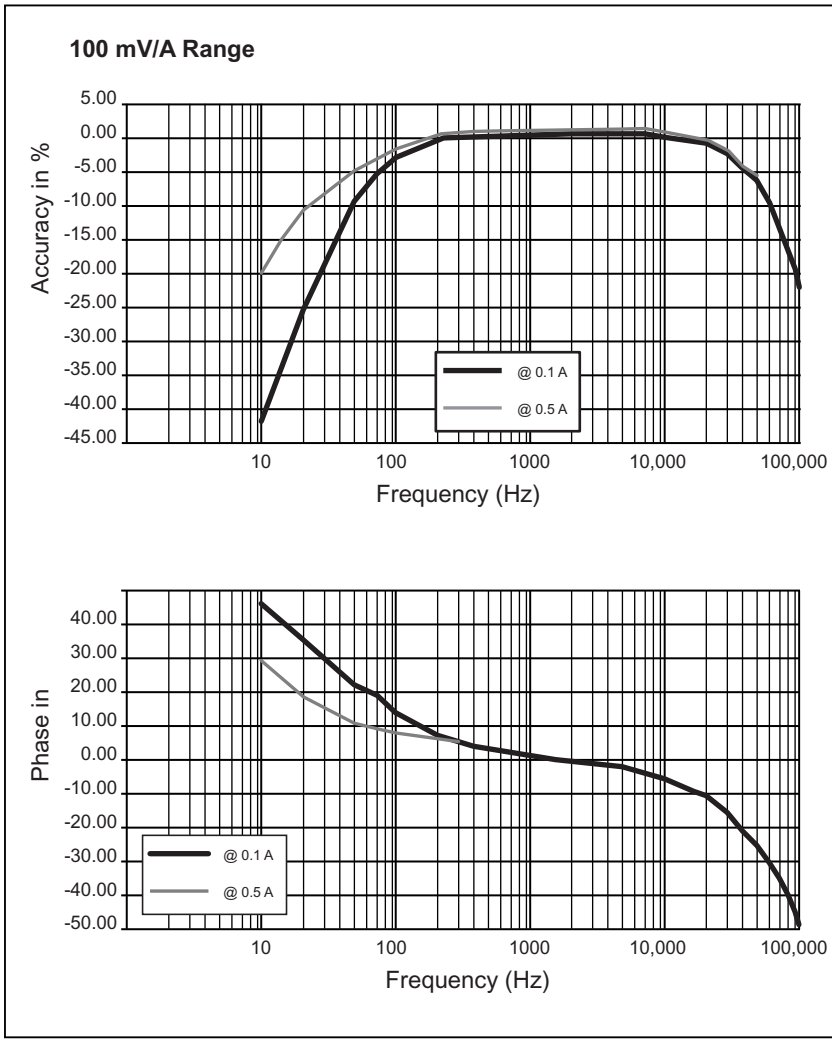


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Figure 2. Typical Response Curves (cont)