



## Current Probe SM 250 500 1000A / 5A

The SM 250 500 1000A / 5A current probe has been designed for use with multimeters, recorders, power analysers, safety testers etc. for accurate non intrusive measurement of AC current. Using the latest transformer technology, the SM 250 500 1000A / 5A can measure currents from 1A to 1200A over a frequency range of 30Hz to 10kHz.



### Electrical Characteristics

Current Range .....	: 250 / 500 / 1000 A <sub>RMS</sub>
Continuous Measuring Range .....	: 1 A to 1200 A
Output Sensitivity .....	: 20 mA / A (250 A)
.....	: 10 mA / A (500 A)
.....	: 5 mA / A (1000 A)
Load Impedance (ohm).....	: ≤ 0.5 Ohm (250 A)
.....	: ≤ 1 Ohm (500 A)
.....	: ≤ 1 Ohm (1000 A)
Conductor Position Sensitivity.....	: 0.5% @ 50Hz
Error due to adjacent conductor .....	: ≤ 2mA / A @ 50 Hz
Frequency Range .....	: 30 Hz to 10 kHz
Temperature coefficient .....	: 0.01% / °C
Working Voltage (see Safety Standards section) .....	: 600 V AC <sub>RMS</sub> or DC

### Accuracy

#### 250A

Primary current	1 to 25A	25 to 50A	50 to 150A	150A to 300A
Accuracy (of rdg)	5% +5 mA	4%+2 mA	3%	2.5%

#### 500A

Primary current	10 to 50A	50 to 100A	100A to 600A
Accuracy (of rdg)	3.5%	2.5%	2%
Phase shift (typ)	6°	4°	3°

#### 1000A

Primary current	10 to 50A	50 to 100A	100 to 500A	500 to 1200A
Accuracy (of rdg)	2.5%	2%	1.5%	1%
Phase shift (typ)	4°	3°	2°	1°

## General Characteristics

Maximum Conductor Size ..... : 54 mm diameter  
Output Connection ..... : 4mm safety sockets  
Operating Temperature Range ..... : -10 to +55 °C  
Storage Temperature Range ..... : -40 to +70 °C  
Operating Humidity ..... : 15% to 85% (non condensing)  
Weight..... : 650 g

**Reference conditions:** Temperature : +18°C to 26 °C, humidity: 20 to 75% RH, sinusoidal current: 48 to 65Hz, distortion factor: < 1%, DC current: none, DC magnetic field: 40 A/m earth's magnetic field, alternating magnetic field: none, proximity of external conductor: none, primary conductor: centred in the aperture, load impedance:  $\leq 1\Omega$  for current output.

## Safety Standards

IEC61010-1: 2010  
IEC61010-2-032: 2012  
IEC61010-2-031: 2008

600 V<sub>RMS</sub>, Category III, Pollution Degree 2

Use of the probe on **uninsulated conductors** is limited to 600 V AC<sub>RMS</sub> or DC and frequencies below 1 kHz.

## EMC Standards

EN 61326 :1998

## Dimensions

