



Current Probe M3.U 100A / 0.5V

The M3.U 100A / 0.5V 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 M3.U 100A / 0.5V can measure currents from 1A to 120A over a frequency range of 30Hz to 30kHz.



Electrical Characteristics

Current Range I_N	: 100 A AC_{RMS}
Measuring Range.....	: 1 A to 120 A RMS
Output Sensitivity.....	: 5 mV / A
Load Impedance.....	: $\geq 100 \text{ k}\Omega$
Conductor Position Sensitivity.....	: < 0.5% @ 50/60Hz
Error due to adjacent conductor.....	: $\leq 15 \text{ mA} / \text{A} @ 50\text{Hz}$
Phase Shift at 2 kHz @ 10A.....	: ± 1 degree
Frequency Range.....	: 30 Hz to 10 kHz
Temperature Coefficient.....	: 0.015% / $^{\circ}\text{C}$
Working Voltage (see Safety Standards section).....	: 600 V AC_{RMS} or DC

Accuracy

Primary Current	1A to 10A	10 to 50A	50 to 100A
Accuracy (of rdg)	$\pm 3\% + 5\text{mV}$	$\pm 1\%$	$\pm 1\%$
Phase Error (typ)	Not specified	2°	1.5°

General Characteristics

Maximum Conductor Size.....	: 15 mm diameter, bus bar 15 x 17mm
Output Connection.....	: 4 mm safety sockets
Operating Temperature Range.....	: -10 to +55 $^{\circ}\text{C}$
Storage Temperature Range.....	: -20 to +70 $^{\circ}\text{C}$
Operating Humidity.....	: 15% to 85% (non condensing)
Weight.....	: 165 g

Reference conditions: Temperature : +18 $^{\circ}\text{C}$ to 26 $^{\circ}\text{C}$, 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, alternative magnetic field: none, proximity of external conductor: none, primary conductor: centred in the aperture, load impedance: $\geq 1\text{M}\Omega$, <100pF for voltage output.

Safety Standards

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

600 V_{RMS}, Category III, Pollution Degree 2

Use of the probe on **uninsulated conductors** is limited to 600 V AC_{RMS} or DC and frequencies below 1 kHz.

EMC Standards

EN 61326 :1998

Dimensions

in mm

