

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>UKAS CALIBRATION 0768</p> <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Megger Instruments Limited</h3> <p>Issue No: 014 Issue date: 01 November 2011</p>	
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<p>Calibration performed at the above address only</p>		

DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ($k = 2$)	Remarks
DC RESISTANCE			
Generation			
Specific Values	0.0001 Ω 0.001 Ω 0.01 Ω 0.1 Ω 1 Ω 10 Ω 100 Ω 1 k Ω 10 k Ω 100 k Ω 1 M Ω 10 M Ω 100 M Ω 1 G Ω 10 G Ω 100 G Ω	820 ppm 50 ppm 50 ppm 5.0 ppm 2.0 ppm 3.0 ppm 2.0 ppm 2.0 ppm 2.2 ppm 13 ppm 21 ppm 440 ppm 0.20 % 0.22 % 0.30 % 0.31 %	
Other Values	0 Ω to 10 Ω 10 Ω to 100 Ω 100 Ω to 1 k Ω 1 k Ω to 10 k Ω 10 k Ω to 100 k Ω 100 k Ω to 1 M Ω 1 M Ω to 10 M Ω 10 M Ω to 2 G Ω 2 G Ω to 10 G Ω 10 G Ω to 100 G Ω	29 ppm + 1.2 m Ω 580 ppm + 0.85 m Ω 30 ppm + 1.3 m Ω 600 ppm + 0.80 m Ω 600 ppm + 2.2 m Ω 600 ppm + 40 m Ω 600 ppm + 0.80 Ω 600 ppm + 5.0 Ω 0.20 % 0.50 %	



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Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty (k = 2)	Remarks
DC RESISTANCE (cont'd)			
Measurement	0 Ω to 20 Ω 20 Ω to 200 Ω 200 Ω to 2 kΩ 2 kΩ to 20 kΩ 20 kΩ to 200 kΩ 200 kΩ to 2 MΩ 2 MΩ to 20 MΩ 20 MΩ to 200 MΩ 1 GΩ to 100 GΩ	25 ppm + 250 μΩ 16 ppm + 0.62 mΩ 13 ppm + 2.0 mΩ 14 ppm + 33 mΩ 16 ppm + 250 mΩ 28 ppm + 4.0 Ω 49 ppm + 180 Ω 400 ppm + 10 kΩ 0.26 % + 520 kΩ	The applied voltage depends on the nominal resistance and may be up to 1 kV.
DC VOLTAGE			
Generation	0 mV to 330 mV 330 mV to 3.3 V 3.3 V to 33 V 33 V to 330 V 330 V to 1 kV 1 kV to 5 kV 5 kV to 40 kV	69 ppm + 4.6 μV 58 ppm + 18 μV 58 ppm + 110 μV 64 ppm + 21 mV 64 ppm + 4.9 mV 0.10 % + 10 V 0.30 % + 1.2 V	
Measurement	0 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1 kV 1 kV to 15 kV 15 kV to 100 kV	9.0 ppm + 1.4 μV 8.0 ppm + 4.0 μV 8.0 ppm + 30 μV 13 ppm + 450 μV 13 ppm + 4.7 mV 0.40 % + 100 V 0.15 % + 35 V	
DC CURRENT			
Generation	0 μA to 3.3 mA 3.3 mA to 33 mA 33 mA to 330 mA 330 mA to 2.2 A 2.2 A to 11 A	0.015 % + 66 nA 0.012 % + 0.5 μA 0.012 % + 7.0 μA 0.035 % + 74 μA 0.070 % + 800 μA	Currents up to 550 A can be simulated using a 50 turn coil with increased uncertainties - suitable for the calibration of clamp-on ammeters.
Measurement	0 nA to 10 nA 10 nA to 100 nA 100 nA to 1 μA 1 μA to 10 μA 10 μA to 200 μA 200 μA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 1 A 1 A to 10 A 10 A to 100 A	0.22 % + 13 pA 0.26 % + 48 pA 0.16 % + 0.5 nA 0.15 % + 2.5 nA 130 ppm + 6.0 nA 130 ppm + 51 nA 130 ppm + 0.50 μA 130 ppm + 5.5 μA 240 ppm + 64 μA 52 ppm + 200 μA 61 ppm + 230 μA	



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AC VOLTAGE			
Generation	40 Hz to 10 kHz 1 mV to 33 mV 33 mV to 330 mV 330 mV to 3.3 V 3.3 V to 33 V 33 V to 330 V 330 V to 1 kV	0.018 % + 26 μ V 0.058 % + 80 μ V 0.035 % + 0.79 mV 0.047 % + 12 mV 0.058 % + 190 mV 0.058 % + 400 mV	
Measurement	50 Hz 6 kV to 40 kV 1 mV to 200 mV 40 Hz to 10 kHz 10 kHz to 100 kHz 200 mV to 2 V 40 Hz to 10 kHz 10 kHz to 100 kHz 2 V to 20 V 40 Hz to 10 kHz 10 kHz to 100 kHz 20 V to 200 V 40 Hz to 10 kHz 10 kHz to 100 kHz 200 V to 1 kV 40 Hz to 10 kHz At 50 Hz 1 kV to 6 kV 6 kV to 40 kV	1.2 % + 35 V 250 ppm + 16 μ V 920 ppm + 45 μ V 200 ppm + 53 μ V 700 ppm + 120 μ V 190 ppm + 410 μ V 670 ppm + 1.4 mV 190 ppm + 5.8 mV 650 ppm + 15 mV 200 ppm + 130 mV 0.40 % + 15 V 1.2 % + 35 V	
AC CURRENT			
Generation	40 Hz to 5 kHz 100 μ A to 330 μ A 330 μ A to 3.3 mA 3.3 mA to 33 mA 33 mA to 330 mA 330 mA to 2.2 A 2.2 A to 11 A	0.15 % + 0.40 μ A 0.12 % + 2.3 μ A 0.11 % + 23 μ A 0.11 % + 230 μ A 0.12 % + 580 μ A 0.070 % + 3.5 mA	Currents up to 550 A, 40 Hz to 400 Hz, can be simulated using a 50 turn coil at increased uncertainties - suitable for the calibration of clamp-on ammeters.
Measurement	10 Hz to 5 kHz 12 nA to 200 μ A 200 μ A to 2 mA 2 mA to 20 mA 20 mA to 200 mA 10 Hz to 1 kHz 200 mA to 2 A	0.14 % + 12 nA 0.12 % + 260 nA 0.12 % + 4.0 μ A 0.12 % + 33 μ A 0.14 % + 360 μ A	



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AC CURRENT (cont'd) Measurement (cont'd)	5 kHz 200 mA to 2 A	0.28 % + 650 μ A	
	40 Hz to 1.59 kHz 1 A to 11 A	0.10 %	
	50 Hz 11 A to 2000 A	0.17 %	
FREQUENCY			
Measurement	1 Hz to 10 MHz	1.0 part in 10^7	
Generation			
Specific Values	0.1 Hz, 1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz, 5 MHz and 10 MHz	1.4 parts in 10^7	
Phase measurement	50 Hz and 60 Hz 0 to 359.0°	70 m°	
CAPACITANCE			
Specific Values	1 kHz 100 pF 1000 pF 10 nF, 100 nF, 1 μ F and 10 μ F	0.10 % 30 ppm 0.10 %	
Measurement	1 kHz 100 pF to 10 μ F	0.20 % to 0.050 %	
INDUCTANCE			
Specific Values	1 kHz 100 μ H 1 mH 10 mH 100 mH 1 H	8.0 nH 1.3 μ H 1.5 μ H 10 μ H 1.3 mH	
Measurement	1 kHz 100 μ H to 1 H	0.20 % to 0.050 %	
AC RESISTANCE	DC and 40 Hz to 1592 Hz 1 Ω 10 Ω , 100 Ω , 1 k Ω and 10 k Ω	14 ppm 10 ppm	
	50 Hz 0.02 Ω to 2 Ω	15 m Ω	Nominal values suitable for the calibration of earth loop testers
	5 Ω	40 m Ω	
	10 Ω	70 m Ω	
	100 Ω	0.70 Ω	
	1 k Ω	7.0 Ω	



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RCD TRIP TIMES	30 ms to 400 ms	0.010 % + 1.0 ms	Suitable for RCD testers
ELAPSED TIME	Nominal 60 s	5.0 ms	Electronically triggered
END			