CERTIFICATE OF CALIBRATION

ISSUED BY: **M K I S** CALIBRATION COMPANY

DATE OF ISSUE: 08 May 2012

CERTIFICATE NUMBER: 2544

UKAS CALIBRATION

0236

MKIS Calibration Company

STANDARDS LABORATORY

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Approved Signatories: R Younger ☑ C Kemp ☐

Signature

Equipment Description:	Digital Multimeter
Manufacturer:	Uni-T
Type:	UT60-3
Serial Number:	1090518818
Order Number:	Ref Paul
Customer:	DJB Labcare Limited
Location:	Milton Keynes
Date Received:	04 May 2012
Date Calibrated:	08 May 2012

The instrument was kept in the laboratory environment for 2 days, to allow the instrument to stabilise, prior to the tests being carried out.

The ambient temperature and relative humidity throughout the test was 20°C ± 2°C and 50% ± 20% respectively.

The uncertainties reported refer to the applied values only with no account being taken of the instruments ability to maintain its calibration.

Remarks: No adjustments were made.

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Function	Range	Applied Value	Indicated Value
DC Volts	400 mV	390.00 mV	390.2 mV
		–390.00 mV	–390.2 mV
	4 V	3.900 00 V	3.907 V
	40 V	10.000 V	10.02 V
		20.000 V	20.05 V
		30.000 V	30.08 V
		39.000 V	39.10 V
	400 V	390.00 V	391.0 V
	1000 V	1000.0 V	1004 V

The measurement uncertainties were:

DC Volts	390 mV to 1000 V	± 0.05% + 1 L.S.D.

Function	Range	Applied Value	Indicated Value
AC Volts	4 V	3.000 0 V @ 100 Hz	2.991 V
	40 V	30.000 V @ 100 Hz	29.95 V
	400 V	300.00 V @ 100 Hz	299.4 V
	750 V	750.0 V @ 100 Hz	753 V

The measurement uncertainties were:

AC Volts	300 mV to 750 V @ 100 Hz	± 0.05% + 1 L.S.D.

Function	Range	Applied Value	Indicated Value
Resistance	400 Ω	100.00 Ω	99.8 Ω
	4 kΩ	1.000 0 kΩ	0.999 kΩ
	40 kΩ	10.000 kΩ	10.00 kΩ
	400 kΩ	100.00 kΩ	100.0 kΩ
	4 MΩ	1.000 0 MΩ	1.001 MΩ
	40 MΩ	10.000 MΩ	10.02 MΩ

The measurement uncertainties were:

Resistance	100 Ω to 10 MΩ	± 0.05% + 1 L.S.D.

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Function	Range	Applied Value	Indicated Value
DC Current	400 µA	100.00 µA	100.3 µA
	4 000 µA	1000.0 µA	1001 µA
	40 mA	10.000 mA	10.05 mA
	400 mA	100.00 mA	100.3 mA
	4 A	1.000 0 A	0.997 A
	10 A	10.000 A	9.96 A

The measurement uncertainties were:

DC Current 100 µA to 10 A ± 0.05% + 1 L.S.D.

Function	Range	Applied Value	Indicated Value	
AC Current	400 µA	100.00 µA	@ 100 Hz	100.4 µA
	4000 µA	1000.0 µA	@ 100 Hz	1001 µA
	40 mA	10.000 mA	@ 100 Hz	10.06 mA
	400 mA	100.00 mA	@ 100 Hz	100.3 mA
	4 A	1.000 0 A	@ 100 Hz	0.998 A
	10 A	* 10.000 A	@ 100 Hz	* 9.95 A

The measurement uncertainties were:

AC Current 100 µA to 1 A @ 100 Hz ± 0.1% + 1 L.S.D.

* Not part of our current accreditation, added for completeness of certificate.

Function	Auto	Applied Value	Indicated Value
Frequency		1.000 Hz	0.999 Hz
		10.000 Hz	9.99 Hz
		100.00 Hz	99.9 Hz
		1.000 0kHz	0.999 kHz
		10.000 kHz	9.99 kHz
		100.00 kHz	99.9 kHz
		1.000 0MHz	0.999 MHz
		10.000 MHz	9.99 MHz

The Measurement uncertainties were:

Frequency 1Hz to 10MHz ± 0.05% + 1 L.S.D

END

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.