CERTIFICATE OF CALIBRATION

Issued By Transmille Ltd. **Certificate Number** 34765

Date of Issue 15 November 2017

UKAS CALIBRATION
0324

Transmille Ltd.
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Approved Signatory

☒ G.A. Shapland ☐ M.A. Bailey ☐ S.A. Hawkins ☐ J.J. Bailey

Customer : SIGNATROL LTD
UNIT E2, GREEN LANE BUSINESS PARK
TEWKESBURY GLOUCESTERSHIRE GL20 8SJ.

Date Received : 08 November 2017

Instrument :

System ID :	H8AA61208	Job Number :	67562-1
Description :	Digital Multimeter (5.5 digit)	Ref. Number :	CE1013
Manufacturer :	Hewlett Packard	Site :	
Model Number :	3478A	Location :	
Serial Number :	2911A61208	Last Calibration Certificate :	32276
Procedure Version :	3.00/N	Last Calibration Date :	15/11/2016

Environmental Conditions

Temperature : 20°C +/- 1°C
Relative Humidity : 40% +/- 20%
Mains Voltage : 230V +/- 12V
Mains Frequency : 50Hz +/- 1Hz

Comments

Instrument was allowed to stabilise for at least 12 hours before calibration.
4-wire connection was made directly to the unit's terminals

Calibration Information

The instrument was calibrated against laboratory standards whose values are traceable to recognised National Standards. The uncertainty limits quoted refer to the measured values only, with no account being taken of the instruments ability to maintain its calibration.

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.

Calibrated By : M. Nelson **Date of Calibration :** 15 November 2017

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UKAS Accredited Calibration Laboratory No. 0324
AS FOUND RESULTS

Certificate Number
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Test Title	Applied Value	Reading	Uncertainties
DC Voltage Ranges			
30mV D.C.	30.000 0mV	30.001 0mV	±3.2uV
300mV D.C.	300.000mV	300.002mV	±6.5uV
3V D.C.	3.000 00V	3.000 06V	±60uV
30V D.C.	30.000 0V	30.000 6V	±730uV
300V D.C.	300.000V	300.005V	±7.3mV
Linearity - 30V DC Range			
Linearity	5.000 0V	5.000 1V	±220uV
Linearity	10.000 0V	10.000 2V	±240uV
Linearity	15.000 0V	15.000 3V	±270uV
Linearity	20.000 0V	20.000 5V	±300uV
Linearity	25.000 0V	24.999 8V	±660uV
AC Voltage @ 200Hz			
300V A.C.	300.000V	300.177V	±150mV
30V A.C.	30.000 0V	30.003 9V	±19mV
3V A.C.	3.000 00V	3.000 26V	±1.7mV
300mV A.C.	300.000mV	299.987mV	±200uV
DC Current Ranges			
300mA D.C.	300.000mA	299.888mA	±280uA
1A D.C.	1.000 00A	0.999 62A	±330uA
AC Current Ranges			
300mA A.C.	300.000mA	299.960mA	±590uA
1A A.C.	1.000 00A	0.999 91A	±1.5mA
Resistance Ranges			
10Ω 4W	10.006 1Ω	10.008 7Ω	±6.9mΩ
100Ω 4W	100.006Ω	100.014Ω	±12mΩ
1kΩ 4W	0.999 96kΩ	0.999 97kΩ	±96mΩ
10kΩ 4W	10.000 4kΩ	10.000 5kΩ	±960mΩ
100kΩ 2W	99.996kΩ	99.997kΩ	±9.6Ω
1MΩ 2W	1.000 03MΩ	1.000 04MΩ	±160Ω
10MΩ 2W	10.002 3MΩ	10.004 3MΩ	±4.6kΩ

End of results