

CERTIFICATE OF CALIBRATION

Issued By Britannia Test & Measurement Ltd

Date of Issue 19 March 2020

Certificate Number

BTM3969

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Britannia

Test & Measurement

Britannia Test & Measurement Ltd
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Brighthouse Road
Middlesbrough
TS2 1RT

Approved Signatory

☐ J. Lillystone

☒ P Trattles

Customer : ViaMed
15 Station Road, Keighley
West Yorkshire BD20 7DT

Date Received :

Instrument -	System ID :	ID2750	Last Certificate Number : BTM1669 Last Calibration Date : 08/03/2019
	Description :	Electrical Safety Analyzer	
	Manufacturer :	Fluke	
	Model Number :	ESA615	
	Serial Number :	2433026	
	Procedure Version :	1.00	

Environmental Conditions

Temperature : 21°C +/- 1°C
Relative Humidity : 50% +/- 10%

Mains Voltage : 240V +/- 10V
Mains Frequency : 50Hz +/- 1Hz

Comments

Instrument was placed in lab and allowed to stabilise before calibration.

Traceability Information

Instrument description	Serial number	Certificate number	Cal. Date	Cal. Period
3200A Electrical Test Calibrator (STD)	M1384F15	39360	05/08/2019	52
8840A Multimeter	4016001	39357	05/08/2019	52

Calibrated By : P Trattles

Date of Calibration : 19 March 2020

This certificate provides traceability of measurement to recognised National Standards, and to the units of measurement realised at the National Physical Laboratory or other recognised National Standards laboratories.
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This certificate complies with the requirements of BS EN ISO 10012:2003.

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Test Title	Tolerance	Applied Value	Reading	Pass/Fail
General Operation Tests				
Controls & Display	---	---	Pass	
200mA Protective Earth Resistance				
Resistance	16mΩ	0.09Ω	0.095Ω	Pass
Resistance	17mΩ	0.14Ω	0.150Ω	Pass
Resistance	19.4mΩ	0.26Ω	0.271Ω	Pass
Resistance	21.6mΩ	0.38Ω	0.385Ω	Pass
Resistance	25mΩ	0.55Ω	0.567Ω	Pass
Resistance	35mΩ	1.05Ω	1.068Ω	Pass
Insulation Resistance @ 250V				
1MΩ	220kΩ	1.00MΩ	1.0MΩ	Pass
5MΩ	300kΩ	5.00MΩ	5.0MΩ	Pass
10MΩ	400kΩ	10.00MΩ	9.9MΩ	Pass
15MΩ	500kΩ	15.00MΩ	14.9MΩ	Pass
19MΩ	580kΩ	19.00MΩ	19.0MΩ	Pass
50MΩ	4MΩ	50.00MΩ	49.4MΩ	Pass
90MΩ	7MΩ	90.00MΩ	86.8MΩ	Pass
Insulation Resistance @ 500V				
1MΩ	220kΩ	1.00MΩ	1.0MΩ	Pass
5MΩ	300kΩ	5.00MΩ	5.0MΩ	Pass
10MΩ	400kΩ	10.00MΩ	10.0MΩ	Pass
15MΩ	500kΩ	15.00MΩ	14.9MΩ	Pass
19MΩ	580kΩ	19.00MΩ	18.9MΩ	Pass
50MΩ	4MΩ	50.00MΩ	49.8MΩ	Pass
90MΩ	7MΩ	90.00MΩ	87.9MΩ	Pass
Leakage Current (AC+DC)				
2mA	30uA	2.00mA	2.02mA	Pass
4.7mA	57uA	4.77mA	4.81mA	Pass
Equipment Current				
O/C Test	---	---	Pass	
0.5A Test	225mA	0.50A	0.5A	Pass
Point To Point Voltage				
Mains	2.3V	103.80V	103.7V	Pass
Mains	4.4V	207.80V	207.5V	Pass

Uncertainties

Earth Bond Ohms	0.5% + 4mohms
Bond Current	0 to 30 Amps: 1.5% + 6counts.
PAT Leakage	1.5% + 0.3mA
Insulation Ohms	10kohms to 5Mohms: 0.1%, 5Mohms to 10Gohms: 1% +/- 1 Digit.
Frequency	0.1ppM ± 1digit
Resistance	0 to 10MOhms 0.005% ± 1digit: 10Mohms to 1Gohm 0.4% ± 1 digit
A.C. Current	0 to 10A: 0.02% ± 2digit
A.C. Voltage	0 to 1000V: 0.01% ± 1digit

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Test Title

Tolerance

Applied Value

Reading

Pass/Fail

End of results

Uncertainties

Earth Bond Ohms	0.5% + 4mohms
Bond Current	0 to 30 Amps: 1.5% + 6counts.
PAT Leakage	1.5% + 0.3mA
Insulation Ohms	10kohms to 5Mohms: 0.1%, 5Mohms to 10Gohms: 1% +/- 1 Digit.
Frequency	0.1ppM ± 1digit
Resistance	0 to 10MOhms 0.005% ± 1digit: 10Mohms to 1Gohm 0.4% ± 1 digit
A.C. Current	0 to 10A: 0.02% ± 2digit
A.C. Voltage	0 to 1000V: 0.01% ± 1digit