



ELECTRICAL RESISTANCE TEST REPORT

in accordance with EN 61340-4-1
“Standard test methods for specific applications –
Electrical resistance of floor coverings and installed floors”

VIASOL*UNIVERSAL* *voltex*

Project: DIPON ENGINEERING/BLUE MOON (Level 1)
Date of the test report: 22.10.2019

This test report comprises 9 pages

Manufacturer:

VIACOR Asia Sdn Bhd, No. 5 Jalan Sungai Terap 32/182, Bukit Rimau Industrial Park, 40460 Shah Alam, Selangor Darul Ehsan, Malaysia,
tel: +603 5131 7777, fax: +603 5131 7878, mail: info@viacor.asia, www.viacor.asia – A division of VIACOR Polymer GmbH Germany



TEST REPORT

VIASOL **UNIVERSAL** voltex

Client / Project : DIPON ENGINEERING / BLUE MOON

Product / System : VIASOL **UNIVERSAL** voltex

Specification : EN 61340-1 (< 10⁹ Ohms)
Blue Moon Spec : < 10⁷ Ohms

Test Method : In Accordance with EN 61340-4-1

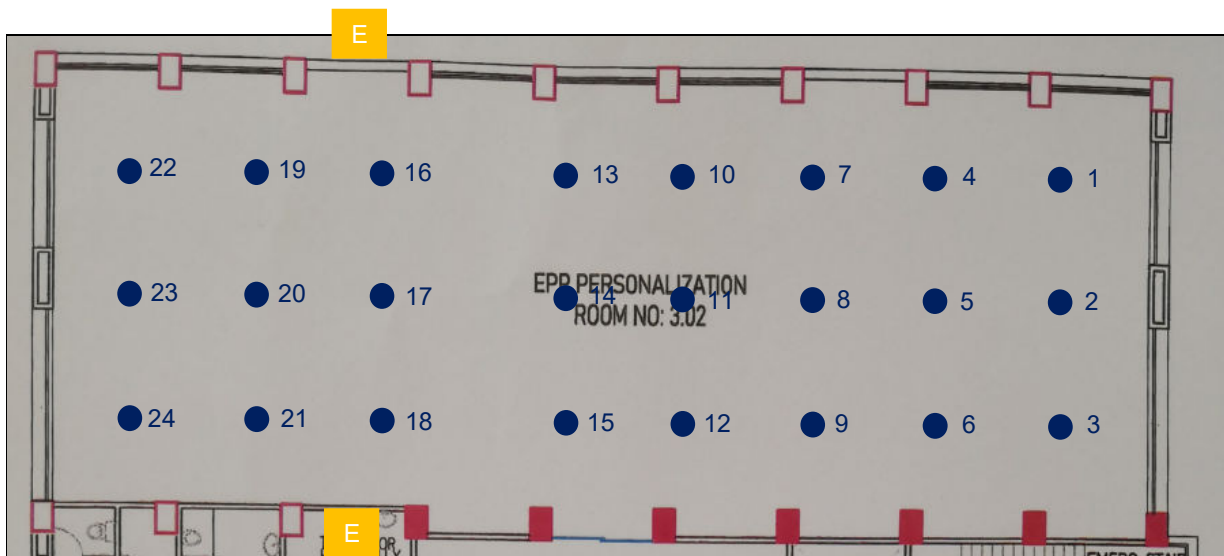
Date : Applied: 17th Oct 2019 , Tested: 19th Oct 2019
**All the measurement were taken by Engr. Emran Ahammed (CEO Fountech) on Oct 19th 2019*

Area : Level 1

Equipment Used : Avomegger MIT 410 with two 5lb Prostat Probe

PLAN LAYOUT/DRAWING

The following are the diagram of the floor and the test point for Resistance Point to Point. The resistance of the floor was taken point to point from each point labeled to the rest of the points.



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Resistance Point to Point

Test No	Resistance in MegaOhms (Ω)	Resistance in Ohms (Ω)
1	0.07	7.00×10^4
2	0.05	5.00×10^4
3	0.05	5.00×10^4
4	0.06	6.00×10^4
5	0.05	5.00×10^4
6	0.06	6.00×10^4
7	0.07	7.00×10^4
8	0.05	5.00×10^4
9	0.05	5.00×10^4
10	0.05	5.00×10^4
11	0.07	7.00×10^4
12	0.09	9.00×10^4

Test No	Resistance in MegaOhms (Ω)	Resistance in Ohms (Ω)
13	0.06	6.00×10^4
14	0.05	5.00×10^4
15	0.05	5.00×10^4
16	0.06	6.00×10^4
17	0.08	8.00×10^4
18	0.05	5.00×10^4
19	0.05	5.00×10^4
20	0.05	5.00×10^4
21	0.06	6.00×10^4
22	0.06	6.00×10^4
23	0.05	5.00×10^4
24	0.05	5.00×10^4

Average electrical resistance is $5.79 \times 10^4 \Omega$.

Conclusion:

The installed area was divided into sections as per the above diagram when conducting the tests. For Point to Point test the sections were labelled as per the diagram.

The Average Electrical Resistance for Point to Point is tabulated and it complies with the EN61340-4-1 Standard's requirement which is less than $1.00 \times 10^9 \Omega$ and Blue Moon's specification which is less than $1.00 \times 10^7 \Omega$.

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APPENDIX



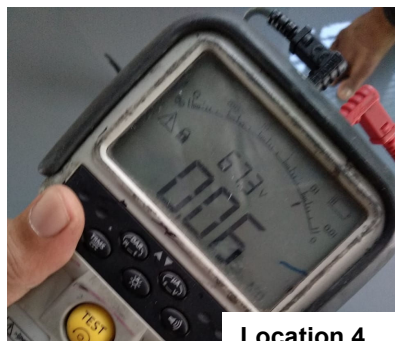
Location 1



Location 2



Location 3



Location 4



Location 5



Location 6



Location 7



Location 8



Location 9

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APPENDIX



Location 10



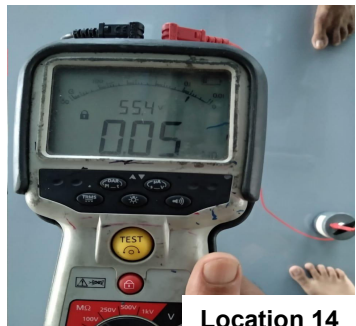
Location 11



Location 12



Location 13



Location 14



Location 15



Location 16



Location 17



Location 18

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APPENDIX



Location 19



Location 20



Location 21



Location 22



Location 23



Location 24

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VITAR-SEGATEC SDN. BHD.
Calibration & Measurement Centre
 Formerly known as Segatec Sdn. Bhd. (Company No. 260510-D)
 (A Member of VITAR BROS. Group)

Wisma Vitar, Lot 590, Jalan Batu Tiga Lama,
 Kaw. Perindustrian Sg. Rasa, 41300 Klang, Selangor.
 Tel : (03) 3342 2023 Fax : (603) 3342 5345
 Email : segatec_lab@vitargroup.com



CERTIFICATE OF CALIBRATION

CERTIFICATE NO. : STE 18 12 - 0354 - 1

Page 1 of 3

Submitted By : VIACOR ASIA SDN. BHD.
 NO. 5, JALAN SUNGAI TERAP 32/182,
 BUKIT RIMAU INDUSTRIAL PARK,
 40460 SHAH ALAM, SELANGOR.

Date Issued : 6 December, 2018

Date Received : 4 December, 2018

Date Calibrated : 6 December, 2018 Recalibration Date Specified by Client : 5 December, 2019

The User should be aware that any number of factors may cause this instrument to drift out of calibration before the specified calibration interval has expired.

Instrument Description

Description : Insulation Tester
 Make : MEGGER
 Model : MIT410
 Serial No. : 101179832

The result of calibration shown relates only to the instrument being calibrated as described above.

Environmental Condition

Ambient Temperature : 20.0 °C ± 2.0 °C
 Relative Humidity : 50 %r.h. ± 10 %r.h.

The instrument has been calibrated at VITAR-SEGATEC SDN. BHD. CALIBRATION AND MEASUREMENT CENTRE - ELECTRICAL LAB. under the environmental condition as stated above.

Reference Method : The calibration was based upon Calibration Procedure CP-(E)E.

The reference standards used are traceable to either the national standards maintained at the National Metrology Institute of Malaysia, SIRIM Bhd or other recognised International Standard Laboratories.

Reference Standard	ID. No.	Serial No.	Traceable	Cert. No.	Due Date
Decade Resistance Box	ST-ERB1	60VX1022	NPL	SST/SA/R/2018H/1238	18-Aug-19
Mohm Standard Resistor	ST-ERB2	9608738	NPL	SST/SA/R/2018H/1465	6-Aug-19

Calibrated By

 Kadiravan A/L Kalaiarasu

Approved Signatory

 Mohamad Ashraf Bin Asari



This certificate is issued in accordance with the conditions of accreditation granted by SAMM which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realised at the corresponding national standards laboratory. Copyright of this certificate is owned by the issuing laboratory and may not be reproduced other than in full except with the prior written approval of the Head of the issuing laboratory.

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Result of Calibration

1. Insulation Test

Function / Range	Applied Value (MΩ)		UUT Indicated (MΩ)		Correction (MΩ)		Uncertainty (± MΩ)		Coverage factor, k
Test Voltage : 50V	0.10	MΩ	0.11	MΩ	-0.01	MΩ	± 0.01	MΩ	2
	5.00	MΩ	4.96	MΩ	0.04	MΩ	± 0.01	MΩ	2
	10.00	MΩ	9.95	MΩ	0.05	MΩ	± 0.01	MΩ	2
	50.0	MΩ	50.0	MΩ	0.0	MΩ	± 0.1	MΩ	2
	100	MΩ	100	MΩ	0	MΩ	± 1	MΩ	2
	200	MΩ	202	MΩ	-2	MΩ	± 1	MΩ	2
Test Voltage : 100V	0.10	MΩ	0.11	MΩ	-0.01	MΩ	± 0.01	MΩ	2
	5.00	MΩ	4.98	MΩ	0.02	MΩ	± 0.01	MΩ	2
	10.00	MΩ	9.96	MΩ	0.04	MΩ	± 0.01	MΩ	2
	50.0	MΩ	50.2	MΩ	-0.2	MΩ	± 0.1	MΩ	2
	100	MΩ	101	MΩ	-1	MΩ	± 1	MΩ	2
	200	MΩ	202	MΩ	-2	MΩ	± 1	MΩ	2
Test Voltage : 250V	0.10	MΩ	0.11	MΩ	-0.01	MΩ	± 0.01	MΩ	2
	5.00	MΩ	5.02	MΩ	-0.02	MΩ	± 0.01	MΩ	2
	10.0	MΩ	10.0	MΩ	0.0	MΩ	± 0.1	MΩ	2
	50.0	MΩ	50.2	MΩ	-0.2	MΩ	± 0.1	MΩ	2
	100	MΩ	101	MΩ	-1	MΩ	± 1	MΩ	2
	200	MΩ	202	MΩ	-2	MΩ	± 1	MΩ	2
300	MΩ	304	MΩ	-4	MΩ	± 1	MΩ	2	

Note : True Value = UUT Indicated + Correction

The result of calibration shown relates only to the range calibrated.

Calibrated by

Katiravan A/L Kalaiarasu

Approved Signatory

Mokamad Ashraf Bin Asari



The uncertainties are for a confidence probability of not less than 95 %.

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Result of Calibration

1. Insulation Test (cont.)

Function / Range	Applied Value (MΩ)		UUT Indicated (MΩ)		Correction (MΩ)		Uncertainty (± MΩ)		Coverage factor, k
Test Voltage : 500V	0.10	MΩ	0.11	MΩ	-0.01	MΩ	± 0.01	MΩ	2
	5.00	MΩ	5.06	MΩ	-0.06	MΩ	± 0.01	MΩ	2
	10.0	MΩ	10.1	MΩ	-0.1	MΩ	± 0.1	MΩ	2
	50.0	MΩ	50.3	MΩ	-0.3	MΩ	± 0.1	MΩ	2
	100	MΩ	101	MΩ	-1	MΩ	± 1	MΩ	2
	200	MΩ	203	MΩ	-3	MΩ	± 1	MΩ	2
300	MΩ	304	MΩ	-4	MΩ	± 1	MΩ	2	
Test Voltage : 1000V	0.10	MΩ	0.11	MΩ	-0.01	MΩ	± 0.01	MΩ	2
	5.00	MΩ	5.07	MΩ	-0.07	MΩ	± 0.01	MΩ	2
	10.0	MΩ	10.1	MΩ	-0.1	MΩ	± 0.1	MΩ	2
	50.0	MΩ	50.3	MΩ	-0.3	MΩ	± 0.1	MΩ	2
	100	MΩ	101	MΩ	-1	MΩ	± 1	MΩ	2
	200	MΩ	202	MΩ	-2	MΩ	± 1	MΩ	2
300	MΩ	304	MΩ	-4	MΩ	± 1	MΩ	2	

Note : True Value = UUT Indicated + Correction

The result of calibration shown relates only to the range calibrated.

Calibrated by

Katiravan A/L Kalafarasu

Approved Signatory

Mohamad Ashraf Bin Asari



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