

Test Report No. 7191234892-EEC20-LLW
dated 13 APR 2020



PSB Singapore

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Note: This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out within this report.

Subject

IP Test For Dry Type Transformer Enclosure IP21

Client

AET Electric Pte Ltd
18 Kaki Bukit Road 3
#01-05
Entrepreneur Business Centre
Singapore 415978

Attn.: Mr. Leong Tar Boon

Sample Submission Date

20 MAR 2020

Description of Sample

Product type : Dry Type Transformer Enclosure IP21
Brand : AET
Model : i) AET-ISO-1P
ii) AET-SU-3P
Part no : i) AET-20K-IP21-P230S230
ii) AET-500K-IP21-P415DS450Y
Quantity : Two (02) units
Dimensions : i) 540 x 490 x 700mm (Width x Depth x Height)
ii) 1300 x 1000 x 1600mm (Width x Depth x Height)
Manufacturer : AET Electric Pte Ltd
Country of origin : Singapore



LA-2007-0380-A LA-2007-0385-E
LA-2007-0381-F LA-2007-0386-C
LA-2007-0382-B LA-2010-0464-D
LA-2007-0383-G LA-2018-0702-B
LA-2007-0384-G LA-2018-0703-G

The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme. Tests/Calibrations marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our laboratory.

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1 Science Park Drive, #02-01
Singapore 118221
TUV®



Method of Test

The assessment detailed in this document was carried out in accordance with clauses 13.2 (IP2X) and 14.2.1 (IPX1) of IEC 60529 : 2001(Consolidated with amendment 1:1999) with amendment 2: 2013.

IP2X

Rigid Sphere
Diameter Of Sphere : Ø12.5
Test Force : 30N

IPX1


Drip Box
Flow Rate : 1 mm/min.
Duration : 10 min


Results

Clause No.	Title / Description	Results
13.2	Protected against solid foreign objects of Ø12.5mm	Complied
14.2.1	Protected against vertically falling water drops (IPX1)	Complied

Remarks:

- (1) Visual inspection with the unaided eye was performed after the exposures in order to determine the ingress of solid foreign objects and/or water. No ingress of solid foreign objects and no water ingress were observed inside the enclosure.
- (2) The enclosure was tested under non-operational mode.
- (3) No functional check was conducted before and after exposures.
- (4) The Dry Type Transformer Enclosure IP21, model: i) AET-ISO-1P and ii) AET-SU-3P, Part no: i) AET-20K-IP21-P230S230 and ii) AET-500K-IP21-P415DS450Y submitted were deemed to comply with IP21 requirement of IEC 60529 : 2001(Consolidated with amendment 1:1999) with amendment 2: 2013.


Low Meng Wah, Leon
Higher Associate Engineer
Product Service(EEC)


Tan Heng Khoon
Product Manager
Product Service(EEC)

Test Report No. 7191247524-EEC20/02-LLW
dated 29 JAN 2021



PSB Singapore

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Inspire trust.**

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Subject

IP Test For Dry Type Transformer Enclosure

Client

AET Electric Pte Ltd
18 Kaki Bukit Road 3
#01-05
Entrepreneur Business Centre
Singapore 415978

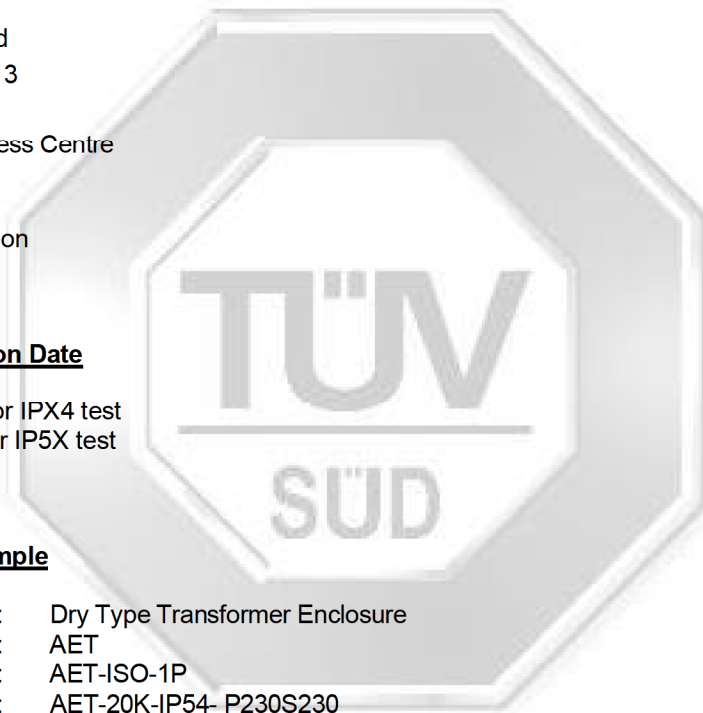
Attn.: Leong Tar Boon

Sample Submission Date

- i) 27 OCT 2020 for IPX4 test
- ii) 15 JAN 2021 for IP5X test

Description of Sample

Product type : Dry Type Transformer Enclosure
Brand : AET
Model : AET-ISO-1P
Part no : AET-20K-IP54- P230S230
Quantity : One (01) unit
Dimensions : 600 x 550 x 640mm (Width x Depth x Height)
Manufacturer : AET Electric Pte Ltd
Country of origin : Singapore



LA-2007-0380-A
LA-2007-0381-F
LA-2007-0382-B
LA-2007-0383-G
LA-2007-0384-G
LA-2007-0385-E
LA-2007-0386-C
LA-2010-0464-D
LA-2018-0702-B
LA-2018-0703-G
LA-2020-0747-L

The results reported herein have been performed in accordance with the terms of accreditation under the Singapore Accreditation Council. Inspections/Calibrations/Tests marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our inspection body/laboratory.

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TUV®



Method of Test

The assessment detailed in this document was carried out in accordance with clauses 13.4 (IP5X) and 14.2.4 (IPX4) of IEC 60529 : 2001(Consolidated with amendment 1:1999) with amendment 2: 2013.

IP5X(Category 2)

Dust Chamber
Duration : 8.0 hours
Volume of talcum powder
Used in the test chamber : 2kg per cubic meter

IPX4


Spray Nozzle : Ø0.5mm(121 holes)
Spray Distance: 300 to 500mm
Duration : 5 minutes
Water Pressure
Delivery Rate : 50 to 150kPa

Results

Clause No.	Title / Description	Results
13.4	Dust-protected (IP5X-Category 2)	Complied
14.2.4	Protected against splashing water (IPX4)	Complied

Remarks:

- (1) Visual inspection with the unaided eye was performed after the exposures in order to determine the ingress of dust and/or water. No dust ingress and no water ingress were present inside the enclosure.
- (2) The enclosure was tested under non-operational mode.
- (3) No functional check was conducted before and after the exposures.
- (4) The Dry Type Transformer Enclosure, model: AET-ISO-1P, Part no: AET-20K-IP54- P230S230, submitted was deemed to comply with IP54(category 2) requirement of IEC 60529 : 2001(Consolidated with amendment 1:1999) with amendment 2: 2013.


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