Description

UL TEST REPORT AND PROCEDURE

Standard:	UL 61010-1, 3rd Edition, May 11, 2012, Revised July 19, 2019, CAN/CSA-C22.2 No. 61010-1(2012-05), 3rd Edition, with revisions through 2018-11
Certification Type:	Component Recognition
CCN:	QQHC2 / QQHC8
Complementary CCNs:	
Product:	Switch mode power supply
Model:	Vega 450, Vega 650, Vega 900, Vega Lite 550 and Vega Lite 750.
Rating:	Vega 450 and Vega Lite 550. PSUs with cooling option F and without xFW and xEW options: Input voltage: 94.5-240 V ac nom., 47-63 Hz, 8.5 A rms max. All other PSUs: Input voltage: 100-240 V ac nom., 47-63 Hz, 8.5 A rms max. Vega 650, Vega Lite 750 and Vega 900. PSUs with cooling option F and without xFW and xEW options: Input voltage: 94.5-240 V ac nom., 47-63 Hz, 12 A rms max. All other PSUs: Input voltage: 100-240 V ac nom., 47-63 Hz, 11 A rms max.
Applicant Name and Address:	TDK-LAMBDA UK LTD KINGSLEY AVENUE ILFRACOMBE DEVON, EX34 8ES, UNITED KINGDOM

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability as applicable.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Marcin Zurek (Handler) Reviewed by: Krzysztof Wasilewski (Reviewer)

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

i. **Part AC** details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.

ii. **Part AE** details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.

iii. **Part AF** details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

Vega 450, Vega 650, Vega 900, Vega Lite 550 and Vega Lite 750 are switch mode power supply units for building into host equipment. There are essentially 2 converters (450 and 650) and all units use the same modules. The Vega 450 and 550 use the 450 converter whilst the Vega 650, 750 and 900 use the 650 converter.

Refer to the Report Modifications page for any modifications made to this report.

Model Differences

See Model Differences Enclosure.

Additional Information

See Additional Information Enclosure.

Technical Considerations

- The product was investigated to the following additional standards: -
- The following additional investigations were conducted: -
- The product was not investigated to the following standards or clauses: -
- The following accessories were investigated for use with the product: -
- The product was submitted and tested for use at the maximum recommended ambient temperature (Tmra) of 50°C

Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- This component has been judged on the basis of the creepage and clearances required in the indicated Standards, which would cover the component itself if submitted for Listing: UL 61010-1 3rd Ed.
  CAN/CSA 22.2 No. 61010-1-12 3rd Ed.
  IEC 61010-1:2010 3rd Ed.
  EN 61010-1:2010.
  The end-product shall consider that: The complete enclosure does not serve as a fire/electrical/mechanical enclosure
  Only the enclosure face of unit with IEC60320 inlets has been assessed an an enclosure.
  The need for the following shall be considered in the end-product: Bonding to protective earthing terminal (Class I construction).
  Creepage and clearance distances were based on a maximum working voltage of Primary to earthed dead metal: 298Vrms, 392V peak.
  Primary to SELV: 328Vrms, 504V peak.

  Insulation between primary circuits and accessible dead metal complies with the requirements for

Basic insulation
Insulation between primary and secondary circuits complies with the requirements for Reinforced insulation
The following tests shall be performed in the end-product evaluation Temperature test for customer air models and
Dielectric Strength test in accordance with the handbook.
The unit is considered acceptable for use at on a max branch circuit of 20A
The unit is considered acceptable for use in a max ambient of 50°C with up to 65°C for certain custom models.
End-product temperature tests for power supplies shall consider that the following transformers employ the indicated insulation system Main barrier transformer Class F (155°C)
Primary 1A option transformer TX1 Class F (155°C)
Other primary option transformers XTR1, XT1, XQ1 Class A (105°C)
The risk associated with clause 5.4.5 shall be assessed in the end product.
The leakage current tests have been provided for information only. This test must be considered in the end product application.