

CERTIFICATE OF COMPLIANCE

Certificate Number 20160301-E135493
Report Reference E135493-A32-UL
Issue Date 2016-MARCH-01

Issued to: VICOR CORP
25 FRONTAGE RD
ANDOVER MA 01810

**This is to certify that
representative samples of**

COMPONENT - POWER SUPPLIES, INFORMATION
TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL
BUSINESS EQUIPMENT

AC Input Power Supply Module
VIA AIM Model AAAbbbbcddeewxyzz

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07 -
Information Technology Equipment - Safety - Part 1:
General Requirements

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance
capabilities and are intended for use as components of complete equipment submitted for investigation rather
than for direct separate installation in the field. The final acceptance of the component is dependent upon its
installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2019-05-09 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	AC Input Power Supply Module
Model:	VIA AIM Model AAAbbbbcdewwxyz
Rating:	See Miscellaneous Enclosure for model details. Single Phase: Rated Input Voltage: 85 - 264 V AC Rated Output Voltage: 120 - 373 Vpk Rated Output Power: 450W Max Three Phase: Rated Input Voltage: 170-530 V AC Rated Output Voltage: 240-750 Vpk Rated Output Power: 1650W Max See Miscellaneous Enclosure for additional model information and electrical ratings.
Applicant Name and Address:	VICOR CORP 25 FRONTAGE RD ANDOVER MA 01810-5424 UNITED STATES

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.

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Prepared by: Timothy Scott

Reviewed by: William E. Platts

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

The Single Phase VIA AIM is an AC front end power supply module designed for building-in. It accepts a universal AC input and provides a rectified Vac output (Vpk) that is designed to power a Vicor VIA PFM. The VIA AIM performs various front end functions and includes a bridge rectifier, EMI filtering, and supplemental transient protection circuitry.

The Three Phase VIA AIM is an AC front end power supply module designed for building-in. It accepts a 170-530Vac input and provides a rectified Vac output (Vpk) that is designed to power a Vicor VIA BCM or UHV VIA BCM series dc-dc modules.

Model Differences

See Miscellaneous Enclosure for model nomenclature.

Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : not directly connected to the mains
- Operating condition : continuous
- Access location : for building-in
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : Single Phase: 85-264 Vac; Three Phase: 170-530 Vac
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Not classified
- Considered current rating of protective device as part of the building installation (A) : Component for building-in, see Conditions of Acceptability
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : Up to 5000
- Altitude of test laboratory (m) : Less than 2000
- Mass of equipment (kg) : 0.032

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:

- The investigated Pollution Degree is: 2
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- The VIA AIM, Single Phase, was evaluated with an external fuse, Littelfuse 216 series rated 8A.
- The VIA AIM, Single Phase, is designed to be used with an external VDR for transient surge protection. Annex Q compliant Littelfuse TMOV connected from L1 to L2.
- See de-rating curve for maximum output power versus case temperature.
- The VIA AIM, Three Phase, was evaluated with three external fuses, EATON KTK series rated 5A in each phase.
- The VIA AIM, Three Phase, output is rated 1650W max or 2.31A max when mounted on a cooling surface with a max temperature of 100C.
- The VIA AIM, Three Phase, may require an external insulator to meet creepage distances to PE Ground if chassis mounted or used with a heatsink. Henkel Bergquist Gap Pad 5000S35 or equivalent. The creepage and clearance should be evaluated in the end-product.

Additional Information

Testing of the AC Input Power Supply Module, Model VIA AIM Model AAAbbbbcdewwxyzz was not considered necessary based upon previous evaluation under the CB scheme. The CB Scheme Test Certificate DE 3 - 502228 and Report Ref. No. 72103425-100 dated 2017-01-09 and Certificate DE 3 - 503374 and Report Ref. No. 72103425-200 dated 2019-08-22 were prepared by TÜV SUD Product Service GmbH, Ridlerstr. 65, 80339 Munich, Germany. As a result, the clause verdicts and test results for this report were noted as N/A and have been referred to the TUV CB Report for details.

Markings and instructions

Clause Title	Marking or Instruction Details
Power rating – Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating – Model	Model Number

Special Instructions to UL Representative

Optional - UR logo may appear on packaging.

VIA AIM Model Matrix: AAAbbbbcddeewwxyzz

Example: AIM1714VB6MC7D5T00 / Single Phase AIM

Example: AIM1714VE3MG5K7T00 / Three Phase AIM

AAA = AIM

Product Type	
AIM	Single Phase AC Input Module
TPM	Three Phase AC Input Module

bbbb = 1714

Package Size Designator (in.)	
1714	1.7 x 1.4

c = V

Package Type	
V	Chassis mount
B	Board mount

dd = B6

Input Voltage Range	
B6	85-264Vac, 47-63Hz
E3	170-530Vac, 47-880Hz

e = M

Range Ratio (Vin high / Vin low)	
M	3.1

ww = C7

Output Voltage Range	
C7	120-373Vpk
G5	240-750Vpk

xx = D5

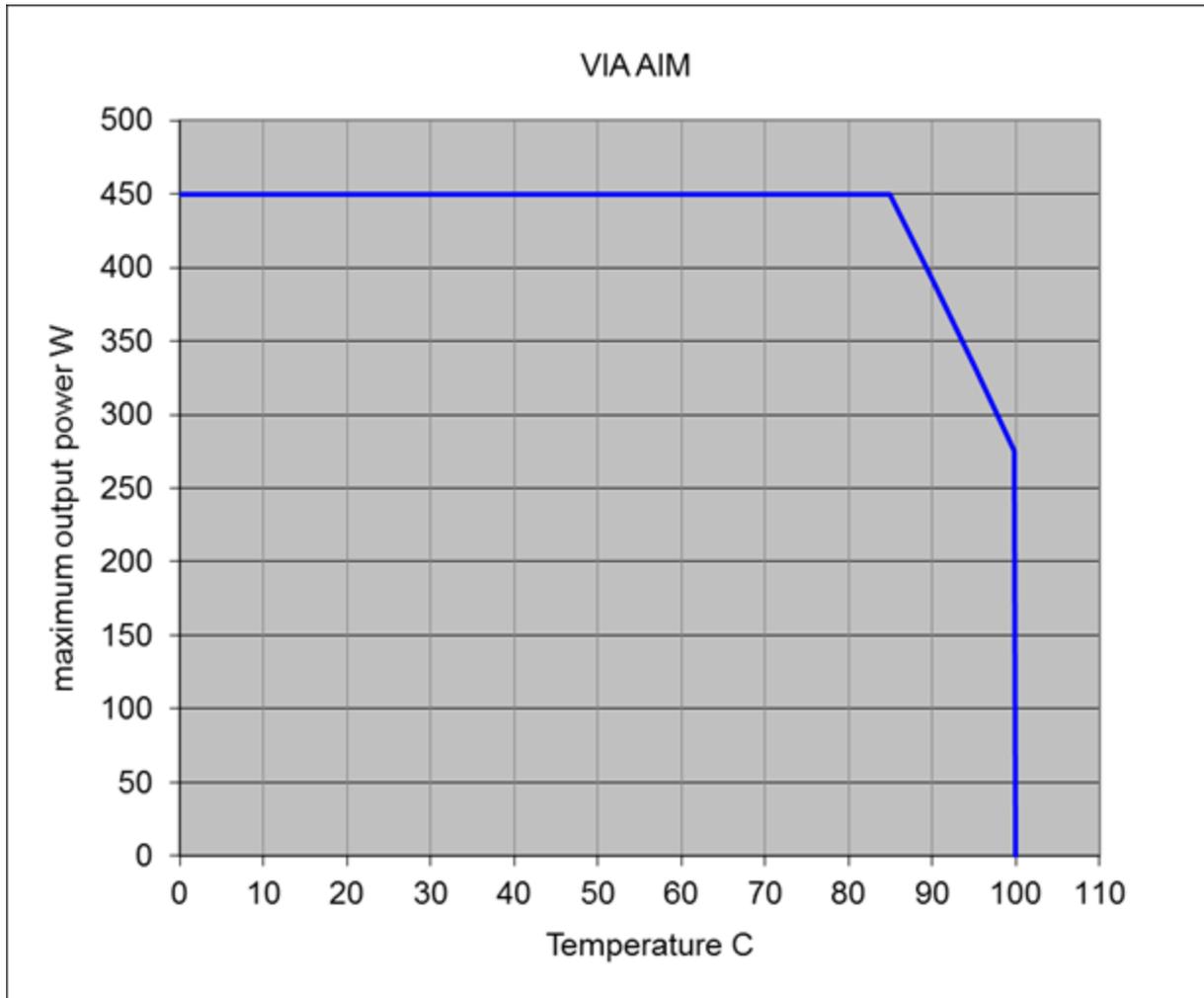
Maximum Output Power	
D5	450W
K7	1650W

y = T

Product Grade	
E	0 to 100°C
C	-20 to 100°C
T	-40 to 100°C
M	-55 to 100°C

zz = 00

Customer Options (non-safety related, any alpha-numeric combination)	
00	No options



1PH VIA AIM

Single Phase VIA AIM	Three Phase VIA AIM (TPM)
Vin = 87-264 Vac	Vin = 170-530 Vac
Temperature = bottom of case Rated: see derating graph above	Temperature = bottom of case Rated: 100°C across the entire input range