

CERTIFICATE OF COMPLIANCE

Certificate Number 20180919-E135493
Report Reference E135493-A6001-UL
Issue Date 2018-SEPTEMBER-19

Issued to: VICOR CORP
25 FRONTAGE RD
ANDOVER MA 01810-5424

This is to certify that representative samples of COMPONENT - POWER SUPPLIES FOR USE WITH AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT


See Addendum Page

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

Standard(s) for Safety: UL 62368-1 and CAN/CSA C22.2 No. 62368-1-14 - Audio/video, information and communication technology equipment Part 1: Safety 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.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: , may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

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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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Models/Product

Digital Isolators
MI1wxL1yz and I1wxL1yz

Point-of-Load Isolator
PLI1209wwxyzz

See Miscellaneous Enclosure for model matrix



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1-14, 2nd Ed (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Component Recognition
CCN:	QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	Digital Isolator
Model:	Digital Isolators MI1wxL1yz and I1wxL1yz Point-of-Load Isolator PLI1209wwxyzz See Miscellaneous Enclosure for model matrix
Rating:	Reinforced Isolation: 3000 Vrms, 4242Vdc with 300Vrms, 420Vdc working voltage Rated Output Current 3.3Vdc, 5mA See Miscellaneous Enclosure for model details.
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: Mengis Tesfay - Handler /
Project Handler

Reviewed By: Scott Shepler / Reviewer

Supporting Documentation	
Product Description	
The Digital Isolators and Point of Load Isolators are designed for building-in and provide reinforced insulation.	
Model Differences	
See Miscellaneous Enclosure for model matrix.	
Test Item Particulars	
Classification of use by	Ordinary person
Supply Connection	External Circuit - not Mains connected Not directly connected to Mains
Supply % Tolerance	None
Supply Connection – Type	No direct connection to Mains. For building in.
Considered current rating of protective device as part of building or equipment installation	N/A
Equipment mobility	for building-in
Over voltage category (OVC)	OVC II
Class of equipment	Not Classified
Access location	For building in
Pollution degree (PD)	PD 2
Manufacturer's specified maximum operating ambient	
IP protection class	IPX0
Power Systems	N/A
Altitude during operation (m)	5000 m
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	0.0005
Technical Considerations	
<ul style="list-style-type: none"> • The product is intended for use on the following power systems : No direct connection • Considered current rating of protective device as part of the building installation (A) : N/A • Mains supply tolerance (%) or absolute mains supply values : No direct connection • The equipment disconnect device is considered to be : N/A • The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual 	

Engineer 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 following product-line tests are conducted for this product : Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of : Input to Output: 300 Vrms, 420 Vpk
- The following output circuits are at ES3 energy levels : All circuits
- The following output circuits are at PS3 energy levels : All circuits
- The investigated Pollution Degree is : 2
- The following end-product enclosures are required : Electrical, Fire
- The power supply was evaluated to be used at altitudes up to : "5,000 m"
- The digital Isolators provide Reinforced Isolation.
- Point of Load Isolator Model PLI1209wwxyzz must be mounted on minimum V-1 flame rated board.

Additional Information

Special consideration - The following items are consideration that were used when evaluating these products:

- 1) Digital Isolator and PLI Isolator series are designed for building in.
- 2) The maximum temperature of both Digital Isolator and Point of Load Isolators is 125 C
- 3) Digital Isolator and PLI Isolator series provide Reinforced Insulation.

Marking label provided is representative of all models.

Additional Standards

The product fulfills the requirements of: CSA CAN/CSA-C22.2 NO. 62368-1 2nd Ed, Issued December 1, 2014

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listees or Recognized companys name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number

PLI, Point-of-Load Isolator Model Matrix: PLI1209wwxyzz

Isolator Type

PLI	Point-of-Load Isolator
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Package Size

1209	12mm x 09mm
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ww = Device Compatibility

Any 2 alphanumeric characters, non-safety related, non-inclusive list of examples	
BC	BCM
NB	NBM
DS	DCM
DD	DCM
PS	PFM
PD	PFM
RF	RFM

x = Options

Any alphanumeric character, non-safety related, non-inclusive list of examples	
1	LDO
0	No LDO

y = option

Any alphanumeric character, non-safety related, non-inclusive list of examples	
1	Digital, Positive Vout
2	Digital, Negative Vout
3	Analog, Positive Vout
4	Analog, Negative Vout
5	Remote Sense, Pos. Vout
6	Remote Sense, Neg. Vout

zz = Customer Reference

Any alphanumeric character, non-safety related	
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All models rated -55 to 100°C

Example Model Numbers:

PLI1209BC1101

Digital Isolator Model Matrix: I1wxL1yz and MI1wxL1yz**Isolator Type**

I1	Digital Isolator
MI1	Mil-COTs Digital Isolator

w = number of channels

1	1 channel
2	2 channel
3	3 channel

x = product grade

T	Telecom -40 – 125°
M	Mil-COTS -65 – 125°C

Package Size

L1	10x10 LGA
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y = Revision

Any alphanumeric character, non-safety related
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z = Customer Reference

Any alphanumeric character, non-safety related
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Example Model Numbers:

Standard 3 channel: I13TL1A0

Mil-COTs 3 channel: MI13ML1A0