Ref. Certif. No.

DE1-55140

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product Produit	Component DC - DC Converter for use with IT Equipment
Name and address of the applicant Nom et adresse du demandeur	TDK-Lambda Americas Inc. 3320 Matrix Drive Suite 100, RICHARDSON TX 75082 UNITED STATES OF AMERICA
Name and address of the manufacturer Nom et adresse du fabricant	TDK-Lambda Americas Inc. 3320 Matrix Drive Suite 100, RICHARDSON TX 75082 UNITED STATES OF AMERICA
Name and address of the factory Nom et adresse de l'usine Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	TDK-Lambda Americas Inc. 3320 Matrix Drive Suite 100, RICHARDSON TX 75082 UNITED STATES OF AMERICA ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	DC 9 - 55 V (SELV) (refer to Model Matrix)
Trademark (if any) Marque de fabrique (si elle existe)	TDK·Lambda
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	WMT
Model / Type Ref. Ref. De type	i6A series (refer to model matrix)
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	SELV - Output, Max. baseplate temperature: 130 C at Q5 tab ☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60950-1(ed.2);am1;am2
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	207721-AS3-1

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE *Testing and Certification Institute*
Zertifizierung Produkte / *Certification Products*

Date: 2015-01-23

Signature: E. Biehl

	Ref. Certif. No.
IEC IECEE CB SCHEME	**DE1-55140**

TDK-Lambda Malaysia Sdn. Bhd. PLO 33 Kawasan Perindustrian Senai Locked Bag No. 110, 81400 SENAI, JOHOR, JOHOR MALAYSIA	

Additional information (if necessary)
Information complémentaire (si nécessaire)

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE *Testing and Certification Institute*
Zertifizierung Produkte / *Certification Products*

Date: 2015-01-23

Signature: E. Biehl

Model Matrix: The i6A -Series

Product Overview: The i6A product family consists of high density, non-isolated DC-DC power modules intended to be purchased and used as a component in an end-user's power system. The modules will be offered in multiple input voltage and output voltage ranges. The input ranges from 9 – 55 Vdc input. The output voltage will be adjustable between -30 V to 30 V. The rated output power will be 250 W or less.

Models:
i6A24***A%%%V-0xx(-R)
where 24 represents nominal input voltage, with a 9-40 Vdc input
*** represents rated output current between 0 A – 14 A,
%%% represents rated output voltage between 0.6 Vdc – 28 Vdc
and 0xx indicates a number or alphanumeric character
which affects non safety related features
Optional –R indicated RoHS compliance

i6A24***A%%%V-Nxx(-R)
where 24 represents nominal input voltage, with a 9 - 40 Vdc input
where *** represents rated output current between 0 A – 8 A,
%%% represents rated output voltage between -0.6 Vdc – -30 Vdc
and Nxx indicates a number or alphanumeric character
which affects non safety related features.
The "N" indicates the output voltage polarity is inverted with respect to the input voltage polarity.
Optional –R indicated RoHS compliance

i6A4W***A%%%V-0xx(-R)
where 4 W represents input voltage between 9 – 55 Vdc input
*** represents rated output current between 0 A – 20 A,
4 W represents input voltage between 9 – 55 Vdc input
%%% represents rated output voltage between 0.6 Vdc – 15 Vdc
and 0xx indicates a number or alphanumeric character
which affects non safety related features.
Optional –R indicated RoHS compliance

The table below indicates the **preliminary example** model numbers:

MODEL #	Input Voltage (Vdc)	Max Input Current* (Adc)	Output Voltage**(Vdc)	Output Current (Adc)	Max. Output Power
i6A24014A033V-0xx(-R)	9-40	15	3.3V-28 V	14	250 W
i6A24008A033V-Nxx(-R)	9-40	15	-3.3Vto -30 V	8	75 W
i6A4W020A033V-0xx(-R)	9-55	16.5	3.3V-15 V	20	250 W

- * Maximum input current will be a data sheet parameter telling the customer the maximum current the power module will draw from 0 V in to Vin, max. The typical current draw will be significantly lower. Fuse value for testing shall be as specified in the product data sheet. (Tested with 30 A fuse),
- The DC-DC Converters are not internally fused. An external input line fuse is required.

- ** The output voltage will be adjustable by the customer over a wide range as shown in the table. When the output voltage is adjusted up the maximum output power is fixed (i.e. maximum output current is decreased). When the output voltage is adjusted down, the maximum output current is fixed (i.e. available output power is decreased).

Naming Convention:

The initial letter I is a fixed character that indicates that the power module is a TDK-Lambda Americas Inc. product. The next two letters indicate the platform name; it dictates the mechanical form factor and pin out of the power module.

The first two numbers indicate the nominal input voltage, followed by three numbers that indicate the maximum output current. The three numbers are followed by an A indicating the unit for the current is amperes.

The next three numbers indicate the nominal output voltage; the next character - V for volts, indicates the unit for the voltage. Note that the third digit is preceded by a decimal point, so 033 V implies 3.3 Volts.

The part number is completed with a -0xx or –Nxx where the three digits indicate the feature set. The second two characters of the feature set are considered to be non-safety affecting changes. Changes to the feature set could be mechanical changes such as modifying the pin length or could be electrical changes such as adding or modifying a control function e.g. modifying the logic for the customer on/off interface.

i6A Product Family Similarities:

The design intention is that the modules within a platform consist of a family of units with similar form, fit and function with the exception of the output voltage and current. The major differences between the modules will be as follows.

The PWB may be changed though the difference in the layout is minimal. The power output inductor is the same structure, but the number of turns will be modified depending upon the output voltage or current of the specific power module.

The semiconductors such as power switches may be different devices depending upon the specific voltage and current stresses in the various power module designs. The power devices may have heat sink applied or omitted.

The input and output filter capacitors may be different values depending upon the specific voltage and current stresses in the various power module designs.

Control circuits will have value changes to scale the typical circuit parameters such as output voltage and output current limit set point as required for the different designs.

Other control circuits such as the feedback compensation may have value changes as required for each specific design.

The facilities are **UL, CSA and VDE** approved manufacturing facility with **ISO9002** certified.