Test Report issued under the responsibility of

VDE

TEST REPORT
IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006
Information technology equipment – Safety –
Part 1: General requirements

Report Reference No.....:	2520400-3336-0023 (109316) CB/DE1- 40099
Tested by (name + signature).....:	Jürgen Bärwinkel
Approved by (name + signature).....:	Frank Richter
Date of issue.....:	2008-09-29
CB Testing Laboratory.....:	VDE Testing and Certification Institute
Address.....:	Merianstrasse 28, D-63069 Offenbach, Germany
Testing location / procedure.....:	CBTL ☐ RMT ☐ SMT ☐ WMT ☒ TMP ☐
Testing location / address.....:	TDK Innoveta Inc. 3320 Matrix Drive, Suite 100, Richardson, Texas 75082, USA WMT (TDAP File no. 2520400-9501-0001)
Applicant's name.....:	TDK Innoveta Inc.
Address.....:	3320 Matrix Drive, Suite 100, Richardson, Texas 75082, USA
Test specification:	
Standard.....:	IEC 60950-1:2005 (2nd Edition) and/or EN 60950-1:2006
Test procedure.....:	CB –scheme, VDE
Non-standard test method.....:	N/A
Test Report Form No.....:	IECEN60950_1C
Test Report Form(s) Originator.....:	SGS Fimko Ltd
Master TRF.....:	2006-06

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description..... :		DC-DC Power Supply for IT-Equipment
Trade Mark .....:		TDK
Manufacturer .....:		TDK Innoveta Inc.
Model/Type reference.....:		iQG Series (See model matrix Appendix 1)
Ratings.....:		See model matrix Appendix 1
	Input:	DC 36 - 60 V (SELV), or DC 36 – 75 V (TNV-2), max. 10 A
	Output:	SELV (see attached model matrix)
	Component / Case Temperature	Max. 124 °C at Baseplate

Copy of marking plate:

See Appendix 2

Summary of testing:				
Clause 1.5	Components	:	☒ Pass	☐ N/A
Clause 1.6	Power interface	:	☒ Pass	☐ N/A
Clause 1.7	Markings and instructions	:	☒ Pass	☐ N/A
Clause 2.1	Protection from electric shock and energy hazards	:	☒ Pass	☐ N/A
Clause 2.2	SELV circuits	:	☒ Pass	☐ N/A
Clause 2.3	TNV circuits	:	☒ Pass	☐ N/A
Clause 2.4	Limited current circuits	:	☐ Pass	☒ N/A
Clause 2.5	Limited power sources	:	☐ Pass	☒ N/A
Clause 2.6	Provisions for earthing and bonding	:	☐ Pass	☒ N/A
Clause 2.7	Overcurrent and earth fault protection in primary circuits	:	☒ Pass	☐ N/A
Clause 2.8	Safety interlocks	:	☐ Pass	☒ N/A
Clause 2.9	Electrical insulation	:	☒ Pass	☐ N/A
Clause 2.10	Clearances, creepage distances and distances through insulation	:	☒ Pass	☐ N/A
Clause 3.1	Wirings	:	☐ Pass	☒ N/A
Clause 3.2	Connection to an a.c. mains supply or a d.c. mains supply	:	☒ Pass	☐ N/A
Clause 3.3	Wiring terminals for connection of external conductors	:	☒ Pass	☐ N/A
Clause 3.4	Disconnection from the mains supply	:	☐ Pass	☒ N/A
Clause 3.5	Interconnection of equipment	:	☒ Pass	☐ N/A
Clause 4.1	Stability	:	☒ Pass	☐ N/A
Clause 4.2	Mechanical strength	:	☐ Pass	☒ N/A
Clause 4.3	Design and construction	:	☒ Pass	☐ N/A
Clause 4.4	Protection against hazardous moving parts	:	☐ Pass	☒ N/A
Clause 4.5	Thermal requirements	:	☒ Pass	☐ N/A
Clause 4.6	Openings in enclosures	:	☐ Pass	☒ N/A
Clause 4.7	Resistance to fire	:	☒ Pass	☐ N/A
Clause 5.1	Touch current and protective conductor current	:	☐ Pass	☒ N/A
Clause 5.2	Electric strength	:	☒ Pass	☐ N/A
Clause 5.3	Abnormal operating and fault conditions	:	☒ Pass	☐ N/A
Clause 6	Connection to telecommunication networks	:	☒ Pass	☐ N/A
Clause 7	Connection to cable distribution systems	:	☐ Pass	☒ N/A
Annex B	Motor Tests under abnormal conditions	:	☐ Pass	☒ N/A
Annex C	Transformers	:	☒ Pass	☐ N/A
Annex G	Alternative Method for determining minimum clearances	:	☐ Pass	☒ N/A
Annex M	Criteria for telephone ringing signals	:	☐ Pass	☒ N/A
Annex U	Insulated winding wires for use without interleaved insulation	:	☐ Pass	☒ N/A

Test item particulars .....:	
Equipment mobility.....:	☐ movable ☐ hand-held ☐ stationary ☐ fixed ☐ transportable ☒ for building-in
Connection to the mains.....:	☐ pluggable equipment ☐ direct plug-in ☐ permanent connection ☒ for building-in
Operating condition.....:	☒ continuous ☐ short-time ☐ intermittent
Over voltage category .....:	☐ OVC I ☐ OVC II ☐ OVC III ☐ OVC IV
DC mains supply .....:	☐ N/A ☒ Earthed ☐ Unearthed
Mains supply tolerance (%).....:	Unit is rated 0% Tolerance
Tested for IT power systems .....:	☐ Yes ☒ No
IT testing, phase-phase voltage (V) .....:	---
Class of equipment .....:	☐ Class I ☐ Class II ☐ Class III ☒ Not classified
Mass of equipment (kg).....:	
Pollution degree .....:	☒ PD 2 ☐ PD 3
IP protection class .....:	IP---
Possible test case verdicts	
- test case does not apply to the test object ..... :	N/A (Not Applicable)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing..... :	
Date of receipt of test item..... :	2008-09-22
Date(s) of performance of tests..... :	2008-09-22 to 2008-09-29

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Factory (for information only)	
Name.....:	TDK Innoveta Inc.
Address.....:	3320 Matrix Drive, Suite 100, Richardson, Texas 75082, USA
Name.....:	NEMIC-LAMBDA (M) SDN. BHD.
Address.....:	PL033 Kawasan perindustrian Senai, Locked Bag No. 110 81400 Senai, Johor, Malaysia

General information:

Complete details of construction and testing as well as supporting documentation such as photographs are included in the attachment.

General product information: / Conditions of Installation:

DC-DC Power Supply for building-in, ratings see page 2.

The units were tested with a maximum continuous output.

The power modules are not internally fused. An external input line normal blow fuse with a maximum value of 15 A is required.

The Electrical and Fire Enclosures are to be provided by the end product.

The equipment shall be installed in compliance with the enclosure, mounting, spacing, casualty and segregation requirements of the end-use application.

The power supply series provides Basic insulation based on DC 75 V (TNV-2), between input and output.

Units are components within customer's end-use system. Input to converters is DC 36 – 60V (SELV) or DC 36 – 75 V (TNV-2).

A. If the input meets all requirements for ELV, then the output may be considered ELV

B. If the input meets all requirements for SELV, then the output may be considered SELV

C. If the input meets all requirements for TNV-2, then the output may be considered TNV-2

Model Differences:

See attached model matrix (Appendix 1)

The label includes: Optional "-R" appended to product code to indicate ROHS compliance.
eg. iQGXXXXXX-### -R Series

The product has been tested according to standard IEC 60950-1:2005 (2nd Edition) / EN 60950-1:2006 and those deviations taken into account of				
☒ CENELEC common modifications		☒ United Kingdom	☐	☐
☒ Finland	☒ Denmark	☒ Ireland	☐	☐
☒ Sweden	☒ Germany	☒ Spain	☐	☐
☒ Norway	☒ Switzerland	☐	☐	☐

☒ **CB Bull. NATIONAL DIFFERENCES IEC 60950-1(2nd Edition)**				
☒ Switzerland	☒ Spain	☒ Ireland	☒ Sweden	☒ USA
☒ Germany	☒ Finland	☒ Korea	☒ Group Differences	☐
☒ Denmark	☒ United Kingdom	☒ Norway	☒ Canada	☐

These tests fulfil the requirements of standard EN ISO/IEC 17025.

This test report includes the following Appendices:

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