Test Report issued under the responsibility of:

TEST REPORT
IEC 61010-1
Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements

Report Number. .....:	23-4790729927
Date of issue .....:	Original: 2023-07-30 Amendment 1: 2024-02-14
Total number of pages.....:	119
Name of Testing Laboratory preparing the Report.....:	UL International Italia S.r.l.
Applicant's name .....:	NEXTYS SA
Address .....:	Via Luserte Sud 6, Quartino, 6572 Switzerland
Test specification:	
Standard .....:	IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016
Test procedure .....:	CB Scheme
Non-standard test method .....:	N/A
TRF template used .....:	IECEE OD-2020-F1:2020, Ed.1.3
Test Report Form No. .....:	IEC61010_1P
Test Report Form(s) Originator ....:	VDE Prüf- und Zertifizierungsinstitut GmbH
Master TRF.....:	2021-04-12

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description..... :	Power Circuit and Motor-mounted Apparatus, Switching Power Supply
Trade Mark..... :	TDK·Lambda
Manufacturer ..... :	NEXTYS SA Via Luserte Sud 6, Quartino, 6572 Switzerland
Model/Type reference..... :	DUSH960-ZZZZ-XY where ZZZZ can be any character or symbol for marketing purposes only with no effect on safety or blank, X can be 0 or 1, Y can be any character or symbol for marketing purposes only with no effect on safety or blank.
Ratings..... :	Input: 12-48V ⎓ / 20A SELV Output: 12-48V⎓ / 20A / 960W Battery: 12-48V⎓ / 20A Aux: 12-48V⎓ / 5A (not present in model DUSH960-ZZZZ-1Y) Relays: 24V⎓ / 1A

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**CB Testing Laboratory:**	UL International Italia S.r.l.	
Testing location/ address ..... :		Via delle Industrie, 5 & 6 20061 Carugate (MI) Italy	
Tested by (name, function, signature)..... :		Luca Cerini (Project handler)	
Approved by (name, function, signature) .. :		Giuseppe Lo Gioco (Project Reviewer)	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature)..... :			
Approved by (name, function, signature) .. :			
☒	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :		NEXTYS SA Via Luserte Sud 6, Quartino, 6572 Switzerland	
Tested by (name + signature)..... :		Stefano Ferreira (Tester)	

Witnessed by (name, function, signature) . :	Luca Cerini (Project handler)	
Approved by (name, function, signature) .. :	Giuseppe Lo Gioco (Project Reviewer)	

☐	**Testing procedure: CTF Stage 3:**	
☐	**Testing procedure: CTF Stage 4:**	
Testing location/ address ..... :		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment)

Document No.	Documents included / attached to this report (description)	Page No.
I	Photographs	14
II	Mechanical drawings + PWB	33
III	Miscellaneous	6
IV	Manuals	2
V	Front and lateral label	4
VI	Particular Standard – (IEC61010_2_201)	31
VII	US National Deviations	7
VIII	CA National Deviations	18
IX	EU National Deviations	1
X	US National Deviations 61010-2-201	1
XI	CA National Deviations 61010-2-201	1

Documents referenced by this report (available on request):

Document Name or No.	Documents description	Page No.
N/A		

Summary of testing:	
Clause	**Comment**
Original:	N/A
Clause 4.4 - Single Fault Condition Tests Clause 4.4.1 - Component Abnormal Clause 4.4.2.8 - Output Abnormal Test Clause 5.1.3 - Mains Supply Clause 6.2 - Determination Of Accessible Parts Clause 6.7 and Annex K - Insulation Requirements Clause 10.1-10.4 - Temperature Test	
Amendment 1:	
Clause 4.4 - Single Fault Condition Tests Clause 4.4.1 - Component Abnormal Clause 5.1.3 - Mains Supply Clause 6.2 - Determination Of Accessible Parts Clause 10.1-10.4 - Temperature Test	

Test Report History:
This report may consist of more than one report and is only valid with additional or previous issued reports:

Report Ref. No.	Item
23-4790729927	Original

Tests performed (name of test and test clause):	**Testing location:**
Original:	
Clause 4.4 - Single Fault Condition Tests Clause 4.4.1 - Component Abnormal Clause 4.4.2.8 - Output Abnormal Test Clause 5.1.3 - Mains Supply Clause 6.2 - Determination Of Accessible Parts Clause 6.7 and Annex K - Insulation Requirements Clause 10.1-10.4 - Temperature Test	Original: CTF Stage 2 NEXTYS SA Via Luserte Sud 6, Quartino, 6572 Switzerland
Amendment 1:	
Clause 4.4 - Single Fault Condition Tests Clause 4.4.1 - Component Abnormal Clause 5.1.3 - Mains Supply Clause 6.2 - Determination Of Accessible Parts Clause 10.1-10.4 - Temperature Test	Amendment 1: CTF Stage 2 NEXTYS SA Via Luserte Sud 6, Quartino, 6572 Switzerland

Summary of compliance with National Differences (List of countries addressed):

EU group, USA, Canada

☒ **The product fulfils the requirements of EN 61010-1:2010/A1, CAN/CSA-C22.2 No 61010-1 + Amd 1, UL 61010-1 (3 rd Ed.); Am. 1**

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

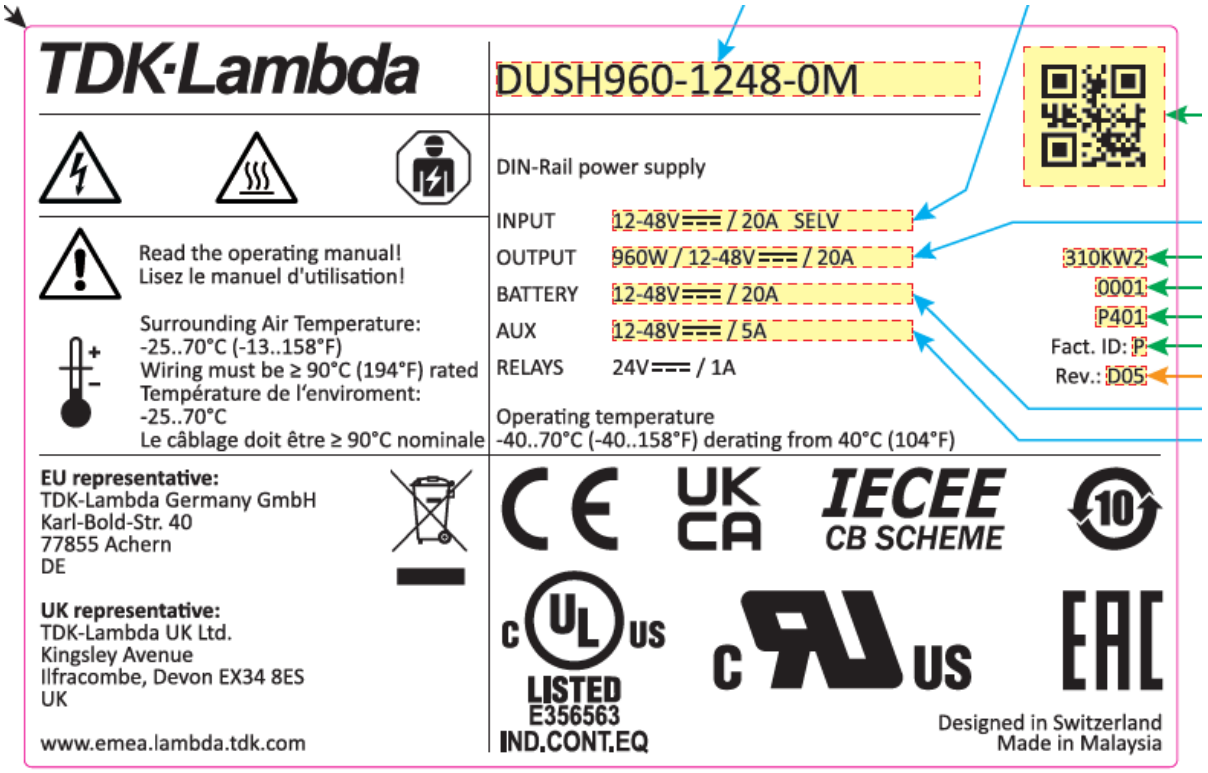
Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

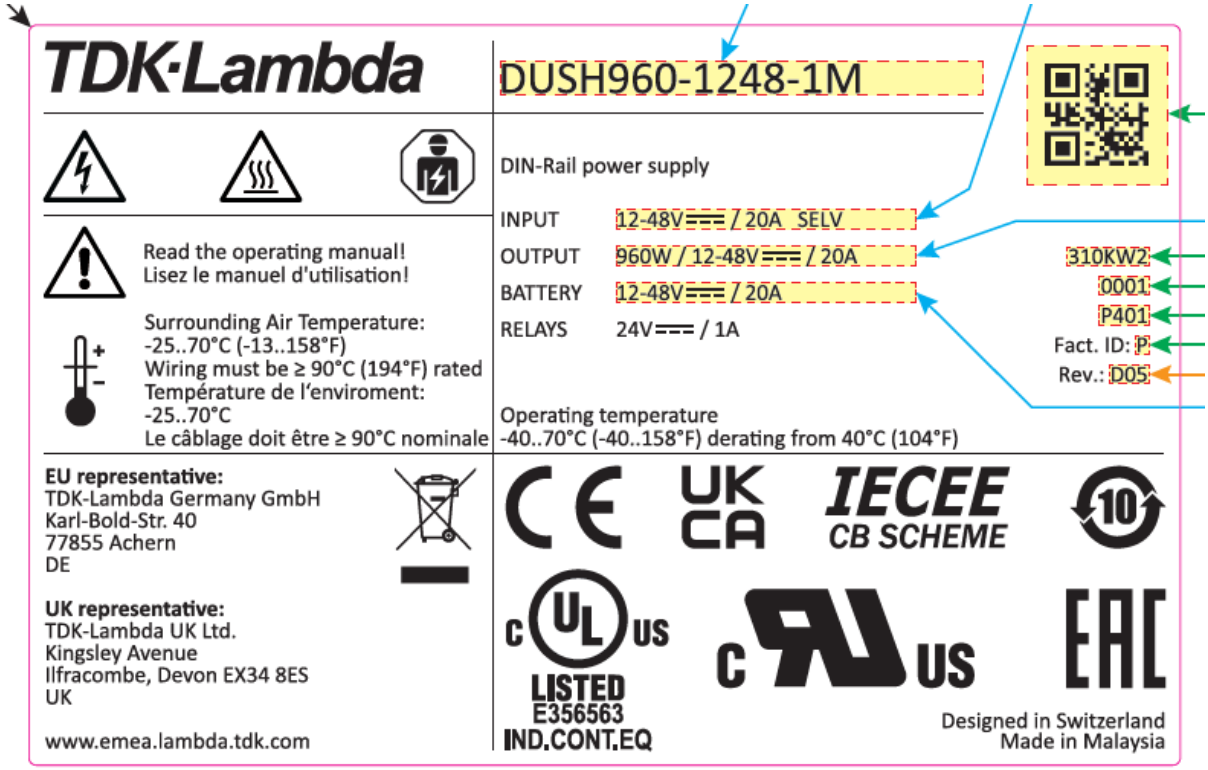
☒ **Statement not required by the standard used for type testing**

(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.





Test item particulars:	
Type of item ..... :	Power supply unit
Description of equipment function..... :	Open-type power supplies intended to be DIN-rail mounted inside an industrial Control Panel or similar Enclosure.
Connection to MAINS supply ..... :	Permanently connected equipment
Overvoltage category..... :	II
POLLUTION DEGREE..... :	2
Means of protection..... :	Class III
Environmental conditions ..... :	Extended (Specify): -25 ÷ 70°C
For use in wet locations..... :	No
Equipment mobility..... :	Built-in
Operating conditions..... :	Continuous
Overall size of equipment (W x D x H)..... :	54 x 110 x 115 mm
Mass of equipment (kg)..... :	Approx 0.5 kg
Marked degree of protection to IEC 60529 ..... :	IP20
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.....:	Original: 2023-03-22 Amendment 1: 2024-02-01
Date (s) of performance of tests .....:	Original: from 2023-06-07 to 2023-07-14 Amendment 1: from 2024-02-01 to 2024-02-05

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 Form A.xx)" refers to a Table appended to the report.
Bottom lines for measurement Tables Forms A.xx are optional if used as record.

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

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the general product information section.

Name and address of factory (ies) .....:	TDK-LAMBDA MALAYSIA SDN BHD LOT 2 & 3, BATU 9 3/4 KAWASAN PERINDUSTRIAN BANDAR BARU JAYA GADING 26070 KUANTAN

PAHANG MALAYSIA

General product information and other remarks:
Description of unit:

Open-type power supplies intended to be DIN-rail mounted inside an industrial Control Panel or similar Enclosure.

The product was investigated to the following additional standards: IEC 61010-2-201, 2nd edition
UL 61010-2-201, 2nd edition
CSA 61010-2-201, 2nd edition
EN 61010-1:2010/A1:2019 (Edition 3.1)

Technical Amendment 1 Report:
This report is amendment no.1 of CBTR Ref. No. 23-4790729927 dated 2023-07-30, CB Test Certificate Ref. No. DK-143675-UL, dated 2023-08-01 to include the following additions, which were considered technical modifications:

- Model nomenclature change
- Replacement of Input Terminal Block (H1) with one suitable for intended application.
- Replacement of internal fuse (FH1)
- Minor changes in component placement that does not affect safety.
- New chassis with minor modification related to opening for new connector.

Description of model differences:

N/A

Description of special features:
(HV circuits, high pressure systems etc.)

+BATT, -BATT (Input/output)	– Voltage 12-48Vdc – Inom 20A
Aux output:	– Voltage 12-48Vdc (= U battery - non regulated) – Inom 5A

Aux output not present in model DUSH960-ZZZZ-1Y

RL Output:	– Voltage 24Vdc – Imax 1A