UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, 2021-10-22 (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:	DIN-rail mounted uninterruptible DC power supply
Model:	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 effects on safety or blank .
Rating:	(Ratings are optional) Input: 12-48 Vdc, 20 A Output: 12-48 Vdc, 20 A, 960 W
Applicant Name and Address:	NEXTYS SA VIA LUSERTE SUD 6 QUARTINO, TICINO,6572,Switzerland

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.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Oreste Buzzetti / Project Handler Reviewed By: Marcello Conegliano / Reviewer

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

EUT is a battery management device used to manage the charging of external battery and is used to provide power either from external PSU or from external battery.

Model Differences

Model DUSH960-1248-1M is a "light" version of model DUSH960-1248-0M because the only difference is the lack of front panel screen, all other components are the same.

Test Item Particulars

Product group	built-in component
Classification of use by	Instructed person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	mating connector
Considered current rating of protective device	N/A
Equipment mobility	DIN-rail mount
Over voltage category (OVC)	OVC II
Class of equipment	Class III
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer’s specified Tma (°C)	50°C (max load 960W); 70°C with derating (720W)
IP protection class	IPX0
Power systems	TN TT
Altitude during operation (m)	3000 m
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	0.5

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of : 50°C (max load 960W), 70°C with derating (720W)

- 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 : No direct connection
- The equipment disconnect device is considered to be : N/A
- The Risk Group of a lamp or lamp system (including LEDs) is : Exempt
- The following scope limitations apply to this test report and additional evaluation and/or tests may be required when submitting this CB Report to a National Certification Body (NCB) to obtain a national mark:
  - No EMC tests nor evaluation to EMC Directive 2004/108/EC and 2014/30/EU
  - No evaluation to RoHS Directives 2002/95/EC, 2011/65/EU and (EU) 2016/585
  - No evaluation to Council Recommendation 1999/519/EC nor 2006/25/EC
  - Only English version of markings and instructions provided and reviewed

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 following output circuits are at ES1 energy levels : All outputs
- The following output circuits are at PS3 energy levels : All outputs
- The investigated Pollution Degree is : 2
- The following end-product enclosures are required : Fire
- Product has not been tested against Annex M for external battery, which is not part of this investigation. Protection circuit of external battery shall be evaluated in final installation, if the case.

Additional Information

Tests performed using an external battery able to provide up to 20 A current.

Project 4790578996:
Original report E511889-A6005-CB-1 and related CBTC DK-144807-UL issued on 2023-08-31 are amended to change model name from DUSH960-ZZZZ-XX to DUSH960-ZZZZ-XY (and adding new model DUSH960-1248-1M). New model is similar to already certified model but without front panel display. Also alternative fuse and input/output connector is added to LOCC for all models.
Only the following tests deemed necessary:
B.2.5 – INPUT TEST: SINGLE PHASE (for reference only)
B.2.6, 5.4.1.4, 6.3, 9.3, B.1.5 – NORMAL OPERATING CONDITIONS TEMPERATURE MEASUREMENT
B.4 – SIMULATED SINGLE FAULT CONDITIONS

Additional Standards

The product fulfills the requirements of: EN IEC 62368-1:2020+A11:2020, CSA/UL 62368-1:2019

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee’s or Recognized Company’s name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number

Special Instructions to UL Representative

N/A

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	**Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.**					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
-	-	-	-	-	-	-
BD1.2	**Earthing Continuity Test Exemptions – This test is not required for the following models:**					
	All models					
BD1.3	**Electric Strength Test Exemptions – This test is not required for the following models:**					
	All models					
BD1.4	**Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.**					
	-					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
-	-	-	-	-	-