

SPECIFIC TECHNICAL CRITERIA

UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements	
Report Reference No	E137006-A29-UL-1
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Standards	UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Test procedure	Component Recognition
Non-standard test method	N/A
Test item description	Switch Mode Power Supply (DIN Rail)
Trademark	None
Model and/or type reference	ML15.10K-XX where K can be 0, 1 or 2 X can be any character or number, not safety relevant. ML15.KKX-XX where KK can be 24, 05 or 12 X can be any character or number, not safety relevant.
Rating(s)	Input: Model ML15.10K-XX, ML15.KKX-XX 100-240 Vac, 0.3 A, 50-60 Hz or 110-300 Vdc, 0.17 A. Output: Model ML15.100 (ML15.241): 24-28 Vdc, 0.63-0.54 A Model ML15.101 (ML15.051): 5-5.5 Vdc, 3 A Model ML15.102 (ML15.121): 12-15 Vdc, 1.3-1.0 A Output de-rating: 0.4W/°C between 60-70°C

Particulars: test item vs. test requirements

Equipment mobility: for building-in
Operating condition: continuous
Mains supply tolerance (%): AC Mains: +10%, -10%
Tested for IT power systems: No
IT testing, phase-phase voltage (V): -
Class of equipment: Class I (earthed)
Mass of equipment (kg): < 1kg
Protection against ingress of water: N/A

Possible test case verdicts:

- test case does not apply to the test object: N / A
- test object does meet the requirement: Pass
- test object does not meet the requirement: Fail (acceptable only if a corresponding, less stringent national requirement is "Pass")

General remarks:

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see appended table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator

GENERAL PRODUCT INFORMATION:	
CA1.0	Report Summary
CA1.1	N/A
CB1.0	Product Description
CB1.1	The product is a Switch Mode Power Supply for DIN-Rail mounting.
CC1.0	Model Differences
CC1.1	The models are technical identical except model designation and output voltage/current but identical output power. Model ML15.241 is identical to ML15.100 except model designation. Model ML15.051 is identical to ML15.101 except model designation. Model ML15.121 is identical to ML15.102 except model designation.
CD1.0	Additional Information
CD1.1	Original evaluation: Model ML15.100, ML15.101 and ML15.102 Amendment 1: Add alternate model designation ML15.241, ML15.051 and ML15.121. Alternate y-capacitors for all models. Typo correction of DC-Rating for all models. Alternate layout model ML15.100 (ML15.241) where PWB top side is populated only. Therefore several tests have been repeated.
CE1.0	Technical Considerations
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (T _{ma}) permitted by the manufacturer's specification of: 60°C
CE1.3	The means of connection to the mains supply is: Permanently connected (field wired)
CE1.4	The product is intended for use on the following power systems: TT, TN, IT
CE1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All outputs.
CE2.0	The normal mounting orientation is: Input downwards, output upwards. Other mounting orientations have been measured at a lower output current of 50%. Refer to heating test table for details.
CF1.0	Engineering Conditions of Acceptability
CF1.1	For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. When installed in an end-product, consideration must be given to the following:
CF1.2	The following Production-Line tests are conducted for this product: Earthing Continuity, Electric Strength
CF1.3	The end-product Electric Strength Test is to be based upon a maximum working voltage of: 338

	Vrms, 460 Vpk;
CF1.5	The following secondary output circuits are SELV: All outputs.
CF1.11	The power supply terminals and/or connectors are: Suitable for field wiring
CF1.12	The maximum investigated branch circuit rating is: 20 A
CF1.13	The investigated Pollution Degree is: 2
CF1.15	Proper bonding to the end-product main protective earthing termination is: Required
CF1.16	An investigation of the protective bonding terminals has: Not been conducted
CF1.18	The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): T1 (Class F);
CF1.19	The following end-product enclosures are required: Mechanical, Fire, Electrical