

## SPECIFIC TECHNICAL CRITERIA

<b>UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements</b>	
Report Reference No .....	E204980-A6-UL-1
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Date of issue .....	2005-09-26
Standards .....	UL 60950-1:2003, First Edition CSA C22.2 No. 60950-1-03 1st Ed. April 1, 2003
Test procedure .....	Component Recognition
Non-standard test method .....	N/A
<b>Test item</b> description .....	Power Supply
Trademark .....	None
Model and/or type reference .....	ALS50-3.3, ALS50-5, ALS50-12, ALS50-15, ALS50-24, IOPS030S03, IOPS045S05, IOPS050S12, IOPS050S15 and IOPS050S24.
Rating(s) .....	I/P: 100-240 Vac, 50/60 Hz, 1.2A for Models ALS50 series and IOPS045S05, IOPS050S12, IOPS050S15 and IOPS050S24; 0.7A for Model IOPS030S03  O/P: For Models ALS50-3.3 and OPS030S03: 3.3Vdc, 9.1 A For Models ALS50-5 and IOPS045S05: 5 Vdc, 9 A For Models ALS50-12 and IOPS050S12: 12 Vdc, 4.2 A For Models ALS50-15 and IOPS050S15: 15 Vdc, 3.4 A For Models ALS50-24 and IOPS050S24: 24 Vdc, 2.1 A

<b>Particulars: test item vs. test requirements</b>	
Equipment mobility .....	for building-in
Operating condition .....	continuous
Mains supply tolerance (%) .....	+10%, -10%
Tested for IT power systems .....	No
IT testing, phase-phase voltage (V) .....	N/A
Class of equipment .....	Class I (earthed)
Mass of equipment (kg) .....	0.201
Protection against ingress of water .....	IP X0

**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

<b>GENERAL PRODUCT INFORMATION:</b>	
CA1.0	<b>Report Summary</b>
CA1.1	N/A
CB1.0	<b>Product Description</b>
CB1.1	Electronic components mounted on PWB.
CC1.0	<b>Model Differences</b>
CC1.1	- Models ALS50-5, ALS50-12, ALS50-15, ALS50-24, IOPS045S05, IOPS050S12, IOPS050S15 and IOPS050S24 are similar with Model ALS50-3.3 except for model designation and output rating.  - Model IOPS030503 is similar with Model ALS50-3.3 except for model designation and input rating.
CD1.0	<b>Additional Information</b>
CD1.1	N/A
CE1.0	<b>Technical Considerations</b>
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (T <sub>ma</sub> ) permitted by the manufacturer's specification of: - 50°C (output loading 100%), - 60°C (output loading 70%)
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: TN
CE1.14	The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
CF1.0	<b>Engineering Conditions of Acceptability</b>
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:
CF1.3	The end-product Electric Strength Test is to be based upon a maximum working voltage of: Max 472 Vrms, Max 290 Vpk,
CF1.5	The following secondary output circuits are SELV: All secondary outputs,
CF1.7	The following secondary output circuits are at non-hazardous energy levels: All secondary outputs.
CF1.11	The power supply terminals and/or connectors are: Suitable for factory wiring only,
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 B)
CF1.19	The following end-product enclosures are required: Electrical, Fire
CF1.23	The equipment is suitable for direct connection to: AC mains supply