

## **COVER PAGE FOR TEST REPORT**

Product Category:	Power Supplies for Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	QQGQ2, QQGQ8
Test Procedure:	Component Recognition
Product:	Power Interface Module
Model/Type Reference:	IQ65033QMA10
Rating(s):	Input rated: 47-75 V dc (+, - 10 % supply tolerance), 10 A  Output rated: 3.3 V dc, 3.6 A 5.0 V dc, 150 mA  Filtered Output rated: 47-75 V dc, 10 A
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)
Applicant Name and Address:	SYNQOR L L C 155 SWANSON RD BOXBOROUGH MA 01719
This Report includes the following parts, in addition to this cover page:	
<ol style="list-style-type: none"><li>1. Specific Inspection Criteria</li><li>2. Specific Technical Criteria</li><li>3. Clause Verdicts</li><li>4. Critical Components</li><li>5. Test Results</li><li>6. National Differences</li><li>7. Enclosures</li></ol>	

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 Underwriters Laboratories Inc. ('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.

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Test Report By:



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Reviewed By:



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## SPECIFIC TECHNICAL CRITERIA

<b>UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements</b>	
Report Reference No .....	E194341-A7-UL-1
Compiled by .....	Gilbert Simpelo
Reviewed by .....	Walid A. Beytoughan
Date of issue .....	2007-06-14
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
<b>Test item</b> description .....	Power Interface Module
Trademark .....	None
Model and/or type reference .....	IQ65033QMA10
Rating(s) .....	Input rated: 47-75 V dc (+, - 10 % supply tolerance), 10 A  Output rated: 3.3 V dc, 3.6 A 5.0 V dc, 150 mA  Filtered Output rated: 47-75 V dc, 10 A

### **Particulars: test item vs. test requirements**

Equipment mobility .....	for building-in
Operating condition .....	continuous
Mains supply tolerance (%) .....	47-75 V dc, +10%, -10%
Tested for IT power systems .....	No
IT testing, phase-phase voltage (V) .....	N/A
Class of equipment .....	N/A - To be determined in final end product.
Mass of equipment (kg) .....	< 0.032 kg
Protection against ingress of water .....	IP X0

<b>GENERAL PRODUCT INFORMATION:</b>	
CA1.0	<b>Report Summary</b>
CA1.1	N/A
CB1.0	<b>Product Description</b>
CB1.1	The SynQor, model IQ65033QMA10 is a power interface module with a quarter brick foot print used in the front end of a DC/DC converter. The product is intended for building-in and is provided with a non-isolated filtered output and two SELV outputs (management power) that are separated by the input by basic insulation only.
CC1.0	<b>Model Differences</b>
CC1.1	N/A
CD1.0	<b>Additional Information</b>
CD1.1	This test report was based on the CB Report by TUV Product Service GmbH CB Certificate Number DE3-56280, dated 27-Apr-07, submitted via the CB Scheme. The test results and clause verdicts of the above noted report were reviewed and found to comply with the applicable Standard UL60950-1, 1st Edition, 2006-07-07. As a result the clause verdicts and test results for this report were noted as N/A and have been referred to the TUV Product Service GmbH CB Report for details.  Transformer T3 provides separation between hazardous voltage secondary and SELV and was subjected to single fault and electric strength testing in accordance with sub-clause 2.2.4 of 60950-1.
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: 25°C
CE1.4	The product is intended for use on the following power systems: For building-in. To be determined in the end product.
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:
CF1.5	The following secondary output circuits are SELV: 3.3 V dc and 5 V dc
CF1.13	The investigated Pollution Degree is: 2
CF1.21	The maximum continuous power supply output (Watts) relied on forced air cooling from: 750 LFM applied over the power interface module.

CF2.0	The unit should be installed per the manufacturer's specification.
CF2.1	Maximum output power is specified at 25°C and 750 LFM at a operating voltage range of 42-75 V dc.
CF2.2	Normal, Abnormal and Component Failure Tests were conducted with the power supply input protected by a 20 A, 250 V fuse and forced cooling rated 750 LFM. If a fuse rated greater than 20 A is used and if the forced cooling is below 750 LFM, additional testing may be required.
CF2.3	If the input meets all of the requirements for SELV (< 42.4 Vpk, 60 V dc), the filtered output may be considered SELV. Output voltages remain within SELV limits.
CF2.4	The units are intended to be supplied from an isolated DC source of supply, such as a battery, or DC mains.