



America

CERTIFICATE

No. U8V 16 10 34962 267

Holder of Certificate: **SynQor Inc.**
155 Swanson Road
Boxborough MA 01719-1316
USA

Production Facility(ies): 34962

Certification Mark:



Product: DC converter
DC to DC Converter

Model(s): BQ4H136HTx80NRS-G; BQ4H136EEC45NRS-G;
BQ4H480FTC64NRS
(see certificate attachment for model nomenclature,
rating information and and license conditions)

Parameters:

Rated Input Voltage:	230-400 VDC
Rated Output Voltage:	13.6 V DC; 13.6 V DC; 48 V DC
Rated Input Current:	3.8 A; 3.1 A; 10.5 A
Rated Output Current:	80 A; 45 A; 64 A

Tested according to: CAN/CSA C22.2 No.60950-1:2007/A2:2014
UL 60950-1:2007/A2:2014
EN 60950-1:2006/A2:2013

The product was voluntarily tested according to the relevant safety requirements noted above. It can be marked with the certification mark above. The mark must not be altered in anyway. This product certification system operated by TÜV SÜD America Inc. most closely resembles system 3 as defined in ISO/IEC 17067. Certification is based on the TÜV SÜD "Testing and Certification Regulations". TÜV SÜD America Inc. is an OSHA recognized NRTL and a Standards Council of Canada accredited certification body.

Test report no.: DI1311064-301

Date, 2016-10-19

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Attachment to Certificate U8V 16 10 34692 267

SynQor Inc.
155 Swanson Road
Boxborough, MA 01719-1318



America

Part Number Nomenclature Half Brick

<u>BQ</u>	<u>4H</u>	<u>136</u>	<u>H</u>	<u>T</u>	<u>C</u>	<u>80</u>	<u>NRS</u>	<u>G</u>
I	II	III	IV	V	VI	VII	VIII	IX
I	<u>Product</u>							
								BQ – BusQor Series
II	<u>Input Voltage</u>							
								4H = 230-400 Vdc, Output 1000 Watts
III	<u>Output Voltage</u>							
								3 Numbers denoting output voltage in volts 136 = 13.6 Vdc
IV	<u>Package Size</u>							
								H = Half Brick
V	<u>Performance level</u>							
								T = Tera
VI	<u>Thermal design</u>							
								Options include but are not limited to: C = Encased V = Encased with Flanged Baseplate
VII	<u>Output Current</u>							
								2 Numbers denoting output current in amps 80 = 80 Amps maximum
VIII	<u>Options</u>							
								Three characters that denote non safety critical options such as, but not limited to, pin length, enable polarity, etc
IX	<u>6/6 RoHS</u>							
								G = 6/6 RoHS Compliance

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America

SynQor Inc.
155 Swanson Road
Boxborough, MA 01719-1318

Part Number Nomenclature Eighth Brick

<u>BQ</u>	<u>4H</u>	<u>136</u>	<u>E</u>	<u>E</u>	<u>C</u>	<u>45</u>	<u>NRS</u>	<u>G</u>
I	II	III	IV	V	VI	VII	VIII	IX

<u>I</u>	<u>Product</u>	BQ = BusQor Series
<u>II</u>	<u>Input Voltage</u>	4H = 230 – 400 Vdc, Output 617.5 Watts max
<u>III</u>	<u>Output Voltage</u>	3 Numbers denoting output voltage in volts 136 = 13.6 Vdc 480 = 48.0 Vdc
<u>IV</u>	<u>Package Size</u>	E = Eighth Brick
<u>V</u>	<u>Performance level</u>	E = Exa
<u>VI</u>	<u>Thermal design</u>	Options include but are not limited to: C = Encased
<u>VII</u>	<u>Output Current</u>	2 Numbers denoting output current in amps 45 = 45 Amps maximum
<u>VIII</u>	<u>Options</u>	Three characters that denote non safety critical options such as, but not limited to, pin length, enable polarity, etc
<u>IX</u>	<u>6/6 RoHS</u>	G = 6/6 RoHS Compliance

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SynQor Inc.
155 Swanson Road
Boxborough, MA 01719-1318



America

Part Number Nomenclature Full Brick

<u>BQ</u> I	<u>4H</u> II	<u>480</u> III	<u>F</u> IV	<u>T</u> V	<u>C</u> VI	<u>64</u> VII	<u>NRS</u> VIII	<u>G</u> IX
I	<u>Product</u>							BQ – BusQor Series
II	<u>Input Voltage</u>							4H = 230-400 Vdc, Output 1000 Watts
III	<u>Output Voltage</u>							3 Numbers denoting output voltage in volts 480 = 48 Vdc
IV	<u>Package Size</u>							F = Full Brick
V	<u>Performance level</u>							T = Tera
VI	<u>Thermal design</u>							Options include but are not limited to: C = Encased V = Encased with Flanged Baseplate
VII	<u>Output Current</u>							2 Numbers denoting output current in amps 64 = 64 Amps maximum
VIII	<u>Options</u>							Three characters that denote non safety critical options such as, but not limited to, pin length, enable polarity, etc
IX	<u>6/6 RoHS</u>							G = 6/6 RoHS Compliance

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**License conditions:**

1. The input circuits are separated for the output circuit and the base plate by reinforced insulation based on 400 V working voltage.
2. The input circuits is separated for the output circuit by reinforced insulation based on 400 V working voltage and input circuit is separated from the base plate by basic insulation based on 400 V..
3. The abnormal testing was performed with the following external fuse value for Half Brick:
5 A, AGC (Fast) for the 400 V input voltage units.
If higher value fuses are used additional testing may be required.
4. The output is considered to be a hazardous energy level.
5. The abnormal testing was performed with the following external fuse value for Eighth Brick:
10 A, KLKD, 600 V AC/DC (Fast) for the 400 V input voltage units.
If higher value fuses are used additional testing may be required.
6. The abnormal testing was performed with the following external fuse value for Full Brick:
20 A, KLKD, 600 V AC/DC (Fast) for the 400 V input voltage units.
If higher value fuses are used additional testing may be required.

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