

CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-2134081-0
Report Reference E131905-A6014-UL
Date 12-Jul-2021

Issued to: BEL FUSE INC
206 VAN VORST ST JERSEY CITY, NJ
United States 07302-4421

**This is to certify that
representative samples of**

QQJQ2 - Power Supplies for Use with Audio/Video,
Information and Communication Technology Equipment -
Component

See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the
component requirements in the Standard(s) indicated on
this Certificate. UL Recognized components are incomplete
in certain constructional features or restricted in
performance capabilities and are intended for installation in
complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 62368-1, 2nd Ed., Issue Date: 2014-12-01

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark.
Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified
and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>




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Certificate Number UL-US-2134081-0
Report Reference E131905-A6014-UL
Date 12-Jul-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
0RQ1-H0S12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-H0T12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-Q2T12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-S0M11xy, (x can be 0-9, A-Z, or blank for marketing purpose, no safety relevant impact. y is optional, both can be 0-9, A-Z indicate non safety related.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-T0S12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ2-Q2T12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-E0S11xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-F5S11xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-S0M11xy, (x can be 0-9, A-Z, or blank for marketing purpose, no safety relevant impact. y is optional, both can be 0-9, A-Z indicate non safety related.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-S0S10xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-S0S12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS



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CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-2128429-0
Report Reference E131905-A6014-UL
Date 12-Jul-2021

Issued to: BEL FUSE INC
206 VAN VORST ST JERSEY CITY, NJ
United States 07302-4421

**This is to certify that
representative samples of**

QQJQ8 - Power Supplies for Use with Audio/Video,
Information and Communication Technology Equipment
Certified for Canada - Component
See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the
component requirements in the Standard(s) indicated on
this Certificate. UL Recognized components are incomplete
in certain constructional features or restricted in
performance capabilities and are intended for installation in
complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: CSA C22.2 NO. 62368-1-14, 2nd Ed., Issue Date: 2014-12-01

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

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CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-2128429-0
Report Reference E131905-A6014-UL
Date 12-Jul-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
0RQ1-H0S12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-H0T12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-Q2T12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-S0M11xy, (x can be 0-9, A-Z, or blank for marketing purpose, no safety relevant impact. y is optional, both can be 0-9, A-Z indicate non safety related.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ1-T0S12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQ2-Q2T12xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-E0S11xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-F5S11xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-S0M11xy, (x can be 0-9, A-Z, or blank for marketing purpose, no safety relevant impact. y is optional, both can be 0-9, A-Z indicate non safety related.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
0RQB-S0S10xy, (x and y represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.). Ratings are optional.	ISOLATED DC/DC CONVERTERS
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UL TEST REPORT AND PROCEDURE

Standard: Certification Type: CCN: Complementary CCN:	UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1-14, 2nd Ed, Issued: 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) Component Recognition QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment) N/A
Product:	ISOLATED DC/DC CONVERTERS
Model:	<p>0RQB-S0M11xy (x can be 0-9, A-Z, or blank for marketing purpose, no safety relevant impact; y is optional, both can be 0-9, A-Z indicate non safety related)</p> <p>0RQ1-S0M11xy (x can be 0-9, A-Z, or blank for marketing purpose, no safety relevant impact; y is optional, both can be 0-9, A-Z indicate non safety related.)</p> <p>0RQ1-H0T12xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQB-F5S11xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQ1-T0S12xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQ1-Q2T12xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQB-E0S11xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQB-S0S12xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQB-S0S10xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p> <p>0RQ2-Q2T12xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)</p>

0RQ1-H0S12xy ("x" and "y" represents of the model part number to be 0-9, A-Z or blank, which will represent the special request of customer.)

For model 0RQB-S0M11xy
(optional) I/P: 48.6-60Vdc, 16A
O/P: 11.2Vdc, 62.5A

For model 0RQ1-S0M11xy
(optional) I/P: 45-60Vdc, 17A
O/P: 11.2Vdc, 62.5A

For model 0RQ1-H0T12xy
(optional) I/P: 36-75Vdc, 17A
O/P: 12Vdc, 50A max

For model 0RQB-F5S11xy
(optional) I/P: 38-56Vdc, 18A
O/P: 10.6Vdc, 52A max

For model 0RQ1-T0S12xy
(optional) I/P: 36-62Vdc, 9A
O/P: 12Vdc, 25A max

Rating:

For model 0RQ1-Q2T12xy
(optional) I/P: 36-75Vdc, 13A
O/P: 12Vdc, 35A max

For model 0RQB-S0S10xy
(optional) I/P: 40-56Vdc, 19A
O/P: 9.7Vdc, 62A max

For model 0RQB-S0S12xy
(optional) I/P: 45-56Vdc, 15A
O/P: 10.2Vdc, 60A max

For model 0RQB-E0S11xy
(optional) I/P: 48-60Vdc, 19A
O/P: 10.8Vdc, 74A max

For Model 0RQ2-Q2T12xy
(optional) I/P: 36-75Vdc, 13A
O/P: 12Vdc, 35A max

For Model 0RQ1-H0S12xy

	(optional) I/P: 40-56Vdc, 17A O/P: 11.8Vdc, 50A max
Applicant Name and Address:	BEL FUSE INC 206 VAN VORST ST JERSEY CITY NJ 07302-4421 UNITED STATES

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: Jenny Seward / Project Handler Reviewed By: Mengis Tesfay / 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

DC-DC Converter which is considered to be a secondary building-in component intended for use in Information Technology Equipment. Electronic components mounted on min. V-1 PWB.

Model Differences

For models 0RQ1-H0T12xy, all models are identical to each other except for different heatsink type which model 0RQ1-H0T12A and 0RQ1-H0T12B corresponding to one type of heatsink while 0RQ1-H0T12C and 0RQ1-H0T12D corresponding to another one, details refer to enclosure 4-06.

Model 0RQB-F5S11xy are identical to 0RQ1-H0T12xy in transformer PCB and construction except for input current, output voltage, output current.

Model 0RQB-Q2T12xy and 0RQ1-T0S12xy are identical to each other in transformer, PCB and construction except for input voltage and output current.

Q2T12xy and 0RQ1-T0S12By are identical to model 0RQ1-H0T12xy except for transformer.

0RQB-E0S11xy are identical to model 0RQB-S0M11xy except for output rating.

0RQB-S0S12xy and 0RQB-S0S10xy are identical to each other except for output rating and both models are identical to model 0RQB-E0S11xy except for input&output rating.

0RQ1-H0S12xy is identical to model 0RQB-F5S11xy except for input and output voltage and output current.

0RQ2-Q2T12xy is identical to model 0RQ1-H0T12xy except for output current.

Model 0RQ1-S0M11xy is exactly the same as 0RQB-S0M11xy except for the input ratings and value of voltage divider resistor R38.

Test Item Particulars

Classification of use by	Skilled person
Supply Connection	External Circuit - not Mains connected ES2
Supply % Tolerance	None
Supply Connection – Type	for building-in supplied by ES2
Considered current rating of protective device as part of building or equipment installation	20 A; building;
Equipment mobility	for building-in
Over voltage category (OVC)	OVC I
Class of equipment	Not classified

Access location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified maximum operating ambient (°C)	See Enclosures.
IP protection class	IPX0
Power Systems	--
Altitude during operation (m)	less than or equal to 4000 m
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	max 0.10 for model 0RQ1-H0T12C/D

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of : See enclosures.
- 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 values : No direct connection
- The equipment disconnect device is considered to be : determined in the end-product - unit is for building-in
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual
- The product was investigated to the following additional standard : EN 62368-1:2014 + A11:2017

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 product-line tests are conducted for this product : Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of : Primary-SELV: 50.7 Vrms, 75 Vpk for models 0RQB-S0M11xy and 0RQ1-S0M11xy, 50Vrms, 98Vpk for model 0RQ1-H0T12xy, 40.1 Vrms, 83.2Vpk for model 0RQB-F5S11xy, 49.2Vrms, 88.2Vpk for model 0RQB-Q2T12xy, 38.1Vrms, 54.1Vpeak for model 0RQB-E0S11B, 41.4Vrms, 68.4Vpk for model 0RQ1-H0S12xy
- The following output circuits are at ES1 energy levels : For models 0RQB-S0M11xy and 0RQ1-S0M11xy: 11.2Vdc , For model 0RQ1-H0T12xy: 12Vdc, For model 0RQB-F5S11xy: 10.6Vdc, For model 0RQ1-T0S12xy: 12Vdc, For model 0RQ1-Q2T12xy: 12Vdc, For model 0RQB-S0S10xy: 9.7Vdc, For model 0RQB-S0S12xy: 10.2Vdc, For model 0RQB-E0S11xy: 10.8Vdc, For model 0RQ1-H0S12xy: 11.8Vdc, For model 0RQ2-Q2T12xy: 12Vdc
- The following output circuits are at PS3 energy levels : For models 0RQB-S0M11xy and 0RQ1-S0M11xy: 11.2Vdc , For model 0RQ1-H0T12xy: 12Vdc, For model 0RQB-F5S11xy: 10.6Vdc, For model 0RQ1-T0S12xy: 12Vdc, For model 0RQ1-Q2T12xy: 12Vdc, For model 0RQB-S0S10xy: 9.7Vdc, For model 0RQB-S0S12xy: 10.2Vdc, For model 0RQB-E0S11xy: 10.8Vdc, For model 0RQ1-H0S12xy: 11.8Vdc, For model 0RQ2-Q2T12xy: 12Vdc
- The maximum investigated branch circuit rating is : 25A fast-acting external Fuse used for testing purposes.
- The investigated Pollution Degree is : 2
- The following end-product enclosures are required : Electrical, Fire
- The equipment is suitable for direct connection to : No direct connection to mains.
- The power supply was evaluated to be used at altitudes up to : 4000 m

Additional Information

This report is a reissue of CBTR Ref. No.: E235017-A6005-CB-1 including Amendment 1, CB Test Certificate Ref. Nos. US-32436-UL and US-32436-M1-UL. During the reissue, the Factory locations were updated and minor clarifications were made to the Critical Components Table. No additional testing was conducted under

this reissue. All required tests were carried out during the original investigation. The test sample received dates and the test dates are from the original report. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, it has been determined that the product continues to comply with the standard.

Marking plate represents all models.

Additional Standards

The product fulfills the requirements of: EN 62368-1:2014 + A11:2017

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized companys name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	"Input Ratings (voltage, frequency/dc, current/power)", "Output Ratings (voltage, frequency/dc, current/power)"

Special Instructions to UL Representative

N/A