Certificate of Compliance

Certificate: 70040691 (170351) **Master Contract:** 170351

Project: 70040691 **Date Issued:** 2015-07-29

Issued to: **Bel Fuse Inc.**
206 Van Vorst St
Jersey City, New Jersey 07302
USA

Attention: Editha S. Vergara

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Juan-Carlos Olivera*
Juan-Carlos Olivera, MSc.

PRODUCTS

CLASS – 5311 11 - POWER SUPPLIES-Component Type (CSA 60950-1-07-2nd Ed)
CLASS – 5311 91 - POWER SUPPLIES-Component Type (UL 60950-1-2nd Ed) - Certified to U.S. Stds

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

Component type power supplies intended for use with Information Technology and Business Equipment, where the suitability of the combination is to be determined by CSA Group.

DC/DC Power Supply, Model P Series, where one supply feed is earthed (within the same building), model dependent, input 16V dc to 150V dc, 12A max.; outputs (up to 4) max., 122W total output.

Typical Model Designation:	B	P	1	10	1 -	7	X
	I	II	III	IV	V--	VI	VII

I – Input Voltage, V dc:
B – 16 to 36
C – 33.6 to 75
D – 40 to 100.8
E – 66 to 150
G – 21.6 to 50.4

II – Model Series: P

III – No. of Outputs:
1 – Single output
2 – Double output
3 – Triple output
4 – Quadruple output

IV – Other specification for main output: 01 to 99

V – Nominal Output Voltage:
01 – 5.1V
10 – 3.3V
20 – 12V
40 – 15V
24 – 60V
Other voltages and features 80 to 90

VI – Operational ambient temperature range, Ta: 0 to 6 other
7 - -25°C to 71°C
9 - -40°C to 71°C

VII – Options Suffix: X – alpha-numeric characters denoting non-safety critical options

Note: All model designations may be followed by "G" indicating R0HS Compliance.

Electrical Ratings for Model GP – Input 21.6 to 50.4V dc:

Output 1			Output 2			Output 3			Output 4			Type
Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Input Voltage 21.6 -50.4 V dc
3.3	100	132	-	-	-	-	-	-	-	-	-	GP 1101-7R
5.1	122	183	-	-	-	-	-	-	-	-	-	GP 1001-7R
3.3	50	66	5.1	61	91	-	-	-	-	-	-	GP 2101-7R
5.1	61	91	5.1	61	91	-	-	-	-	-	-	GP 2001-7R
12	60	96	12	60	96	-	-	-	-	-	-	GP 2320-7R
15	80	97	15	60	97	-	-	-	-	-	-	GP 2540-7R
24	60	96	24	60	96	-	-	-	-	-	-	GP 2660-7R
5.1	61	91	12	30	48	12	30	48	-	-	-	GP 3020-7R
5.1	61	91	15	30	48	15	30	48	-	-	-	GP 3040-7R
5.1	61	91	24	30	48	24	30	48	-	-	-	GP 3060-7R
5.1	20	30	12	30	48	12	30	48	3.3	10	20	GP 4720-7R
12	30	48	12	30	48	12	30	48	12	30	48	GP 4320-7R
15	30	48	15	30	48	15	30	48	15	30	48	GP 4540-7R
24	30	48	24	30	48	24	30	48	24	30	48	GP 4660-7R

Certificate: 70040691 **Master Contract:** 170351

Project: 70040691 **Date Issued:** 2015-07-29

Electrical Ratings for Model BP – Input 16 to 36V dc and for Model CP – Input 33.6 to 75V dc:

Output 1			Output 2			Output 3			Output 4			Type	Type
Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Input Voltage 16-36 V dc	Input Voltage 33.6-75 V dc
3.3	100	132	-	-	-	-	-	-	-	-	-	BP 1101-7R	CP 1101-7R
5.1	122	183	-	-	-	-	-	-	-	-	-	SP 1001-7R	CP 1001-7R
3.3	50	66	5.1	61	91	-	-	-	-	-	-	BP 2101-7R	CP 2101-7R
5.1	61	91	5.1	61	91	-	-	-	-	-	-	BP 2001-7R	CP 2001-7R
12	60	96	12	60	96	-	-	-	-	-	-	BP 2320-7R	CP 2320-7R
15	60	97	15	60	97	-	-	-	-	-	-	BP 2540-7R	CP 2540-7R
24	60	96	24	60	96	-	-	-	-	-	-	BP 2660-7R	CP 2660-7R
5.1	61	91	12	30	48	12	30	48	-	-	-	BP 3020-7R	CP 3020-7R
5.1	61	91	15	30	48	15	30	48	-	-	-	BP 3040-7R	CP 3040-7R
5.1	61	91	24	30	48	24	30	48	-	-	-	BP 3060-7R	CP 3060-7R
5.1	20	30	12	30	48	12	30	48	3.3	10	20	BP 4720-7R	CP 4720-7R
12	30	48	12	30	48	12	30	48	12	30	48	BP 4320-7R	CP 4320-7R
15	30	48	15	30	48	15	30	48	15	30	48	BP 4540-7R	CP 4540-7R
24	30	48	24	30	48	24	30	48	24	30	48	BP 4660-7R	CP 4660-7R

Certificate: 70040691 **Master Contract:** 170351

Project: 70040691 **Date Issued:** 2015-07-29

Electrical Ratings for Model DP - Input 40 to 100.8V dc and for Model EP – Input 66 to 150V dc:

Output 1			Output 2			Output 3			Output 4			Type	Type
Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Vo nom [V dc)	Po nom [W]	Po max [W]	Input Voltage 40-100.8 V dc	Input Voltage 66-150 V dc
3.3	100	132	-	-	-	-	-	-	-	-	-	DP 1101-7R	EP 1101-7R
5.1	122	183	-	-	-	-	-	-	-	-	-	DP 1001-7R	EP 1001-7R
3.3	50	66	5.1	61	91	-	-	-	-	-	-	DP 2101-7R	EP 2101-7R
5.1	61	91	5.1	61	91	-	-	-	-	-	-	DP 2001-7R	EP 2001-7R
12	60	96	12	60	96	-	-	-	-	-	-	DP 2320-7R	EP 2320-7R
15	60	97	15	60	97	-	-	-	-	-	-	DP 2540-7R	EP 2540-7R
24	60	96	24	60	96	-	-	-	-	-	-	DP 2660-7R	EP 2660-7R
5.1	61	91	12	30	48	12	30	48	-	-	-	DP 3020-7R	EP 3020-7R
5.1	61	91	15	30	48	15	30	48	-	-	-	DP 3040-7R	EP 3040-7R
5.1	61	91	24	30	48	24	30	48	-	-	-	DP 3060-7R	EP 3060-7R
5.1	20	30	12	30	48	12	30	48	3.3	10	20	DP 4720-7R	EP 4720-7R
12	30	48	12	30	48	12	30	48	12	30	48	DP 4320-7R	EP 4320-7R
15	30	48	15	30	48	15	30	48	15	30	48	DP 4540-7R	EP 4540-7R
24	30	48	24	30	48	24	30	48	24	30	48	DP 4660-7R	EP 4660-7R

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No 60950-1-07, +Am.1:2011 +Am.2:2014	– Information Technology Equipment - Safety - Part 1: General Requirements
UL 60950-1-2014	– Information Technology Equipment - Safety - Part 1: General Requirements

CONDITIONS OF ACCEPTABILITY

The following must be evaluated in end use:

1. Enclosure Protective earth ground connection.
2. Accessible energy hazards at output connections.
3. Connections to other SELV circuits.
4. Disconnect devices.
5. DC supply is isolated from the AC Mains by reinforced insulation.
6. One leg of the DC supply is earthed within the same building.

Supplement to Certificate of Compliance

Certificate: 70040691 (170351) **Master Contract:** 170351

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70040691	2015-07-29	DC-DC Power Supply, P Series. (C/US) (transferred from 173688 - 2247050 and upgraded to include Am1 and Am2).

CERTIFICATE

No. P15220322

Order No. 292249

Product	DC/DC Switching Power Supply
Applicant	Bel Fuse Inc. 206 Van Vorst St. Jersey City, NJ 07302 USA
Manufacturer	Bel Fuse Inc. 206 Van Vorst St. Jersey City, NJ 07302 USA
Factory	Bel Power Solutions, s.r.o. Areal ZTS 924 01841 Dubnica nad Vahom Slovakia ☐ See next page(s)
Ratings	Input Voltage: 16 to 150Vdc (Model Depended) Output Voltage: 3.3Vdc to 24 Vdc (Model Depended) Maximum Output Power: 50W–194W (Model Depended)
Trade mark	bel POWER SOLUTIONS & PROTECTION a bel group
Model / Type Ref.	P Series
Principal characteristics	See General Product Information for addtional detail ☐ See next page(s)
A sample of the product was tested and found to be in conformity with	OFF EN 60950-1:2006;A11;A1;A12;A2
Validity	This certificate documents conformity with the standards shown, and also applies as license for use of Nemkos name and certification mark. The certificate and license is valid as long as the applicable conditions are complied with, and provided that any changes to the product are notified to Nemko for acceptance prior to implementation. New standards or amendments to the standards may imply that the product design must be updated and/or that re-testing and re-certification is necessary.
Additional information	☐ See next page(s) The abovementioned certified equipment complies with current regulatory requirements regarding electrical safety in Norway and other EU/EEA member states, as far as this can be checked. Compliance with requirements regarding building-in, protection against electric shock and Electromagnetic Compatibility (EMC) must be checked when the equipment is built-in a completed product or forms a part of a complete system.
Additional model(s)	☐ See next page(s)

Date of issue 07-10-2015

Okhyun Jeon

Certification Department

Nemko AS
Gaustadalléen 30, P.O. Box 73 Blindern, 0314 Oslo, Norway
TEL +47 22 96 03 30 FAX +47 22 96 05 50 EMAIL info@nemko.com
ENTERPRISE NUMBER NO974404532

Ref. Certif. No.

NO88706

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI DACCEPTATION MUTUELLE DE CERTIFICATS DESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product Produit	DC/DC Switching Power Supply
Name and address of the applicant Nom et adresse du demandeur	Bel Fuse Inc. 206 Van Vorst St. Jersey City, NJ 07302 USA
Name and address of the manufacturer Nom et adresse du fabricant	Bel Fuse Inc. 206 Van Vorst St. Jersey City, NJ 07302 USA
Name and address of the factory Nom et adresse de l'usine	Bel Power Solutions, s.r.o. Areal ZTS 924 01841 Dubnica nad Vahom Slovakia
Note: When more than one factory, please report on page 2 Note: Lorsque il y plus d'une usine, veuillez utiliser la deuxième page	☐ Additional information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	Input Voltage: 16 to 150Vdc (Model Depended) Output Voltage: 3.3Vdc to 24 Vdc (Model Depended) Maximum Output Power: 50W–194W (Model Depended)
Trademark (if any) Marque de fabrique (si elle existe)	bel POWER SOLUTIONS & PROTECTION a bel group
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	
Model / Type Ref. Ref. De type	P Series
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la deuxième page	See General Product Information for addtional detail ☐ Additional information on page 2
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60950-1(ed.2);am1;am2
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport dessais numéro de référence qui constitue partie de ce Certificat	292249

This CB Test Certificate is issued by the National Certification Body
Ce Certificat dessai OC est établi par l'Organisme **National de Certification**

Nemko
Gaustadalléen 30
NO-0373 Oslo, Norway

Date: 07-10-2015

Signature: Okhyun Jeon
Certification Department

Test Report issued under the responsibility of

www.nemko.com

TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number.....:	292249
Date of issue.....:	28 September 2015
Total number of pages.....	48 pages
Applicant's name.....:	Bel Fuse Inc.
Address .....:	206 Van Vorst St., Jersey City, NJ 07302
Test specification:	
Standard.....:	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure .....:	CB-Scheme
Non-standard test method .....:	N/A
Test Report Form No. .....:	IEC60950_1F
Test Report Form(s) Originator.....:	SGS Fimko Ltd
Master TRF.....:	Dated 2014-02

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description.....:	DC/DC Switching Power Supply
Trade Mark .....:	bel POWER SOLUTIONS & PROTECTION a bel group
Manufacturer .....:	Same as Applicant
Model/Type reference.....:	P Series. See General Product information for Model Nomenclature
Ratings .....:	Input Voltage: 16 to 150Vdc (Model Depended) Output Voltage: 3.3Vdc to 24 Vdc (Model Depended) Maximum Output Power: 50W – 194W (Model Depended) See General Product information for additional details

Testing procedure and testing location:

CB Testing Laboratory:	**Nemko USA Inc.**	
Testing location/ address.....:	**2210 Faraday Ave. Suite 150, Carlsbad, CA 92008, USA**	
Associated CB Testing Laboratory:		
Testing location/ address.....:		
Tested by (name + signature).....:	Eli Madrigal	
Approved by (name + signature).....:	Jeff Busch	

Report History:
Original report

List of Attachments (including a total number of pages in each attachment):

Attachment 1: European Group Differences and National Deviations ..... 82 pages
Documented deviations contain individual national documents for several European countries that are included in the European Group Deviations. The European Group Difference: EN60950:2006/A11:2009/A:2010/A12:2011/A2:2013 are considered “Normative”. The individual national documents (Denmark, Finland, Germany, Ireland, Norway, Spain, Sweden, Switzerland and United Kingdom) are considered “informative” and included at the manufacturer’s request.

Attachment 2: Miscellaneous Documentation, e.g. Photos, PWB Layout, Schematic etc. ..... 16 pages
(Not for publication – Engineering use only)

Summary of testing	
General	All comments relate to all models, unless specifically stated.
Power supply	The equipment is an enclosed, Class I switch mode power supply with universal DC input and multiple DC voltage outputs for building-in. This report covers multiple models and all comments / tests apply to all models unless otherwise indicated. Testing was conducted on Interchangeable models as indicated.
1.5, 3.2.5; Power supply cord set.	A power supply cord set is not provided with the power supply. A power supply cord set, complying with the national regulations of the country in which the product is to be sold, shall be provided with the end-use equipment.
1.7.2; Safety instructions.	Instructions and equipment markings related to safety are to be provided in a language, which is acceptable in the country in which the equipment is to be sold. English language verified.
5.2: Electric Strength test	Increased test voltages for Basic insulation applied to the equipment, based on measured working voltages.

Summary of testing:	
Tests performed (name of test and test clause)**:** 1) Input Test ..... 1.6.2 2) Durability Test ..... 1.17.11 3) Capacitance Discharge Test ..... 2.1.1.7 4) Energy Hazard DC Mains..... 2.1.1.8 5) SELV Reliability Test ..... 2.2 6) Protective Bonding Test ..... 2.6.3.4 7) Humidity Test ..... 2.9.2 8) Working Voltage Measurement ..... 2.10.2 9) Hazardous Voltage Measurement ..... 2.10.2 10) Heating Test ..... 4.5.1 11) Touch Current Test ..... 5.1 12) Electric Strength Test ..... 5.2.2 13) Component Failure Test ..... 5.3 14) Abnormal Operation Test ..... 5.3 15) PS Output Overload and Short Test 5.3	**Testing location:** **See page 2**

Summary of compliance with National Differences:

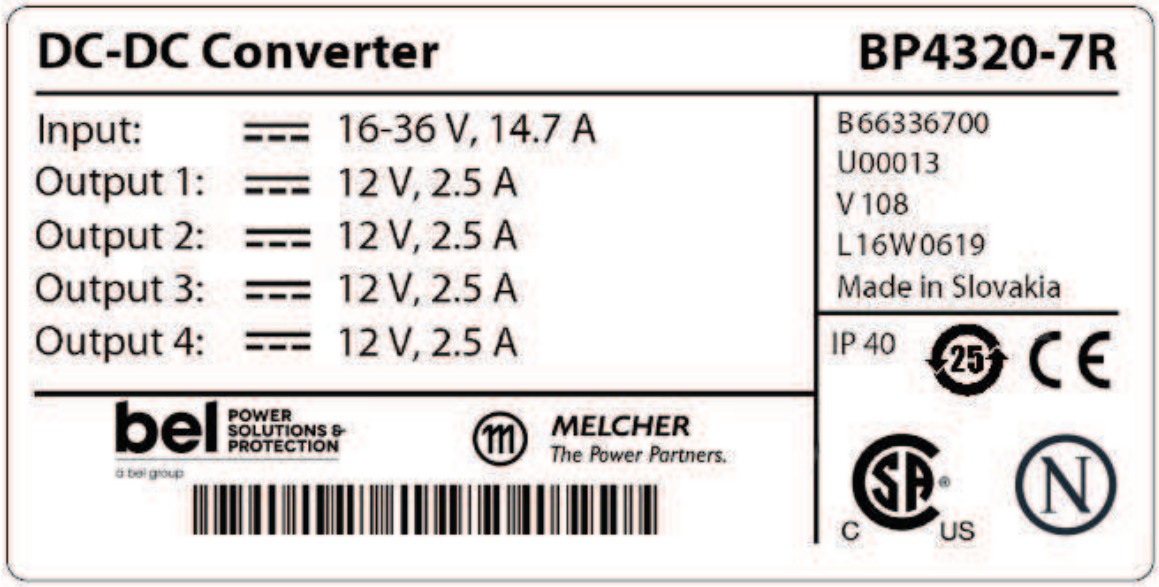
List of countries addressed

Austria (AT), Australia (AU), Canada (CA), China (CN), Denmark (DK), Finland (FI), Germany (DE), Ireland (IE), Israel (IS), Korea (KR), Norway (NO), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH), United Kingdom (GB), United States of America (US)

☒**The product fulfils the requirements of :** EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

Copy of marking plate: The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective Certification Bodies that own these marks.

Four output model from the series of products



Calibration	All instruments used in the tests given in this test report are calibrated and traceable to national or international standards. Further information about traceability will be given on request.
Measurement uncertainty	Measurement uncertainties are calculated for all instruments and instrument set-ups given in this report. Calculation are based in the principles given in the standard EZ-4/02 (Dec.1999), IEC Guide 155:2007, Nemko routine L227 and other relevant internal Nemko-procedures. Further information about measurement uncertainties will be given on request.
Evaluation of result	If not explicitly stated otherwise in the standard, the test is passed if the measured value is equal to or below (above) the limit line, regardless of the measurement uncertainty. If the measured value is above (below) the limit line, the test is not passed-ref IEC Guide 115:2007, and Nemko routine L220. The instrumentation accuracy is within limits agreed by IECEE-CTL (ref. Nemko routine L227)

Test item particulars:	
Equipment mobility	[] movable [] hand-held [] transportable [] stationary [**X**] for building-in [] direct plug-in
Connection to the mains	[] pluggable equipment [] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains [] DC Mains [**X**] Equipment for building-in, evaluation at end use
Operating condition	[**X**] continuous [] rated operating / resting time:
Access location	[**X**] operator accessible [] restricted access location
Over voltage category (OVC)	[] OVC I [] OVC II [] OVC III [] OVC IV [**X**] other: DC Input
Mains supply tolerance (%) or absolute mains supply values	0%, rated voltage range only
Tested for IT power systems	[] Yes [**X**] No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	[**X**] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A)	To be determined at end use equipment
Pollution degree (PD)	[] PD 1 [**X**] PD 2 [] PD 3
IP protection class	IPX0 (Not evaluated against ingress of water)
Altitude during operation (m)	2000 m
Altitude of test laboratory (m)	38m, sea level
Mass of equipment (kg)	0.4943 kg
Temperature, Ambient (°C)	71 °C

Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)

Testing	
Date of receipt of test item	September 2015
Date (s) of performance of tests	September 2015

General remarks:
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**

Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	☐ **Yes** ☒ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... Bel Power Solutions s.r.o. ArealZTS Dubnica n.Vahom c.924 01841 Dubnica nad Vahom SLOVAKIA	

General product information:

This test report is based on a TUV SUD test report Ref. No. 095-1000015242-000 with appended CB cert Ref. No. DE3 -58771.

The report includes an upgrade to IEC 60950-1:2005 (Second Edition) + Am 1: 2009 + Am 2:2013.

For continuity, data from the original TUV report is included in this report, along with the additional evaluation referenced.

DC/DC converter model P Series is provided with an aluminium enclosure. The unit is hot swappable and can be used on(a) redundant system(s).
The unit can operate up to 95ºC case temperature, Tc. Refer to manufacturer's datasheet for exact Tc location.

Typical Model Designation: B P 1 1 01 - 7 X
I II III IV V VI VII

I – Input Voltage, Vdc:
B -- 16 to 36
C -- 33.6 to 75
D – 40 to 100.8
E – 66 to 150
G – 21.6 to 50.4

II – Model Series: P

III - No. of Outputs:
1 – Single Output
2 – Double Output
3 – Triple Output
4 – Quadruple Output

IV – Nominal Voltage [Output1/Output4] 1 to 9

V – Nominal Voltage [Output2/Output3] 01-5.1V
10-3.3V
20-12V
40-15V
24-60V
Other voltages and features 80 to 90
Other specifications for main output 01 to 99

VI Operational ambient temperature range Ta : 0 to 6 – Other
7 -25ºC to 71ºC
9 -40ºC to 71ºC

VII – Options Suffix X = Letters or numbers denoting no –safety-critical options such as, but not limited to, potentiometer, output voltage control input, etc.

Notes: IV and V specifies the output configurations and other features.
All models names maybe followed by "G" indicating ROHS version.

Additional Electrical Rating Information:

Output 1			Output 2			Output 3			Output 4			Type Input voltage 21.6-50.4Vdc
Vo nom [Vdc]	Po nom [W]	Po max [W]	Vo nom [Vdc]	Po nom [W]	Po max [W]	Vo nom [Vdc]	Po nom [W]	Po max [W]	Vo nom [Vdc]	Po nom [W]	Po max [W]	
3.3	100	132	-	-	-	-	-	-	-	-	-	GP1101-7R
5.1	122	183	-	-	-	-	-	-	-	-	-	GP1001-7R
12	120	192	-	-	-	-	-	-	-	-	-	GP1301-7R
15	120	194	-	-	-	-	-	-	-	-	-	GP1501-7R
24	120	192	-	-	-	-	-	-	-	-	-	GP1601-7R
3.3	50	66	5.1	61	91	-	-	-	-	-	-	GP2101-7R
5.1	61	91	5.1	61	91	-	-	-	-	-	-	GP2001-7R
5.1	61	91	12	60	91	-	-	-	-	-	-	GP2020-7R
12	60	96	12	60	96	-	-	-	-	-	-	GP2320-7R
15	60	97	15	60	97	-	-	-	-	-	-	GP2540-7R
24	60	96	24	60	96	-	-	-	-	-	-	GP2660-7R
5.1	61	91	12	38	48	12	38	48	-	-	-	GP3020-7R
5.1	61	91	15	38	48	15	30	48	-	-	-	GP3040-7R
5.1	61	91	24	30	48	24	30	48	-	-	-	GP3060-7R
5.1	20	30	12	30	48	12	30	48	3.3	10	20	GP4720-7R
12	30	48	12	30	48	12	30	48	12	30	48	GP4320-7R
15	30	48	15	30	48	15	30	48	15	30	48	GP4540-7R
24	30	48	24	30	48	24	30	48	24	30	48	GP4660-7R

Output 1			Output 2			Output 3			Output 4			Type input voltage 16-36 Vdc	Type input voltage 33.6-75Vdc
Vo nom Vdc	Po nom W	Po ma x W	Vo nom Vdc	Po nom W	Po max W	Vo nom Vdc	Po nom W	Po max W	Vo nom Vdc	Po nom W	Po ma x W		
3.3	100	132	-	-	-	-	-	-	-	-	-	BP1101-7R	CP1101-7R
5.1	122	183	-	-	-	-	-	-	-	-	-	BP1001-7R	CP1101-7R
12	120	192	-	-	-	-	-	-	-	-	-	BP1301-7R	CP1301-7R
15	120	194	-	-	-	-	-	-	-	-	-	BP1501-7R	CP1501-7R
24	120	192	-	-	-	-	-	-	-	-	-	BP1601-7R	CP1601-7R
3.3	50	66	5.5	61	91	-	-	-	-	-	-	BP2101-7R	CP2101-7R
5.1	61	91	5.1	61	91	-	-	-	-	-	-	BP2001-7R	CP2001-7R
5.1	61	91	12	60	96	-	-	-	-	-	-	BP2020-7R	CP2020-7R
12	60	96	12	60	96	-	-	-	-	-	-	BP2320-7R	CP2320-7R
15	60	97	15	60	97	-	-	-	-	-	-	BP2540-7R	CP2540-7R
24	60	96	24	60	60	-	-	-	-	-	-	BP2660-7R	CP2660-7R
Output 1			Output 2			Output 3			Output 4			Type input voltage 16-36 Vdc	Type input voltage 33.6-75Vdc
Vo nom Vdc	Po nom W	Po ma x W	Vo nom Vdc	Po nom W	Po max W	Vo nom Vdc	Po nom W	Po ma x W	Vo nom Vdc	Po no m W	Po ma x W		
5.1	61	91	12	30	48	12	30	48	-	-	-	BP3020-7R	CP3020-7R
5.1	61	91	15	30	48	15	30	48	-	-	-	BP3040-7R	CP3040-7R
5.1	61	91	24	30	48	24	30	48	-	-	-	BP3060-7R	CP3060-7R
5.1	20	30	12	30	48	12	30	48	3.3	10	20	BP4720-7R	CP4720-7R
12	30	48	12	30	48	12	30	48	12	30	48	BP4320-7R	CP4320-7R
15	30	48	15	30	48	15	30	48	15	30	48	BP4540-7R	CP4540-7R
24	30	48	24	30	48	24	30	48	24	30	48	BP4660-7R	CP4660-7R

Output 1			Output 2			Output 3			Output 4			Type input voltage 40-100.8Vdc	Type input voltage 66-150Vdc
Vo nom Vdc	Po nom W	Po ma x W	Vo nom Vdc	Po nom W	Po max W	Vo nom Vdc	Po nom W	Po ma x W	Vo nom Vdc	Po no m W	Po ma x W		
3.3	100	132	-	-	-	-	-	-	-	-	-	DP1101-7R	EP1101-7R
5.1	122	183	-	-	-	-	-	-	-	-	-	DP1001-7R	EP1001-7R
12	120	192	-	-	-	-		-	-	-	-	DP1301-7R	EP1301-7R
15	120	194	-	-	-	-	-	-	-	-	-	DP1501-7R	EP1501-7R
24	120	192	-	-	-	-	-	-	-	-	-	DP1601-7R	EP1601-7R
3.3	50	66	5.1	61	91	-	-	-	-	-	-	DP2101-7R	EP2101-7R
5.1	61	91	5.1	61	91	-	-	-	-	-	-	DP2001-7R	EP2001-7R
5.1	61	91	12	60	96	-	-	-	-	-	-	DP2020-7R	EP2020-7R
12	60	96	12	60	96	-	-	-	-	-	-	DP2320-7R	EP2320-7R
15	60	97	15	60	97	-	-	-	-	-	-	DP2540-7R	EP2540-7R
24	60	96	24	60	96	-	-	-	-	-	-	DP2660-7R	EP2660-7R
5.1	61	91	12	30	48	12	30	48	-	-	-	DP3020-7R	EP3020-7R
5.1	61	91	15	30	48	15	30	48	-	-	-	DP3040-7R	EP3040-7R
5.1	61	91	24	30	48	24	30	48	-	-	-	DP3060-7R	EP3060-7R
5.1	20	30	12	30	48	12	30	48	3.3	10	20	DP4720-7R	EP4720-7R
12	30	48	12	30	48	12	30	48	12	30	48	DP4320-7R	EP4320-7R
15	30	48	15	30	48	15	30	48	15	30	48	DP4540-7R	EP4520-7R
24	30	48	24	30	48	24	30	48	24	30	48	DP4660-7R	EP4660-7R

CONDITIONS OF ACCEPTABILITY:

When installed in the end use equipment, the following are among the considerations to be made:

All models require:

1) A reliable protective earth ground connection.
2) Accessible energy hazards at output.
3) Connections to other SELV circuits.
4) Disconnect devices.
5) Temperature tests should be considered for specific installation conditions in the end system.
6) Enclosure should be suitable for fire, electrical and mechanical hazard prevention in the end system.
7) Sustainability of fusing to be evaluated in end use equipment.

Abbreviations used in the report:

- normal conditions ..... N.C.
- functional insulation ..... OP
- double insulation..... DI
- between parts of opposite polarity ..... BOP
- single fault conditions ..... S.F.C
- basic insulation..... BI
- supplementary insulation..... SI
- reinforced insulation ..... RI

Indicate used abbreviations (if any): ..... None