Ref. Certif. No.

JPTUV-157086

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

CB TEST CERTIFICATE

Product	DC-DC Power Module
Name and address of the applicant	TDK-Lambda (China) Electronics Co., Ltd. No.95, Zhujiang Road, Xinwu District,, Wuxi, 214028 Jiangsu, P.R. China
Name and address of the manufacturer	TDK-Lambda (China) Electronics Co., Ltd. No.95, Zhujiang Road, Xinwu District,, Wuxi, 214028 Jiangsu, P.R. China
Name and address of the factory	See additional page(s)
Ratings and principal characteristics	Rated Input: 43Vdc, 4.3A or 2.8A or 1.6A 50-160Vdc, 4.3A or 2.8A or 1.6A
Trademark (if any)	TDK-Lambda
Customer's Testing Facility (CTF) Stage used	N/A
Model / Type Ref.	CN150B110 -zxxxxxxx, CN100B110 -zxxxxxxx, CN50B110 -zxxxxxxx (z = 5, 12, 15, 24, 48; xxxxxxx =/T, /AUX, /CO, /S, /NP, other alphanumeric character, symbol or blank)
Additional information (if necessary may also be reported on page 2)	For model differences and detail ratings, refer to the test report.
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2018
As shown in the Test Report Ref. No. which forms part of this Certificate	CN23XKGG 001

This CB Test Certificate is issued by the National Certification Body

TÜVRheinland®

TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021, Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web : www.tuv.com

Date: 2024-01-29

Signature: Mark Chen

10/0861 CB 06/2019 rk

1. TDK-Lambda (China) Electronics
   Co., Ltd.
   No.95,
   Zhujiang Road, Xinwu District,
   Wuxi, 214028 Jiangsu, P.R. China

2. TDK-Lambda Malaysia Sdn. Bhd.
   PLO 33, Kawasan Perindustrian Senai
   81400 Senai, Johor
   Malaysia

Additional information (if necessary) Report Ref. No. : CN23XKGG 001

Date: 2024-01-29 Signature: Mark Chen

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT

IEC 62368-1

Audio/video, information and communication technology equipment Part 1: Safety requirements

Report Number ..... :	CN23XKGG 001
Date of issue ..... :	2024-01-23
Total number of pages ..... :	128 (excluding report attachments, see page 3)
Name of Testing Laboratory preparing the Report ..... :	TÜV Rheinland (Shanghai) Co., Ltd.
Applicant's name ..... :	**TDK-Lambda (China) Electronics Co., Ltd.**
Address ..... :	No. 95, Zhujiang Road, Xinwu District, Wuxi 214028 Jiangsu, P.R. China
Test specification:	
Standard ..... :	IEC 62368-1:2018
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
TRF template used ..... :	IECEE OD-2020-F801:2021, Ed.1.4
Test Report Form No. ..... :	IEC62368_1E
Test Report Form(s) Originator .... :	UL(US)
Master TRF ..... :	Dated 2022-04-14

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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 Power Module
Trade Mark(s) ..... :	TDK·Lambda
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	CN150B110 -zxxxxxxx, CN100B110 -zxxxxxxx, CN50B110 -zxxxxxxx (z = 5, 12, 15, 24, 48; xxxxxxx =/T, /AUX, /CO, /S, /NP, other alphanumeric character, symbol or blank)
Ratings ..... :	See the model list on page 9-12 for details

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	TÜV Rheinland (Shanghai) Co., Ltd.	
Testing location/ address ..... :		No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China	
Tested by (name, function, signature) ..... :		James Zhang / Technical Expert	
Approved by (name, function, signature) .. :		Sky Zhu / Technical Reviewer	
☐	**Testing procedure: CTF Stage 1:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 2:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 3:**	N/A	
☐	**Testing procedure: CTF Stage 4:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

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

- ATTACHMENT – National Differences (73 pages)
- ATTACHMENT – Photo Documentation (11 pages)

Note: Total number of pages in each attachment is indicated in individual attachment.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
All applicable tests as described in Test Case and Measurement Sections performed on all models. The equipment has been evaluated for ambient temperature up to +100°C (At center of baseplate). Specified ambient temperature for operation is according to manufacturer's specification. The load conditions used during testing: Maximum normal load for this equipment is the operation with the maximum specified DC load with maximum power condition according to the manufacturer specified. The product is to be operated up to 5000m above sea level, the minimum clearances were multiplied by the factor given in Table A.2 of IEC 60664-1: 1.48. The test samples are pre-production without serial numbers.	TÜV Rheinland (Shanghai) Co. Ltd. No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China

Summary of compliance with National Differences (List of countries addressed):

EU Group Differences, EU Special National Conditions, US, CA, SG, SA, JP, CN, AU, NZ.

Explanation of used codes: US=United States of America, CA=Canada, SG=Singapore, SA= SAUDI ARABIA, JP = Japan, CN=China, AU=Australia, NZ=New Zealand.

☒ **The product fulfils the requirements of**

EN IEC 62368-1:2020+A11:2020

GB 4943.1-2022

CSA/UL 62368-1:2019

AS/NZS 62368.1:2022

Use of uncertainty of measurement for decisions on conformity (decision rule) :

☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other:… (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:

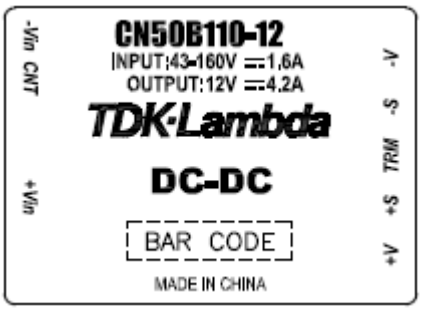
The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

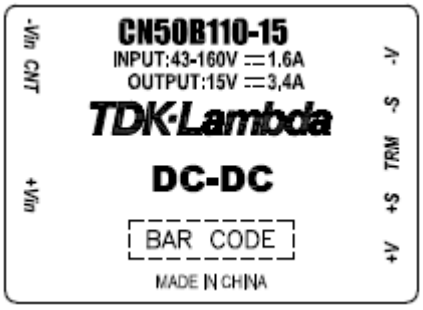
IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

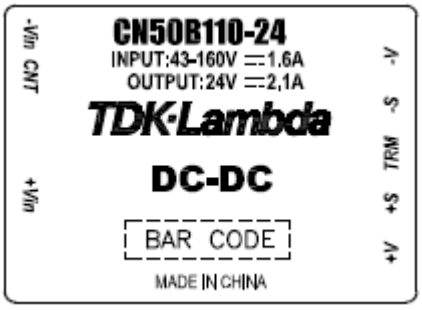
Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

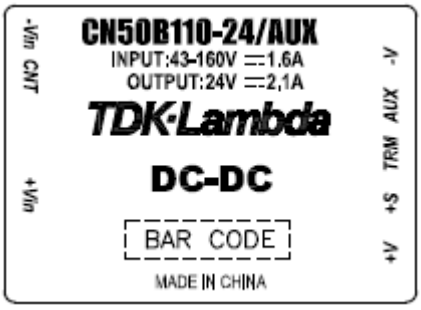
Copy of marking plate:

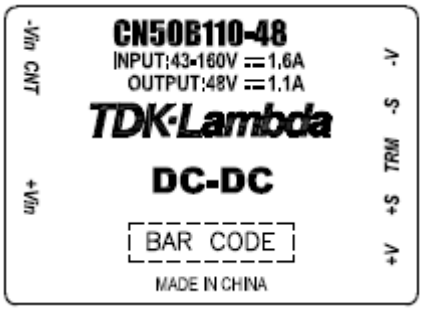
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

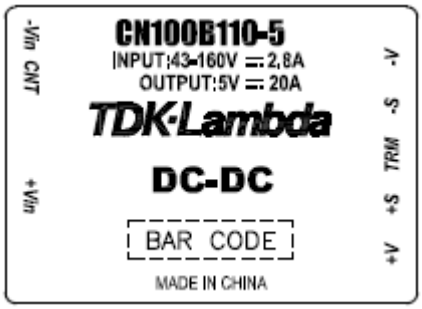








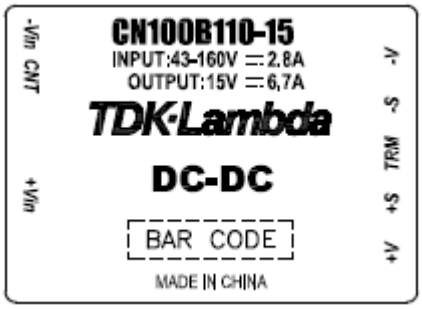



-Vin CNT
+Vin
CN100B110-5
INPUT:43-160V 2,8A
OUTPUT:5V 20A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
-S
TRM
+S
+V

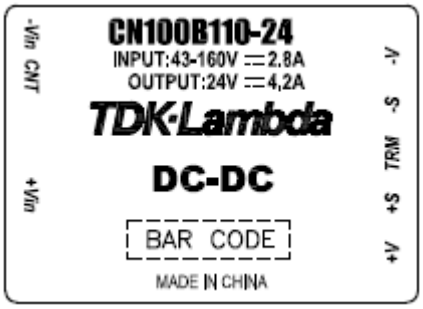

-Vin CNT
+Vin
CN100B110-5/AUX
INPUT:43-160V 2,8A
OUTPUT:5V 20A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
AUX
TRM
+S
+V

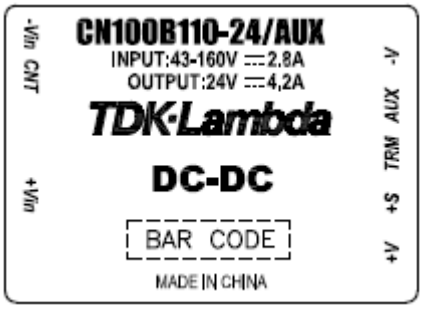

-Vin CNT
+Vin
CN100B110-12
INPUT:43-160V 2,8A
OUTPUT:12V 8,4A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
-S
TRM
+S
+V

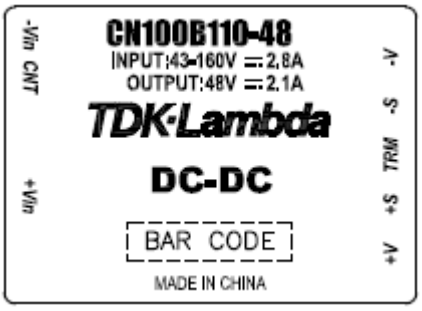

-Vin CNT
+Vin
CN100B110-12/AUX
INPUT:43-160V 2,8A
OUTPUT:12V 8,4A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
AUX
TRM
+S
+V

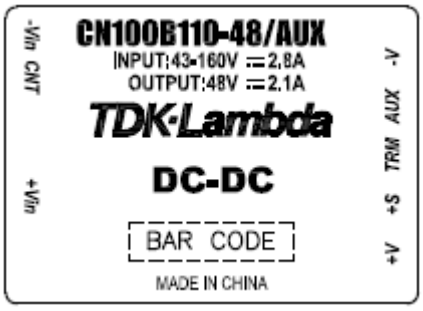

-Vin CNT
+Vin
CN100B110-15
INPUT:43-160V 2,8A
OUTPUT:15V 6,7A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
-S
TRM
+S
+V

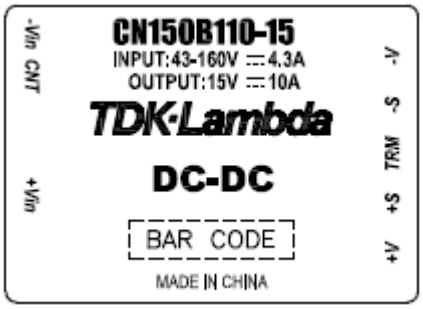

-Vin CNT
+Vin
CN100B110-15/AUX
INPUT:43-160V 2,8A
OUTPUT:15V 6,7A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
AUX
TRM
+S
+V

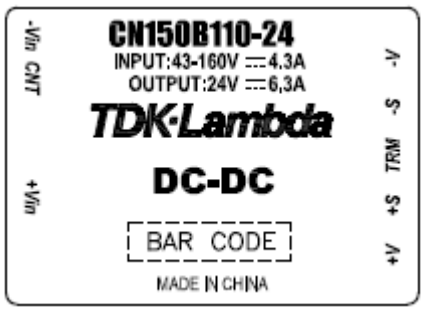

-Vin CNT
+Vin
CN100B110-24
INPUT:43-160V 2,8A
OUTPUT:24V 4,2A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
-S
TRM
+S
+V

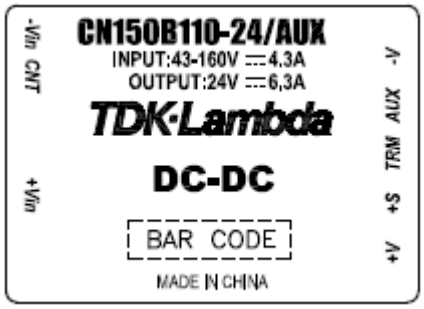

-Vin CNT
+Vin
CN100B110-24/AUX
INPUT:43-160V 2,8A
OUTPUT:24V 4,2A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
AUX
TRM
+S
+V


-Vin CNT
+Vin
CN100B110-48
INPUT:43-160V 2,8A
OUTPUT:48V 2,1A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
-S
TRM
+S
+V


-Vin CNT
+Vin
CN100B110-48/AUX
INPUT:43-160V 2,8A
OUTPUT:48V 2,1A
TDK·Lambda
DC-DC
BAR CODE
MADE IN CHINA
-V
AUX
TRM
+S
+V







< representative >

Test item particulars:	
Product group ..... :	☐ end product ☒ built-in component
Classification of use by..... :	☐ Ordinary person ☐ Children likely present ☒ Instructed person ☒ Skilled person
Supply connection ..... :	☐ AC mains ☐ DC mains ☒ not mains connected: ☐ ES1 ☐ ES2 ☒ ES3
Supply tolerance ..... :	☐ +10%/-10% ☐ +20%/-15% ☒ None
Supply connection – type ..... :	☐ pluggable equipment type A - ☐ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☒ other: PCB terminal
Considered current rating of protective device ..... :	☒ 16 or 20 A (for US/CSA); Location: ☐ building ☐ equipment ☒ N/A
Equipment mobility..... :	☐ movable ☐ hand-held ☐ transportable ☐ direct plug-in ☐ stationary ☒ for building-in ☐ wall/ceiling-mounted ☐ SRME/rack-mounted ☐ other:
Overvoltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III ☐ Not classified ☐
Special installation location ..... :	☐ N/A ☒ restricted access area ☐ outdoor location☐
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified T_{ma}..... :	100 °C ☐ Outdoor: minimum °C
IP protection class ..... :	☒ IPX0 ☐ IP
Power systems ..... :	☐ TN ☐ TT ☐ IT - V_{L-L} ☒ not AC mains
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ up to 5000 m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ m
Mass of equipment (kg) ..... :	Approx. 0.06

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 ..... :	2023-11-22
Date (s) of performance of tests..... :	2023-11-22 to 2023-12-22

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 4.2.5 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) ..... :	1. TDK-Lambda (China) Electronics Co., Ltd. No. 95, Zhujiang Road, Xinwu District, Wuxi 214028 Jiangsu, P.R. China 2. TDK-Lambda Malaysia Sdn. Bhd PLO33, Kawasan Perindustrian Senai, 81400 Senai Johor Malaysia

General product information and other remarks:

The product covered by this report is DC-DC Power Module (building-in type) intend for general use with audio/video, information and communication technology equipment in the scope of this standard.

The insulation spacing of power supply module comply with reinforced insulation between input and output circuits.

For earthed construction (Class I), the PSU need to be reliably earthed and professionally installed and fixed with metal screws or others.

All models are identical, except for the turns of Transformer, AL-PCB and the rating of some components that results in different output ratings. See Model List below for details.

The primary turns of main transformer(T102) for 5V is different from 12V/15V/24V/48V.

The AL-PCB of 5V/12V/15V(CCB364x) is different from the AL-PCB of 24V/48V (CCB365x), the control board (CCB363x) is the same.

The output rectification circuit of 5V/12V/15V is different from 24V/48V.

The output inductance (L151) of CN50B110-24 series is different from that of CN150B110-24/CN100B110-24 series, and it is same as CN50/100/150B110-48 series.

For the CN50B110/CN100B110 series, it could be considered as derating version of CN150B110 series. For CN50B110/NP series and CN100B110/NP series, it is no potting on power PWB, and CN50B110/NP series could be considered as derating version of CN100B110/NP series.

Additional application considerations – (Considerations used to test a component or sub-assembly)

- Some components are **pre-certified**, which have been evaluated according to the relevant requirements of IEC 62368-1, are employed in this product. Their suitability of use has been checked according to subclause 4.1.1 and 4.1.2.
- The product is to be operated up to 5000m above sea level, the minimum clearances were multiplied by the factor given in Table A.2 of IEC 60664-1: 1.48.

Tests were repeated with each alternative source of components with identical results unless otherwise specified.

For rating differences between the models see below tables:

Series Model	I/p voltage (Vdc)	Freq (Hz)	I/p current (A)	Output Channel	Minimal output	Rated output (typical)	Maximum output
Convection cooling condition							
CN150B110 series							
CN150B110-5xxxxxxx (potting only)	43	-	4.3	Main output	4 Vdc	5 Vdc	--
					30 A	30 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160	-		Main output	4 Vdc	5 Vdc	6 Vdc
					30 A	30 A	25 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN150B110-12xxxxxxx (potting only)	43	-	4.3	Main output	9.6 Vdc	12 Vdc	--
					12.5 A	12.5 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	9.6 Vdc	12 Vdc	14.4 Vdc
					12.5 A	12.5 A	10.4 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN150B110-15xxxxxxx (potting only)	43	-	4.3	Main output	12 Vdc	15 Vdc	--
					10 A	10 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	12 Vdc	15 Vdc	18 Vdc
					10 A	10 A	8.4 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN150B110-24xxxxxxx (potting only)	43	-	4.3	Main output	19.2 Vdc	24 Vdc	--
					6.3 A	6.3 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	19.2 Vdc	24 Vdc	28.8 Vdc

					6.3 A	6.3 A	5.2 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN150B110-48xxxxxxx (potting only)	43	-	4.3	Main output	38.4 Vdc	48 Vdc	--
					3.2 A	3.2 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	38.4 Vdc	48 Vdc	57.6 Vdc
					3.2 A	3.2 A	2.6 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN100B110 series							
CN100B110-5xxxxxxx (potting or no potting)	43	-	2.8	Main output	4 Vdc	5 Vdc	--
					20 A	20 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	4 Vdc	5 Vdc	6 Vdc
					20 A	20 A	16.7 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN100B110-12xxxxxxx (potting or no potting)	43	-	2.8	Main output	9.6 Vdc	12 Vdc	--
					8.4 A	8.4 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	9.6 Vdc	12 Vdc	14.4 Vdc
					8.4 A	8.4 A	6.9 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN100B110-15xxxxxxx (potting or no potting)	43	-	2.8	Main output	12 Vdc	15 Vdc	--
					6.7 A	6.7 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	12 Vdc	15 Vdc	18 Vdc
					6.7 A	6.7 A	5.5 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN100B110-24xxxxxxx (potting or no potting)	43	-	2.8	Main output	19.2 Vdc	24 Vdc	--
					4.2 A	4.2 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	19.2 Vdc	24 Vdc	28.8 Vdc
					4.2 A	4.2 A	3.5 A

				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN100B110-48xxxxxxx (potting only)	43	-	2.8	Main output	38.4 Vdc	48 Vdc	--
					2.1 A	2.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	38.4 Vdc	48 Vdc	57.6 Vdc
					2.1 A	2.1 A	1.8 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN100B110-48/NPxxxxxxx (no potting only)	43			Main output	38.4 Vdc	48 Vdc	--
					2.1 A	2.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	38.4 Vdc	48 Vdc	--
					2.1 A	2.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN50B110 series							
CN50B110-5xxxxxxx (potting or no potting)	43	-	1.6	Main output	4 Vdc	5 Vdc	--
					10 A	10 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	4 Vdc	5 Vdc	6 Vdc
					10 A	10 A	8.4 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN50B110-12xxxxxxx (potting or no potting)	43	-	1.6	Main output	9.6 Vdc	12 Vdc	--
					4.2 A	4.2 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	9.6 Vdc	12 Vdc	14.4 Vdc
					4.2 A	4.2 A	3.5 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN50B110-15xxxxxxx (potting or no potting)	43	-	1.6	Main output	12 Vdc	15 Vdc	--
					3.4 A	3.4 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	12 Vdc	15 Vdc	18 Vdc
					3.4 A	3.4 A	2.8 A
				Standby power	9 Vdc (Rated)		

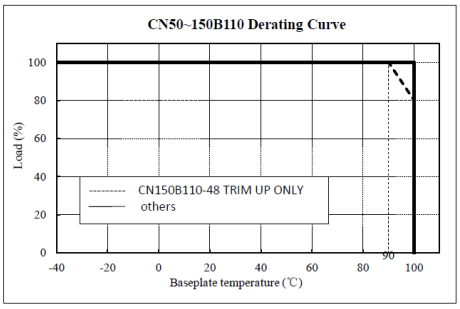
				(/AUX only)	10 mA (Rated)		
CN50B110-24xxxxxxx (potting or no potting)	43	-	1.6	Main output	19.2 Vdc	24 Vdc	--
					2.1 A	2.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	19.2 Vdc	24 Vdc	28.8 Vdc
					2.1 A	2.1 A	1.7 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN50B110-48xxxxxxx (potting only)	43	-	1.6	Main output	38.4 Vdc	48 Vdc	--
					1.1 A	1.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	38.4 Vdc	48 Vdc	57.6 Vdc
					1.1 A	1.1 A	0.9 A
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
CN50B110-48/NPxxxxxxx (no potting only)	43	-	1.6	Main output	38.4 Vdc	48 Vdc	--
					1.1 A	1.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
	50-160			Main output	38.4 Vdc	48 Vdc	--
					1.1 A	1.1 A	--
				Standby power (/AUX only)	9 Vdc (Rated)		
					10 mA (Rated)		
Remark: Operating temp.: up to +100ºC (At center of baseplate) (operating temperature depending on equipment's load, mounting position, for details refer to instruction manual).							

Derating Curve:

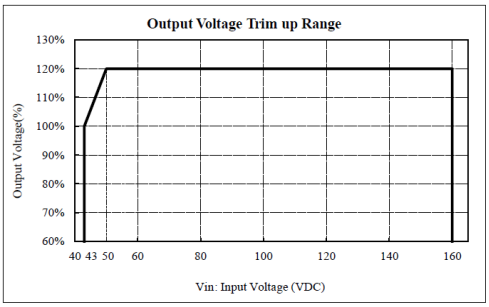
For CN50B110，CN100B110，CN150B110

DERATING CURVE :

Derating Curve: Tb V.S Load

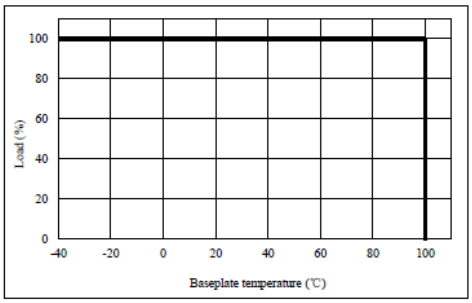


Output Voltage Trim up Range Limited v.s Input Voltage

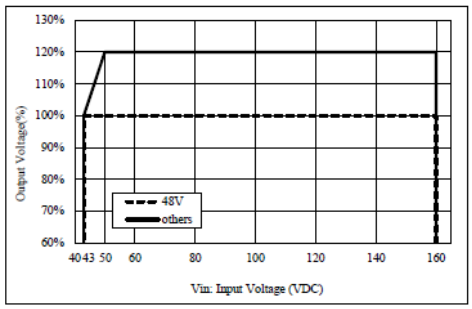


For CN50B110/NP，CN100B110/NP

Derating Curve: Tb V.S Load



Output Voltage Trim up Range Limited v.s Input Voltage



Additional Information:

The product is component type Board Mounted Power Supply intended for incorporation in information technology equipment, the overall compliance shall be investigated in the complete end system/equipment, in particular as:

- Fire enclosure
- Electrical enclosure

- The label is draft of artwork for marking plates pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.
- The power supply cord set is not evaluated together with the equipment. It should be investigated in the end system/equipment.
- The following output circuits are at ES1 energy levels: Output of all models except for 48V.
- The following output circuits are at ES2 energy levels: Output of model 48V.
- This equipment did not have fuse that shall be considered or evaluated in final system if it's necessary. The product was tested with manufacturer specified fuse, 10A / 500Vdc, Model: WN30, Manufactured: SUZHOU WALTER ELECTRONIC CO LTD.
- Supply circuit to this unit is assumed to be a rectified d.c. circuit of AC Mains voltage less than 250V.

Definition of various:

CN150B110 -zxxxxxxx, CN100B110 -zxxxxxxx, CN50B110 -zxxxxxxx (z = 5, 12, 15, 24, 48; xxxxxxx =/T, /AUX, /CO, /S, /NP, other alphanumeric character, symbol or blank)

Variable:	Suffix	Description
z	5, 12, 15, 24, 48	Denotes for different output voltage.
xxxxxxx	Blank	Denotes for standard model: M3 NUT, OCP, OVP & OTP belong to auto-recovery type
	/ T	Denotes for Standard model except change NUT from M3 to φ3.3mm
	/ AUX	Denotes for standard model except change -S to AUX OUTPUT(9V/10mA max.)
	/ CO	Denotes for Power PWB coating and Control PWB coating on both sides or Control PWB coating on both sides only.
	/ S	Denotes for standard model except change pin from 5mm to 3mm
	/NP	Denotes for no potting on power PWB.
	other alphanumeric character, symbol	For market purposes, no construction differences and no safety impact.

Note: These suffixes may be used together (e.g. /T, /TCO)

OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	**Possible Hazard**			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES3: Primary circuits	Instructed person, Skilled person	N/A	N/A	Isolating Transformers and certified Optocouplers
ES1: Secondary circuit		N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1st S	2nd S
PS3: > 100 Watt circuits (All circuits)	Combustible materials	See 6.3.1 (a) (N)	See 6.4.6 (N, A, S)	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
N/A	N/A	N/A	N/A	N/A
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1: Sharp edges and corners	Instructed person, Skilled person	N/A	N/A	N/A
MS1: Equipment mass – mass < 7 kg		N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
To be determinied by end-product use	--	--	--	--
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
--	--	--	--	--
Supplementary Information: “B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard				

ENERGY SOURCE DIAGRAM
Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems. Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings
See OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS ☒ **ES** ☒ **PS** ☒ **MS** ☐ **TS** ☐ **RS**