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EU DECLARATION OF CONFORMITY

NV700 Series


We, TDK-Lambda UK Limited, of Kingsley Avenue, Ilfracombe, Devon, EX34 8ES declare under our sole responsibility that the TDK-Lambda NV700 series of power supplies, as detailed on the attached products covered sheets, complies with the provisions of the following European Directives and is eligible to bear the CE mark:

Low Voltage Directive 2014/35/EU

RoHS 2 Directive 2011/65/EU

Assurance of conformance of the described product with the provisions of the stated EC Directive is given through compliance to the following standards:

Electrical Safety (LVD) EN60950-1:2006 + A2:2013

Name of Authorized Signatory	Martin Southam
Signature of Authorized Signatory	
Position of Authorized Signatory	Marketing Director, TDK-Lambda EMEA
Date	19 th January 2018
Date series first CE marked	29 January 2007
Place where signed	Ilfracombe, Devon, England

NV700 PRODUCTS COVERED

Unit Nomenclature:

RA-PFC-001 consists of the main PFC Converter without any NV700 modules fitted.

NV700 models as described below:

Units may be marked with a Product Code: K7x or NV7x where x may be up to any six letters and/or numbers 0 to 9.

Unit Configuration (Description) Code may be prefixed by NS # followed by / or - (where # may be any characters indicating non-safety related model differences).

Unit Configuration (Description) Code:

a) NV-700x or NV7x (these models are identical)

where x = H for high hold-up or blank for standard hold up

b) followed by: S, C or U

where S = Forward airflow, standard fan
C = Customer air, fan not fitted
U = Customer air, fan not fitted, cover not fitted

c) followed by: S or I

where S = Screw input terminals
I = IEC input

d) followed by: S, M, L, R, or T

where S = Standard Leakage (Class B Filter)
M = Medium Leakage
L = Low Leakage
R = Reduced Leakage
T = Tiny Leakage

Unit configuration may be given using the above code and/or by the option description. The input terminal type (screw or IEC) may alternatively be determined by examination of the unit.

e) optionally followed by: EN#V, EN*V, IN#V, IN*V, ES#V, ES*V, IS#V, IS*V.

where EN#V = AC good, global module good, PSU enable, 5-5.5V, 2A standby output
EN*V = AC good, global module good, PSU enable, 12-13.5V, 1A standby output
IN#V = AC good, global module good, PSU inhibit, 5-5.5V, 2A standby output
IN*V = AC good, global module good, PSU inhibit, 12-13.5V, 1A standby output
ES#V = AC good, PSU enable, 5-5.5V, 2A standby output
ES*V = AC good, PSU enable, 12-13.5V, 1A standby output
IS#V = AC good, PSU inhibit, 5-5.5V, 2A standby output
IS*V = AC good, PSU inhibit, 12-13.5V, 1A standby output

where # represents the standby output voltage and is in the range 5 to 5.5V

where * represents the standby output voltage and is in the range 12-13.5V

The Global Options Inhibit and Enable functions permit the customer to turn off or on the main psu outputs and the fan. The standby supply is for use by the customer and provides an SELV output that continues to operate when all the main psu outputs have been turned off using the Inhibit or Enable functions. All the functions of the Global Option pass through a single 8 way PWB socket and are all rated SELV.

Modules:

Up to 4 of the following modules types may be fitted:

@B

or @C

or @CM

or @BH

where @ is the output voltage of the module and is within the range given in the single output module table.

or @/#DB or @_#DB

where @ is the output voltage of channel 1 and # is the output voltage of channel 2 of the module. Voltages are within the range given in the DB module tables.

or @/#DA or @_#DA

where @ is the output voltage of channel 1 and # is the output voltage of channel 2 of the module. Voltages are within the range given in the DA module tables. Only 1 DA module may be fitted.

or B/S or B_S

where B/S indicates that a blanking plate is fitted in place of a module.

The following nomenclature may optionally be used for outputs connected in series:
(Note that outputs may be connected in series even when this nomenclature is not used)

@BB or @ BHB or @BBH or @BHBH or @CC or @CCM

where @ is the total voltage of any two B, BH, C or CM modules connected in series.

or @/#BDB or @_#BDB or @BHDB

where @ is the total series voltage of any B or BH module and DB module channel 1. # is the output voltage of the DB module channel 2. Voltages for # are within the range given in the DB module tables.

or @HDB

where @ is the total series voltage of any DB module channel 1 and channel 2.

For all outputs connected in series:

Permissible min. value for @ is given by summing the min. voltage ratings of the outputs connected in series.

Permissible max. value for @ is given by summing the max. voltage ratings of the outputs connected in series.

Custom Models:

Model: NV-700 RSS IN5V 12BH 12BH

Maximum outputs: 12.5V, 20A; 12.5V, 20A (total power 500W max.)

Maximum ambient: 65°C with 2.5%/°C derating of total power and module current above 50°C

Orientations: Horizontal with chassis lowest, on either side or vertical with the airflow upwards.

Comments: PSU has reverse air.

Model: NV-700 CSS ES5V 12C (NV722DCC and NV7Y019T)

Maximum output: 12V, 37.5A (peak power rating as given in electrical and thermal ratings section on following page)

Maximum ambient: 65°C with 2.5%/°C derating of total power and module current above 50°C

Orientations: Horizontal with chassis lowest, on either side or vertical with the airflow upwards.

Output Interface Assembly:

One of the following output interface assemblies may optionally be fitted:

Wxxx

where xxx is a number between 001 and 999. These assemblies attach to the module output(s) and contain circuitry providing one or more of the following: current sharing, reduced current limit, fusing, sequencing, diode or-ing, module good, filtering, connectors or terminal blocks for outputs or signaling purposes, indicator lamps or LEDs.

Documentation to be made available to the customer detailing ratings of all assembly outputs.

ELECTRICAL AND THERMAL RATINGS

Nominal Input Voltage	100 - 240 Vac
Input Voltage Range	90 - 264 Vac #
Input Frequency Range	47 - 440 Hz
Maximum Input Current	11 A rms

Subject to limitations, see table below.

Input Voltage)	Total output	Maximum
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Code	Cooling Option	Range (Vac)	power (W)	ambient (°C)	Derating
S	Forward airflow standard fan	90 - 99.9	700W continuous (850W peak if 700W average #)	65	2.5% per °C above 45°C
S	Forward airflow standard fan	100 - 149.9	700W continuous (850W peak if 700W average #)	65	2.5% per °C above 50°C
S	Forward airflow standard fan	150 - 264	1150W continuous (1450W peak if 1150W average #)	65	2.5% per °C above 45°C
C, U	Customer air fan not fitted	Refer to Customer Air Cooling section for details			

Global Option standby outputs (12-13.5V at 1A or 5-5.5V at 2A) should not be included when calculating total PSU output power. The total output power, module output currents and Global Option output currents are derated by the given value.

The PSU may output the given peak power for up to 10 seconds providing that the average power from the PSU does not exceed the stated value.

Global Options with output voltages between 5.01 and 5.5V have their max. output current linearly derated from 2A at 50°C ambient to 1.4A at 65°C ambient.

Permitted orientations: Horizontal with chassis lowest, on either side or vertical with the airflow upwards.

Single Output Modules:

Module	Nominal Voltage (V)	Voltage Range (V) #	Max. Current
B	3.3	3.135 - 3.6	40A
	5	4.75 - 5.5	4.75 - 5.0V: 40A 5.0 - 5.5V: Linearly derate from 40 to 36A
	8	7 - 9	7 - 8V: 22.5A 8 - 9V: Linearly derate from 22.5 to 20A
	12	12 - 15.5	12 - 12.5V: 19.5A 12.5 - 15.5V: Linearly derate from 19.5 to 15A
	24	24 - 28	24V: 10A 24 - 28V: Linearly derate from 10 to 8A
	BH	12	12 - 15.5
	24	24 - 28	24V: 10A 24 - 28V: Linearly derate from 10 to 8.5A
	C & CM	12	12 - 13.2
	16	15 - 17.6	15 - 16V: 28.12A. Derated to 450W above 16V
	24	24 - 26.4	24V: 18.75A. Derated to 450W above 24V
	30	27 - 32	27V: 16.67A. Derated to 450W above 27V

C & CM modules may output up to 600W for up to 10 seconds providing that the average power from the module does not exceed 450W.

Dual Output Modules:

Dual Output Modules, Output 1

Module	Nominal Voltage (V)	Voltage Range (V) #	Max. Current
DA	12	12.25	3A
DB	3.3	3.135 - 3.6	25A
	5	4.75 - 5.5	25A
	6	5.5 - 6.5	25A
	12	12 - 15.5	12 - 12.5V: 13A 12.5 - 15.5V: Linearly derate from 13 to 10A
	24	24 - 28	24 - 25V: 7A 25 - 28V: Linearly derate from 7 to 6A

Dual Output Modules, Output 2

Module	Nominal Voltage (V)	Voltage Range (V) #	Max. Current(A)	Max. Power(W)
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DA	12	(-)11.6 - (-)11.9	1	11.9
DB	5	3.3 - 6	10	60
	12	7 - 15.5	5	60
	24	24 - 32	2	50

Voltage measured at the module power terminals. This voltage must not be exceeded when remote sense is used.

DB modules with 6V nominal channel 1 derated as follows:

Ch.1 : 5.5 - 6V Ch.1 + Ch.2 : 195W total.
Ch.1 : 6.01 - 6.5V Ch.1 + Ch.2 : 170W total.

The DB module may be used with output 1 up to 24V at 8.3A and output 2 up to 16V at 3.13A provided the ambient temperature does not exceed 42°C.

SELV and Outputs Connected In Series:

All individual outputs are SELV. Outputs connected in series are non-SELV if the total output voltage + 30% of the highest of those outputs exceeds 60Vdc (the 30% addition allows for a single fault in any one individual channel).

If the total voltage of outputs connected in series exceeds the 60Vdc SELV limit then all outputs must be considered non-SELV.

The total voltage of outputs connected in series must not exceed 160V.

Non-SELV outputs are hazardous and must be guarded or a deflector fitted during installation to avoid a service engineer making inadvertent contact with the output terminals, or dropping a tool onto them.

All outputs have operational spacings to earth, and due consideration must be given to this in the end product design.