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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 power supplies, as detailed on the attached products covered sheets, comply with the provisions of the following European Directives and are eligible to bear the CE mark:

| | |
|-------------|---|
| Low Voltage | Directive 2014/35/EU |
| EMC | Directive 2014/30/EU |
| RoHS | Directive 2011/65/EU (as amended by 2015/863) |

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) | EN 62368-1:2014/AC:2015 |
| Electromagnetic Compatibility (EMC) | EN 61000-6-3:2007 + A1:2011 EN 61000-6-2:2005 EN 61204-3:2000 EN 55024:2010 EN 55032:2015 |
| Restriction of Hazardous Substances (RoHS) | EN 63000:2018 |

Our representative in the EU is TDK-Lambda Germany GmbH, located at Karl-Bold-Str. 40, 77855 Achern, Germany.

Note: The EMC performance of a component power supply will be affected by the final installation, compliance to the stated EMC standards and conformance to the EMC Directive must be confirmed after installation by the final equipment manufacturer. For guidance with respect to test conditions please visit our website at https://emea.lambda.tdk.com/EMC_Guidance or contact your local TDK-Lambda sales office.

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UK DECLARATION OF CONFORMITY



NV700 Series

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Electrical Equipment (Safety) Regulations 2016

Electromagnetic Compatibility Regulations 2016

Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment Regulations 2012

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

| | |
|--|---|
| Electrical Safety | EN 62368-1:2014/AC:2015 |
| Electromagnetic Compatibility (EMC) | EN 61000-6-3:2007 + A1:2011 EN 61000-6-2:2005 EN 61204-3:2000 EN 55024:2010 EN 55032:2015 |
| Restriction of Hazardous Substances (RoHS) | EN 63000:2018 |

Note: The EMC performance of a component power supply will be affected by the final installation, compliance to the stated EMC standards and conformance to the EMC Regulation must be confirmed after installation by the final equipment manufacturer. For guidance with respect to test conditions please visit our website https://emea.lambda.tdk.com/EMC_Guidance or contact your local TDK-Lambda sales office.

NV700 Series 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.

| Code | Cooling Option | Input Voltage) Range (Vac) | Total output power (W) | Maximum 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 | 12 - 12.5V: 20A 12.5 - 15.5V: Linearly derate from 20 to 15.5A |
| | 24 | 24 - 28 | 24V: 10A 24 - 28V: Linearly derate from 10 to 8.5A |
| C & CM | 12 | 12 - 13.2 | 12V: 37.5A. Derated to 450W above 12V |
| | 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) |
|--------|---------------------|---------------------|-----------------|---------------|
| 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.

NV700 Series Signature Page

| | |
|--|-------------------------------------|
| Name of Authorized Signatory | Christopher Haas |
| Signature of Authorized Signatory | |
| Position of Authorized Signatory | Head of Quality & Compliance Europe |
| Date | 23 September 2021 |
| Date when this CE declaration first issued | 29 January 2007 |
| Date when this UKCA declaration first issued | 6 April 2021 |
| Place where signed | Achern, Germany |

This declaration is signed for and on behalf of TDK-Lambda