



TDK-Lambda UK Limited
Kingsley Avenue, Ilfracombe
Devon, EX34 8ES, United Kingdom
Tel: +44 (0) 1271 856600
Fax: +44 (0) 1271 864894
www.uk.tdk-lambda.com

EU DECLARATION OF CONFORMITY

XMS Series

We, TDK-Lambda UK Limited, of Kingsley Avenue, Ilfracombe, Devon, EX34 8ES declare under our sole responsibility that the TDK-Lambda XMS 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	27 th December 2017
Date when first CE marked	02 November 2015
Place where signed	Ilfracombe, Devon, England

XMS PRODUCTS COVERED

Model Differences

XMS350 or XMS500 series (may also be marked as XMS-350 or XMS-500) as described below:

Units may be marked with a Product Code: Xy where y may be any number of characters.

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

Unit Configuration (Description)

XMSxy-a-bc-defghijklm

where:

- x =
 - 350 for 350W model
 - 500 for 500W model
 - 500P for 576W peak power models (36V, 40V and 48V output models only)

- y =
 - Blank for Class I
 - D for Class II

- a = Channel 1 Output Voltage (see Ch1 in the table below, adjustment range column).

- b = Standby Output Voltage: see standby voltage in table below
 - N for no supply
 - 5 for 5 volt
 - 12 for 12 volt

- c = Standby Output Current†:
 - C for 0.5A
 - M for 1.0A
 - H for 2.0A
 - N for no supply or 0 amps output

- d = Fan Supply†:
 - N for no fan supply (customer cooling)
 - N1 for 24V fan supply (customer cooling)
 - N2 for 12V variable supply
 - N3 for 12V fixed supply
 - KF for non-standard top fan
 - TF for top-fan

- e =
 - U for non-standard U chassis
 - P for perforated frame
 - N for Open Frame
 - C for custom chassis/covers for non-standard models
 - S for standard U chassis
 - B for standard U chassis with perforated cover

f = Touch (Enclosure) current:
 B for <100uA
 T for <75uA

g = Earth leakage current:
 D for Class II (no Earth)
 L for <300uA
 R for <150uA
 T for <100uA

h = E or In for inhibit
 T or En for enable

i = A for AC OK option
 N for no AC OK option

j = Blank for dual fuses fitted
 FL for single fuse fitted in the Live line

klm = Blank for standard output settings

May be three numbers from 0 to 9 (preceded by -) which denotes various output voltage/current settings within the specified ranges of each output for a particular unit. (may define non-safety related parameters/feature, e.g. reduced primary current limit, reduced OVP)

Input Parameters

Nominal input voltage 100 - 240 Vac

Input voltage range 90 - 264 Vac

Input frequency range 47 - 63 Hz

Maximum input current 7A (5.3A*) rms

* Input for 350W models.

All ratings apply for ambient temperatures up to 50°C.

Output Parameters

†Output ratings are in accordance with the following table:

Standard models:

Output Channel	Voltage Designation	Vout nom.(V)	Adjustment Range (V)	Output Current (A)	Output Power (W)
CH1 (500W)	12	12	11.6 - 13.2	41.6	500
	24	24	23.8 - 25.2	20.8	500
	36	36	36	13.8 (16*)	500(576*)
	40	40	38 - 42	12.5(15.16*)	500(576*)
	48	48	47-50	10.4(12*)	500(576*)
Standby Option	5	5	5 - 5.5	0.5	2.75
	5	5	5 - 5.5	2.0	11.0
	12	12	12-13.2	1	13.2
Fan Supply	N	-	-	-	-
	N1	24	Fixed	0.2	4.8
	N2	12	6-12	-	3.0
	N3	12	Fixed	0.25	3.0

CH1 (350W)	24	24	23.8 - 25.2	14.6	350
Standby Option	N	10	5 - 15	0	0
Fan Supply	N	-	-	-	-
	N1	24	Fixed	0.2	4.8

*576W peak power up to 2 minutes with 500Wrms power using the following formula:

$$500Wrms = ((\text{peakpower}^2 \times T1 + \text{reducedpower}^2 \times T2) / (T1 + T2))^{1/2}$$

Where T1 = peakpower time on in seconds

T2 = reducedpower time on in seconds

Non-Standard Models:

X00011# XMS350-24-NN-N1CBLEN	Customer specific chassis
X00023# XMS500D-24.5-5C-KFCBDEN	Customer specific top fan/chassis model
X00073# XMS500-24-NN-NCBRInA	Customer specific chassis/cover

Where # can be any letter denoting non-safety related changes.

Output Limitations:

All outputs are SELV

Channel 1 is hazardous energy

Additional Information

Cooling for units with customer supplied air (all models except –KF fan supply)

The following method must be used for determining the safe operation of PSUs.

The components listed in the following table must not exceed the temperatures given. To determine the component temperatures the heating tests must be conducted in accordance with the requirements of the standard in question. Consideration should also be given to the requirements of other safety standards.

Test requirements include: PSU to be fitted in its end-use equipment and operated under the most adverse conditions permitted in the end-use equipment handbook/specification and which will result in the highest temperatures in the PSU. To determine the most adverse conditions consideration should be given to the end use equipment maximum operating ambient, the PSU loading and input voltage, ventilation, end use equipment orientation, the position of doors & covers etc. Temperatures should be monitored using type K fine wire thermocouples (secured with cyanoacrylate adhesive or similar) placed on the hottest part of the component (out of any direct airflow) and the equipment should be run until all temperatures have stabilised.

Cooling for unit temperature table:

Circuit Ref:	Description	Max. Temperature (°C) ++
J1	Input Connector	105
C7, C8	X Capacitor	100
L2, L4	Common Mode Choke Winding	130 (145)
L6	Series Mode Choke Winding	130
ASY5 D7	Bridge Diode	125 (130)
C14, C11, C21, C22, C10, C23, C24, C6, C18 (++)	Y Capacitors	100
C26	Capacitor	85 (105)

RLY1	Relay	100
U1, U2, U5, U6, U7 (++)	Opto-Coupler	100
TX1 (Standby)	Windings and core	120 (130)
TX3 500W	Windings and core	120 (130)
TX3 350W	Windings and core	100 (110)
ASY6 Q3	Boost FET	127 (130)
ASY4 Q1	Forward FET	127 (130)
ASY3 Q4	Output FET	127 (130)
C13	Boost Capacitor	80 (105)
C9	Boost Capacitor	70 (105)
L3, L5	Boost Choke Winding	130 (140)
L7	Channel 1 Output Choke	130 (140)
C4, C5, C15, C16, C17		
C19, C20 (++)	Electrolytic Capacitors	80 (105)

+ The higher temperature limits in brackets may be used but product life may be reduced.

++ When fitted