

DEMKO CERTIFICATE

| | |
|----------------------------|---|
| Certificate No. | D-08891 |
| Page | 1/4 |
| Date of Issue | 2021-11-12 |
| Certificate Holder | TDK-LAMBDA CORP NAGAOKA TECHNICAL CENTER R&D DIV 2704-1 SETTAYA-MACHI NAGAOKA-SHI, NIIGATA, 940-1195 JAPAN |
| Manufacturer | TDK-LAMBDA CORP NAGAOKA TECHNICAL CENTER R&D DIV 2704-1 SETTAYA-MACHI NAGAOKA-SHI, NIIGATA, 940-1195 JAPAN |
| Production site | TDK-LAMBDA CORP 2704-1 SETTAYA-MACHI NAGAOKA-SHI, NIIGATA-KEN, 940-1195 JAPAN |
| Certified Product | See Page 2 for additional information |
| Model | Switching Power Supply HWS1000L-X /BATz, HWS1000L-X /YYYYYYY, SWS1000L-X /YYYYYYY See page 2 for additional Information |
| Trademark | <i>TDK-Lambda</i> |
| Ratings | Input: 100-240 Vac, 13A, 50/60 Hz. See page 2 for additional ratings |
| Tested according to | EN IEC 62368-1:2020, EN IEC 62368-1:2020/A11:2020 |
| Test Report No. | E122103-A6151-CB-1 issued on 2021-09-17 |
| Additional | EN 50178:1997 |
| Expire date | 2031-11-11 |

Certification Manager
Jan-Erik Storgaard

This is to certify that representative sample(s) of the Product described herein ("Certified Product") have been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the D-Mark Requirements. As specified in the respective appendix below the Designated Certificate holder is entitled to use the D-Mark, or its alternative for cables, for the Certified Product manufactured at the production site(s) identified above, in accordance with the D-Mark Service Agreement, including without limitation the D-Mark Testing and Certification Services Service Terms. Only those Products bearing the D-Mark should be considered as being covered by UL's D-Mark Service. This Certificate shall remain valid through the expiration date, unless terminated earlier in accordance with the Service Agreement including without limitation if the Standard identified on this Certificate is amended or withdrawn prior the expiration date.

Certification Body

UL International Demko A/S, Borupvang 5A, DK-2750
Ballerup, Denmark, Tel. +45 44 85 65 65,
info.dk@ul.com
www.UL.com



Appendix DEMKO CERTIFICATE

Certificate No. D-08891
Page 2/4
Date of Issue 2021-11-12

Factories:

TDK-LAMBDA MALAYSIA SDN BHD
PLO33 KAWASAN PERINDUSTRIAN SENAI SENAI, JOHOR, 81400
MALAYSIA

TDK-LAMBDA MALAYSIA SDN BHD
LOT 2 & 3, BATU 9 3/4
KAWASAN PERINDUSTRIAN
BANDAR BARU JAYA GADING KUANTAN, PAHANG, 26070
MALAYSIA

ALPS LOGISTICS FACILITIES CO LTD
593-1 NISHIOHASHI TSUKUBA-SHI, IBARAKI-KEN, 305-0831
JAPAN

TDK-LAMBDA (CHINA) ELECTRONICS CO LTD
NO.95,ZHUJIANG RD, XINWU DISTRICT WUXI, JIANGSU, 214028
CHINA

ZHANGJIAGANG HUA YANG ELECTRONICS CO LTD
NO.15 TONGXIN RD, ZHAOFENG ECONOMIC DEVELOPMENT ZONE, LEYU TOWN ZHANGJIAGANG, JIANGSU,
215622
CHINA

Additional Model(s):

Series: HWS1000L-X /YYYYYYYY, SWS1000L-X /YYYYYYYY, where X can be 3, 5, 12, 15, 24, 36, 48, or 60. And, /YYYYYYYY can be /RF, /RFHC, /RFCO2, /HC, /HCCO2, /CO2, /RFHCCO2, /LLF, /LLFCO2, /LNF1 (only for X is 48) or blank HWS1000L-X /BATz, where X can be 36 or 60. And, z can be 3 digit max which consist of 0 to 9 and/or A to Z or blank

Ratings:

Output:

HWS1000L-3, SWS1000L-3, +3.3Vdc, 200A
HWS1000L-5, SWS1000L-5, +5Vdc (+4 - +6Vdc), 200A max
HWS1000L-12, SWS1000L-12, +12Vdc (+9.6 - +14.4Vdc), 88A max
HWS1000L-15, SWS1000L-15, +15Vdc (+12 - +19.5Vdc), 70A max
HWS1000L-24, SWS1000L-24, +24Vdc (+19.2 - +28.8Vdc), 44A max
HWS1000L-36, SWS1000L-36, +36Vdc (+28.8 - +43.2Vdc), 29A max
HWS1000L-48, SWS1000L-48, +48Vdc (+38.4 - +56Vdc), 22A max
HWS1000L-60, SWS1000L-60, +60Vdc (+48 - +66 Vdc), 17A max

IPX0
Class I

Certification Body

UL International Demko A/S, Borupvang 5A, DK-2750
Ballerup, Denmark, Tel. +45 44 85 65 65, info.dk@ul.com
www.UL.com

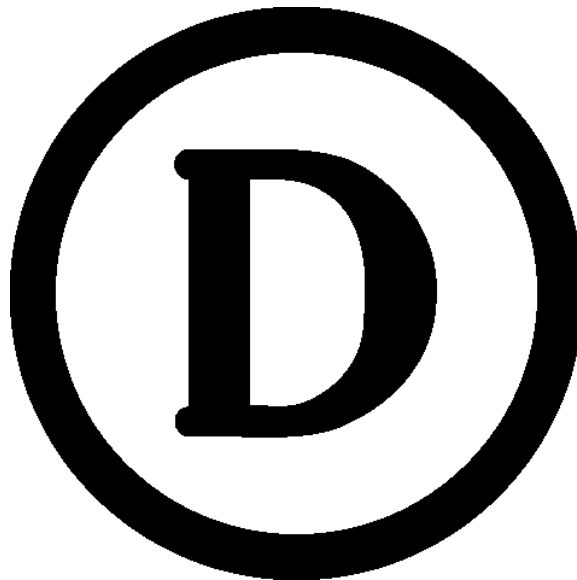


Appendix DEMKO CERTIFICATE

Certificate No. D-08891
Page 3/4
Date of Issue 2021-11-12

Certification Mark D-Mark

The D-Mark, as displayed below, shall appear on certified products only. Except as specified below the Mark shall be legible and no Minimum size is specified.



The size of the Mark may be reduced or enlarged on the condition that it remains readable and that the proportions of width and height are kept. The use of dark text for the D-Mark on light backgrounds and light text on dark backgrounds is permitted.

The D-Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Certificate Manufacturer's name or trademark and model number shall also appear elsewhere on the product

When putting the product on the EU market, the manufacturer's name, trademark or mark of origin must be affixed in a clearly visible location and position on the product, on the package and in the user manual. It can be affixed by label, be directly imprinted, or cast or molded into the product.

Where the size of the product does not allow the Mark, the manufacturer's name, trademark, mark of origin and model number to be legible, and appearance on a label is not desired, it is allowed to cast, stamp or mold the Mark into the product, in a size which is not visible to the naked eye, provided the legible Mark, the manufacturer's name, trademark or mark of origin and model number appears on the package and in the user manual

Certification Body

UL International Demko A/S, Borupvang 5A, DK-2750
Ballerup, Denmark, Tel. +45 44 85 65 65, info.dk@ul.com
www.UL.com



Appendix DEMKO CERTIFICATE

Certificate No. D-08891
Page 4/4
Date of Issue 2021-11-12

Alternate certification Mark for cables

As an alternative to the D-Mark specified above the alternate D-Mark, displayed below, can appear on certified cables only. Minimum size is not specified, as long as the mark is legible.

<DEMKO>

The alternate D-Mark may be cast, stamped or molded into the cable and continue throughout the length of the cable as specified in the applicable cable standard.

All content shall be in accordance with the details provided on this D-Mark Certificate.

Certification Body

UL International Demko A/S, Borupvang 5A, DK-2750
Ballerup, Denmark, Tel. +45 44 85 65 65, info.dk@ul.com
www.UL.com

