

# DEMKO CERTIFICATE

<b>Certificate No.</b>	D-08874-M5
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<b>Date of Issue</b>	2024-07-05
<b>Certificate Holder</b>	TDK-LAMBDA CORP NAGAOKA TECHNICAL CENTER R&D DIV 2704-1 SETTAYA-MACHI NAGAOKA-SHI NIIGATA 940-1195 JAPAN
<b>Production site</b>	TDK-LAMBDA (CHINA) ELECTRONICS CO LTD NO.95, ZHUJIANG RD, XINWU DISTRICT WUXI JIANGSU 214028 CHINA See Page 2 for additional information
<b>Certified Product</b>	Switching Power Supply
<b>Model</b>	ZWS150BAF-24/FU, ZWS150BAF-abcdefghijkl See page 2 for additional Information
<b>Trademark</b>	<b><i>TDK-Lambda</i></b>
<b>Ratings</b>	Input: Model ZWS150BAF-3bcdefghij: 100-240 Vac, 50/60 Hz, 1.4A See page 2-3 for additional ratings
<b>Tested according to</b>	EN IEC 62368-1:2020, EN IEC 62368-1:2020/A11:2020
<b>Test Report No.</b>	E122103-A6172-CB-2 issued on 2024-07-03
<b>Additional</b>	Additionally evaluated to EN 50178:1997. The report was revised to include technical modifications. Summary of Modifications: Deletion of Factory, Update National differences, Update Critical Components information, see CB Test Report for details.
<b>Expire date</b>	This Certificate replaces Certificate No.: D-08874-M4 issued on 2023-08-23 2027-02-15

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**Certification Manager**  
Thomas Wilson

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with the Service Agreement including without limitation if the Standard identified on this Certificate is amended or withdrawn prior the expiration date.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

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## Factories:

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

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

TDK-LAMBDA CORP  
2704-1 SETTAYA-MACHI  
NAGAOKA-SHI  
NIIGATA-KEN 940-1195 JAPAN

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

YOKOTE SEIKO CO., LTD.  
1-71 ARAYATORIKIMACHI  
AKITA-SHI  
AKITA 010-1633 JAPAN

## Additional Model(s):

ZWS150BAF-abcdefghij,  
a = 3, 5, 12, 15, 24 or 48  
b = "/" or blank  
c = "R" or blank  
d = "A", "L" or blank  
e = "CO2" or blank  
f = "FG" or blank  
g = "FV" or blank  
h = "FGM" or blank  
i = "SN" or blank  
j = "N" or blank

## Additional Ratings:

Input:  
Model ZWS150BAF-3bcdefghij:  
100-240 Vac, 50/60 Hz, 1.4A  
Models ZWS150BAF-5bcdefghij, -12bcdefghij, -15bcdefghij, -24bcdefghij, -48bcdefghij and ZWS150BAF-24/FU

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100-240 Vac, 50/60 Hz, 2.0A

Output:

3.3 Vdc, 30A: ZWS150BAF-3bcdefghij (DC 2.64 - 3.63 V, max 30A, max 99.0W)

5 Vdc, 30A: ZWS150BAF-5bcdefghij (DC 4.0 - 5.5 V, max 30A, max 150W)

12 Vdc, 12.5A: ZWS150BAF-12bcdefghij (DC 9.6 - 13.2 V, max 12.5A, max 150W)

15 Vdc, 10A: ZWS150BAF-15bcdefghij (DC 12.0 - 16.5 V, max 10A, max 150W)

24 Vdc, 6.3A: ZWS150BAF-24bcdefghij and ZWS150BAF-24/FU (DC 19.2 - 26.4 V, max 6.3A, max 151.2W)

48 Vdc, 3.2A: ZWS150BAF-48bcdefghij (DC 38.4 - 52.8 V, max 3.2A, max 153.6W)

Not classified, Class 1 construction

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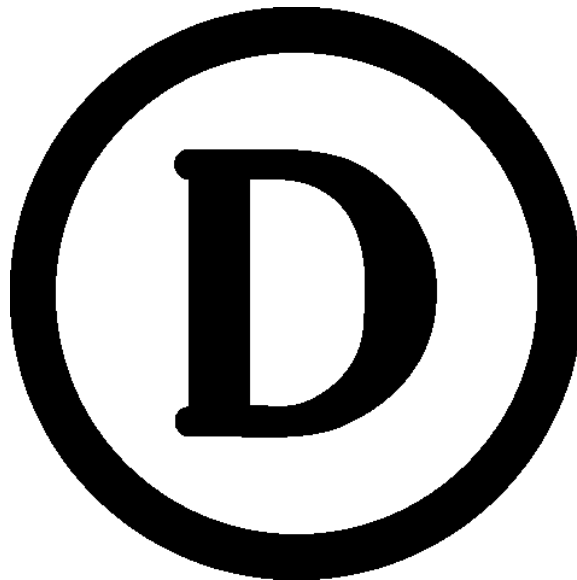
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## **Certification Mark D-Mark**

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

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## **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.

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