

File E132003
Project 98NK6531

Issued: April 8, 1998
Revised: February 16, 2006

Report

On

COMPONENT - ELECTRIC FANS

Delta Electronics Inc.
Taoyuan Hsien, Taiwan

Copyright © 1998 Underwriters Laboratories Inc.

Underwriters Laboratories Inc. authorizes the above named company to reproduce this Report provided it is reproduced in its entirety.

Underwriters Laboratories Inc. authorizes the above named company to reproduce the latest pages of that portion of this Report consisting of this Cover Page through Page 2.

DESCRIPTION

PRODUCT COVERED:

USR Component - DC Fans, all Models except for Models AFB1448HE(Y) series, see "ELECTRICAL RATINGS" for details.

USR, CNR - DC Fans, Models AFB1448HE(Y) series, where (X) may be H, M or L; (Y) may be xxxxx, where x may be A through Z, 0 through 9, "-" or blank, see "ELECTRICAL RATINGS" for details.

ELECTRICAL RATINGS:

Model Nos.	Volts dc	Amperes
AFB1212LE(Y)	12	0.30
AFB1212ME(Y)	12	0.40
AFB1212HE(Y)	12	0.48
AFB1212HHE(Y)	12	0.70
AFB1212HHE-8C2A	12	0.75
AFB1212VHE(Y)	12	0.90
AFB1212SHE(Y)	12	1.60
AFB1212EHE(Y)	12	2.20
AFB1212GHE(Y)	12	3.24
AFB1224LE(Y)	24	0.23
AFB1224ME(Y)	24	0.30
AFB1224HE(Y)	24	0.36
AFB1224HHE(Y)	24	0.45
AFB1224VHE(Y)	24	0.57
AFB1224SHE(Y)	24	0.75
AFB1224EHE(Y)	24	1.05
AFB1224GHE(Y)	24	1.60
AFB1248LE(Y)	48	0.09
AFB1248ME(Y)	48	0.12
AFB1248HE(Y)	48	0.18
AFB1248HHE(Y)	48	0.23
AFB1248VHE(Y)	48	0.27
AFB1248SHE(Y)	48	0.40
AFB1248EHE(Y)	48	0.60
AFB1248GHE(Y)	48	0.90
EFB1212LE(Y)	12	0.24
EFB1212ME(Y)	12	0.35
EFB1212HE(Y)	12	0.40
EFB1212HHE(Y)	12	0.60
EFB1212VHE(Y)	12	0.72
EFB1212SHE(Y)	12	1.2
EFB1224LE(Y)	24	0.15
EFB1224ME(Y)	24	0.21
EFB1224HE(Y)	24	0.27
EFB1224HHE(Y)	24	0.30
EFB1224VHE(Y)	24	0.40
EFB1224SHE(Y)	24	0.66

***TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):**

USR indicates investigation to U.S. Standard for Electric Fans, UL 507.

CNR indicates investigation to the Canadian Standard for Fans and Ventilators, CSA C22.2 No. 113 - Sixth Edition & T.I.L. G-37C dated March 25, 2005.

Use - For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability - When installed in the end-use equipment, consideration shall be given to the following:

1. The suitability of the fan leads, connector and strain relief shall be determined for each application.
2. A suitable enclosure, either a fire enclosure (enclosure rated with suitable flammability rating) or mechanical enclosure (guard) shall be provided in accordance with the requirements of the end application.
3. These fans have not been evaluated for use in combination with any solid-state speed control.
4. These fans have only been investigated for connection to low voltage non-energy hazard isolated secondary circuit. Further considerations must be given for a non-isolated secondary circuit connection.
5. These units are provided with Class A (105) insulation, the need for measuring fan coil temperature shall be determined during each end-use application.
6. These fans all Models are provided with locked rotor protected circuit (controlled by the IC and other electronic components); the locked rotor current is greater than 50% of the normal input current and can not be considered as an electronic protected type motor.
7. **Models AFB1448HE(Y) series, where (Y) may be xxxxx, where x may be A through Z, 0 through 9, "-" or blank, are provided with an external lead that is intended for connection to an external speed control (PWM) circuit. This lead was not connected during the component fan investigation.**

GUTACHTEN MIT FERTIGUNGSÜBERWACHUNG CERTIFICATE OF CONFORMITY WITH FACTORY SURVEILLANCE

Delta Electronics Inc.
252 Shangying Road
Guishan Industrial Zone
33341 Taoyuan City
Taiwan

ist berechtigt, für ihr Produkt /
is authorized to use for their product
Einbauventilator für IT-Geräte
Fan for building-in, IT-equipment

die hier abgebildeten markenrechtlich geschützten Zeichen
für die ab Blatt 2 aufgeführten Typen zu benutzen /
the legally protected Marks as shown below for the types referred to on page 2 ff.



REG 1764 oder/or



oder/or VDE-REG 1764

REG 1764

Geprüft und zertifiziert nach /
Tested and certified according to

DIN EN IEC 62368-1 (VDE 0868-1):2021-05; EN IEC 62368-1:2020+A11:2020

Das Produkt erfüllt auch die Anforderungen nach /
The product also fulfills the requirements of

IEC 62368-1:2018

Aktenzeichen: 5000878-2611-0007 / 298442

File ref.:

Ausweis-Nr. 1764

Blatt 1

Certificate No.

Page

Weitere Bedingungen siehe Rückseite und Folgeblätter /
further conditions see overleaf and following pages

Offenbach, 1994-06-08

(letzte Änderung / updated 2022-11-11)

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsstelle / Certification

M. Tasotti

VDE Zertifikate sind nur gültig bei Veröffentlichung unter:
VDE certificates are valid only when published on:

<http://www.vde.com/zertifikat>
<http://www.vde.com/certificate>

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Delta Electronics Inc., 252 Shangying Road, Guishan Industrial Zone, 33341 TAOYUAN CITY, TAIWAN

Aktenzeichen / File ref.

5000878-2611-0007 / 298442 / TL4 / CNGD-SXU

letzte Änderung / updated

2022-11-11

Datum / Date

1994-06-08

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Gutachtens mit Fertigungsüberwachung Nr. 1764.

This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 1764.

Einbauventilator für IT-Geräte *Fan for building-in, IT-equipment*

Typ(en) / Type(s)

AFB0812LL/L/M/H/HH/VH/SH

AFB0824LL/L/M/H/HH/VH/SH

AFB0912L/M/H/HH/VH

AFB0924L/M/H/HH/VH

AFC0612A

AFC0612B

AFB0605LB/MB/HB/HHB

AFB0605LLD/LD/MD/HD/HHD

AFB0612LLD/LD/MD/HD/HHD/VHD

AFB0624LLD/LD/MD/HD/HHD/VHD

AFC0912A/B-(M/H/HH)

AFC0912A/B-F00(M/H/HH)

AFC0912A/B-R00(M/H/HH)

DSB0612L/M/H

BFB1012LL/L/M/H/HH(-F00/R00)

BFB1024LL/L/M/H/HH(-F00/R00)

BFC1012A/B(-F00/F05/R00)

BFC1012C(-F00)

AFB1212LE/ME/HE/HHE/VHE(-F00/F05/R00)

AFB1224LE/ME/HE/HHE/VHE(-F00/F05/R00)

BFB1224LE/ME/HHE(-F00/R00)

BFB1248LE/ME/HE(-F00/R00)

AFB0612/M-SB/H-SB

AFB0912/M-SB/H-SB(F00)

AFB02505LA/MA/HA

AFB02512LA/MA/HA/HHA

AFC0712A/B

AFB0305LLA/LA/MA/HA

AFB0312LLA/LA/MA/HA

ASB0912/M-SB/H-SB

Fortsetzung siehe Blatt 4 /
continued on page 4

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Delta Electronics Inc., 252 Shangying Road, Guishan Industrial Zone, 33341 TAOYUAN CITY, TAIWAN

Aktenzeichen / File ref.

5000878-2611-0007 / 298442 / TL4 / CNGD-SXU

letzte Änderung / updated

2022-11-11

Datum / Date

1994-06-08

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Gutachtens mit Fertigungsüberwachung Nr. 1764.

This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 1764.

Genehmigung zum Benutzen des auf Seite 1 abgebildeten markenrechtlich geschützten Zeichens des VDE:

Grundlage für die Benutzung sind die Allgemeinen Geschäftsbedingungen (AGB) der VDE Prüf- und Zertifizierungsinstitut GmbH (www.vde.com\AGB-Institut). Das Recht zur Benutzung erstreckt sich nur auf die bezeichnete Firma mit den genannten Fertigungsstätten und die oben aufgeführten Produkte mit den zugeordneten Bezeichnungen. Die Fertigungsstätte muss so eingerichtet sein, dass eine gleichmäßige Herstellung der geprüften und zertifizierten Ausführung gewährleistet ist.

Die Genehmigung ist so lange gültig wie die VDE-Bestimmungen gelten, die der Zertifizierung zugrunde gelegen haben, sofern sie nicht auf Grund anderer Bedingungen aus der VDE Prüf- und Zertifizierungsordnung (PM102) zurückgezogen werden muss.

Der Gültigkeitszeitraum einer VDE-GS-Zeichengenehmigung kann auf Antrag verlängert werden. Bei gesetzlichen und / oder normativen Änderungen kann die VDE-GS-Zeichengenehmigung ihre Gültigkeit zu einem früheren als dem angegebenen Datum verlieren.

Produkte, die das Biozid Dimethylfumarat (DMF) enthalten, dürfen gemäß der Kommissionsentscheidung 2009/251/EG nicht mehr in den Verkehr gebracht oder auf dem Markt bereitgestellt werden.

Der VDE-Zeichengenehmigungsausweis wird ausschließlich auf der ersten Seite unterzeichnet.

Approval to use the legally protected Mark of the VDE as shown on the first page:

Basis for the use are the general terms and conditions of the VDE Testing and Certification Institute (www.vde.com\terms-institute). The right to use the mark is granted only to the mentioned company with the named places of manufacture and the listed products with the related type references. The place of manufacture shall be equipped in a way that a constant manufacturing of the certified construction is assured.

The approval is valid as long as the VDE specifications are in force, on which the certification is based on, unless it is withdrawn according to the VDE Testing and Certification Procedure (PM102E).

The validity period of a VDE-GS-Mark Approval may be prolonged on request. In case of changes in legal and / or normative requirements, the validity period of a VDE-GS-Mark Approval may be shortened.

Products containing the biocide dimethylfumarate (DMF) may not be marketed or made available on the EC market according to the Commission Decision 2009/251/EC.

The approval is solely signed on the first page.

Declaration of Conformity

Manufacturer name: Delta Electronics, Inc.

Add: 252, Shangying Road, Guishan Industrial Zone, Taoyuan City 33341, Taiwan

Tel: 886-3-359-1968

Fax: 886-3-359-1991

EU Contact address:

Delta Electronics (Netherlands) BV

Zandsteen 15, 2132 MZ Hoofddorp, The Netherlands

Is herewith confirmed the following equipment

Product: DC Fan

Type Designation: BFB0712HB-SM(Y), AFB1248MF(Y), AFB1248HF(Y), AFB1248HHF(Y), AFB1248VHF(Y), AFB1248SHF(Y), KDB0505HB(Y), AFB03512LA(Y), AFB03512MA(Y), AFB03512HA(Y), AFB0312LA(Y), AFB0312MA(Y), AFB0312HA(Y), AFB02512MA(Y), AFB02512HA(Y), AFB02512HHA(Y), KDB04505HA(Y), PFB2024LT(Y), PFB2024MT(Y), PFB2048LT(Y), PFB2048MT(Y), PFB2048HT(Y), BSB0705HC(Y), PHB2048LT(Y), PHB2048MT(Y), KDB0505HB-5K86(Y), AFB0412HB-5F45(Y), KHB1248VHS(Y), KHB1248SHS(Y), KHB1248EHS(Y), BFB1224HHE-4J97(Y), DSB0512LB(Y), DSB0512MB(Y), DSB0512HB(Y), DSB0512HHB(Y), EFB0412LA-SE(Y), TFB0512EHF-4M56(Y), QFR1212EHE(Y), QFR1212GHE(Y), NFB0612L-A(Y), NFB0612M-A(Y), NFB0612H-A(Y), NFB0612HH-A(Y), AFB1212HE-RD0(Y), AFC1248D-6A28(Y), KFB2348HHU(Y), KFB2348HU(Y), KFB2348HV(Y), KFB2348HHV(Y), KFB2548HU(Y), KFB2548HHU(Y), LFB0512HD(Y), GFB1412EHT(Y), GFC1412DT(Y), DSB1212HH(Y), AFB0805H-T6A9(Y), QFR0812VHE(Y), QFR0812SHE(Y), QFR0812EHE(Y), QFR0812GHE(Y), QFR0812UHE(Y), AFB1248EHE-5K82(Y), BFB1012L-C(Y), BFB1012M-C(Y), BFB1012H-C(Y), BFB1012HH-C(Y), BUB04512MD(Y), BUB04512HD(Y), QFR0912EHE(Y), QFR0912GHE(Y), QFR0912UHE(Y), BUB0505LB(Y), BUB0505MB(Y), NFB0712LD(Y), NFB0712MD(Y), NFB0712HD(Y), NFB0712HHD(Y), NFB0712VHD(Y), EFC1548DG-5K06(Y), BDB05405HB(Y), NUB0712M(Y), NFB0712M-SM(Y), BFB0612HB-SM(Y), BFB0712HHD-SM06(Y), BFB0812H-SM05(Y), AFB0812SHE(Y), AFB0812EHE(Y), AFB0812GHE(Y), AFC0812DE(Y), AFB0824SHE(Y), AFB0824EHE(Y), AFB0824GHE(Y), KSB0505HA(Y), KHB2548HHU(Y), BFB04505LA-A(Y), BFB04505MA-A(Y), BFB04505HA-A(Y), BFB04505HHA-A(Y), BFB0505LA-A(Y), BFB0505MA-A(Y), BFB0505HA-A(Y), BFB0505HHA-A(Y), KHB2348HHU(Y), KHB2348HHV(Y), KFB0505HA(Y), DSB0612LB(Y), DSB0612MB(Y), DSB0612HB(Y), DSB0612HHB(Y), PFC1212DE-6C1M(Y), QFR1224EHE(Y), QFR1224GHE(Y), QFR1248EHE(Y), QFR1248GHE(Y), QFR1248EHE(Y), QFR1248GHE(Y), KSB0405HA(Y), AFC0712DE-5J76 (D27550-001)(Y), NFB1212L(Y), NFB1212M(Y), NFB1212H(Y), BSB0412HA-SM02(Y), AFB0648VH-5C2C(Y), BFB0305LA-A(Y), BFB0305MA-A(Y), BFB0305HA-A(Y), BFB0305HHA-A(Y),

BFB03505LA-A(Y), BFB03505MA-A(Y), BFB03505HA-A(Y), BFB03505HHA-A(Y), BFB0405LA-A(Y),
 BFB0405MA-A(Y), BFB0405HA-A(Y), BFB0405HHA-A(Y), BSB0712HD(Y), AFB08512LD(Y),
 AFB08512MD(Y), AFB08512HD(Y), AFB08512HHD(Y), AFB08512VHD(Y), FC08512DD(Y),
 BUB0524MB(Y), BUB0524HB(Y), BUB0524HHB(Y), QFR0924EHE(Y), QFR0924GHE(Y),
 QFR0924UHE(Y), QFR0948EHE(Y), QFR0948GHE(Y), QFR0948UHE(Y), BFB0712L-A(Y),
 BFB0712M-A(Y), BFB0712H-A(Y), BFB0712HH-A(Y), ASB03505LB-6C18(Y), PFC1548DG(Y),
 FFB0412VHN-A(Y), FFB0412SHN-A(Y), AFB1212LE(Y), AFB1212ME(Y), AFB1212HE(Y),
AFB1212HHE(Y), AFB1212VHE(Y), AFB1224LE(Y), AFB1224ME(Y), AFB1224HE(Y),
 AFB1224HHE(Y), AFB1224VHE(Y), AFB1212SHE(Y), AFB1212EHE(Y), AFB1212GHE(Y),
 AFB1224SHE(Y), AFB1224EHE(Y), AFB1224GHE(Y), AFB1248SHE(Y), AFB1248EHE(Y),
 AFB1248GHE(Y), AUB0812LD(Y), AUB0812MD(Y), AUB0812HD(Y), AUB0812HHD(Y),
 AUB0812VHD(Y), BFB0512LA-A(Y), BFB0512MA-A(Y), BFB0512HA-A(Y), BFB0512HHA-A(Y),
 DSB0412LA(Y), DSB0412MA(Y), DSB0412HA(Y), DSB0412HHA(Y), DSB0824HH(Y), DSB0824VH(Y),
 DSB0924L(Y), DSB0924M(Y), DSB0924H(Y), DSB0924HH(Y), AFB02505LB-A(Y), AFB02505MB-A(Y),
 AFB02505HB-A(Y), AFB02505HHB-A(Y), NFB0612LB(Y), NFB0612MB(Y), NFB0612HB(Y),
 NUB0612LB(Y), NUB0612MB(Y), NUB0612HB(Y), AUB0712HH-T6L1(Y), DSB0612LA(Y),
 DSB0612MA(Y), AFB02505LA(Y), AFB02505MA(Y), AFB02505HA(Y), AFB02505HHA(Y),
 AFB0305LA(Y), AFB0305MA(Y), AFB0305HA(Y), AFB03505LA(Y), AFB03505MA(Y), AFB03505HA(Y),
 BFB0712HD-A(Y), AUB0812HE(Y), AUB0812HHE(Y), AUB0812VHE(Y), AUB0824HE(Y),
 AUB0824HHE(Y), AUB0824VHE(Y), AUC0812DE(Y), FFB03612EHN(Y), BSB04505HA(Y),
 BFB0605LB-SX(Y), QFR0812DE(Y), AFB1212HHE-8C2A(Y),
 (Y) may be xxxxx , where X may be A through Z, 0 through 9, “-“ or blank

Comply with the following directives and requirements set out in the Council Directive on the Approximation for the Laws of the Member States

- ☒ Low Voltage Directive 2014/35/EU
 - ☒ EN 62368-1: 2014
(Report No.: 40016423(5000878-2611-0011))
 - ☐ EN 60335-1: 2012+A11 (Report No.:)
 - ☐ EN 60335-2-80:2003+A1:2004+A2:2009 (Report No.:)
 - ☐ EN 60335-2-40:2003+A11+A12+A1+A2+A13 (Report No.:)
 - ☐ EN 62233:2008 (Report No.:)
- ☒ Risk Assessment Report (Report No.: 40016423(5000878-2611-0011)_RA)
- ☒ RoHS Directive 2011/65/EU
 - ☒ EN 50581: 2012
(Ref. No.: 40016423(5000878-2611-0011)_RoHS)
- ☐ ErP Directive 2009/125/EC, Commission Regulation (EU) No 327/2011
(Report No.:)



Ref. No.: 40016423(5000878-2611-0011)_CE1

Person responsible for making this declaration

Name, Surname: Tammy Chen

Title: Senior Safety Engineer

Place: Taiwan, Delta

Date: 2019-03-11

Signature: 