



## TEMPORARY SPECIFICATION FOR REFERENCE

Customer : \_\_\_\_\_  
Description : EST FAN (Energy Saving Technology Fan)  
Customer Part No. \_\_\_\_\_ REV. : \_\_\_\_\_  
Delta Model No. AFL12AUHE-00 REV. : 02  
Sample Issue No. \_\_\_\_\_  
Sample Issue Date : Oct. 06 2017

PLEASE SEND ONE COPY OF THIS SPECIFICATION BACK AFTER YOU SIGNED APPROVAL FOR PRODUCTION PRE-ARRANGMENT.

APPROVED BY:

DATE :

DELTA ELECTRONICS, INC.  
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## STATEMENT OF DEVIATION

NONE

DESCRIPTION:

Delta Electronics, Inc.  
No.252, Shanying Rd., Guishan Dist.,  
Taoyuan City 333, Taiwan (R.O.C.)

TEL : 886-(0)3-3591968  
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## **Temporary specification for reference**

Customer : \_\_\_\_\_

Description : EST FAN (Energy Saving Technology Fan)  
\_\_\_\_\_

Customer P/N : \_\_\_\_\_

rev. : \_\_\_\_\_

Delta model no. : AFL12AUHE-00

Delta Safety Model No.: N/A

Sample revision. : 02

Issue no.: \_\_\_\_\_

Sample issue date : OCT. 06 2017

Quantity : \_\_\_\_\_

### 1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE AC TO DC BRUSHLESS AXIAL FLOW FAN.

### 2. CHARACTERS:

UNLESS SPECIFIED, ALL READINGS AND TESTS ARE BASED ON 25°C, 65% RH.

| ITEM                                       | DESCRIPTION   |
|--|---|
| RATED VOLTAGE (VAC)                        | 100 ~ 240 (50 / 60Hz)   |
| OPERATION VOLTAGE                          | 110 OR 230 VAC  |
| INPUT POWER (FREE AIR)                     | 4.6 W TYP.  |
| SPEED                                      | 3200 R.P.M. (REF.)  |
| MAX. AIR FLOW<br>(AT ZERO STATIC PRESSURE) | 2.93 M <sup>3</sup> /MIN. (TYP.)<br>103.6 CFM (TYP.)                          |
| MAX. AIR PRESSURE<br>(AT ZERO AIRFLOW)     | 10.16 mmH <sub>2</sub> O (TYP.)<br>0.40 inchH <sub>2</sub> O (TYP.)           |
| ACOUSTICAL NOISE (AVG.)                    | 45 dB-A   |
| INSULATION TYPE                            | UL: CLASS B   |
| INSULATION STRENGT                         | 10 MEG OHM MIN. AT 500 VDC<br>(BETWEEN FRAME AND (+) TERMINAL)                |
| DIELECTRIC STRENGTH                        | 5 mA MAX. AT 500 VAC 50/60 Hz ONE MINUTE,<br>(BETWEEN FRAME AND (+) TERMINAL) |

(continued)

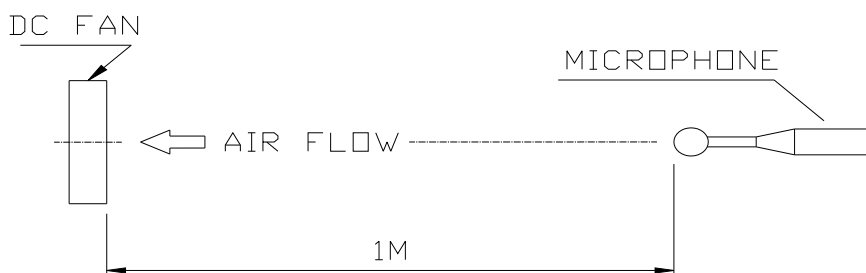
PART NO:

DELTA MODEL: AFL12AUHE-00

|   |   |
|---|---|
| LIFE EXPECTANCE (L10)<br>(AT LABEL VOLTAGE) | 70,000 HOURS CONTINUOUS OPERATION AT<br>40 °C WITH 15 ~ 65 %RH. |
| ROTATION                                    | COUNTER CLOCK WISE DIRECTIONS FROM<br>NAME PLATE SIDE           |
| OVER CURRENT SHUT DOWN                      | THE CURRENT WILL SHUT DOWN, WHEN<br>ROTOR LOCKED AND FIXED.     |
| LEAD WIRE                                   | UL 3266 AWG #24 125°C / 300V<br>BLUE WIRE (N)<br>BROWN WIRE (L) |

NOTES:

1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES.
2. STANDARD AIR PROPERTY IS AIR AT (Td) 25°C TEMPERATURE, (RH) 65% RELATIVE HUMIDITY , AND (Pb) 760 mmHg BAROMETRIC PRESSURE.
3. THE VALUES WRITTEN IN PARENS , ( ), ARE LIMITED SPEC.
4. THE CHARACTERS SHOWED IN PAGE 1 IS THE CONDITION OF BOTH FANS RUN.
5. ACOUSTICAL NOISE MEASURING CONDITION:



NOISE IS MEASURED AT RATED VOLTAGE IN FREE AIR IN ANECHOIC CHAMBER WITH B & K SOUND LEVEL METER WITH MICROPHONE AT A DISTANCE OF ONE METER FROM THE FAN INTAKE.

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PART NO:

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DELTA MODEL: AFL12AUHE-00

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3. MECHANICAL:

- 3-1. DIMENSIONS----- SEE DIMENSIONS DRAWING
- 3-2. FRAME----- PLASTIC UL: 94V-0
- 3-3. IMPELLER----- PLASTIC UL: 94V-0
- 3-4. BEARING SYSTEM----- TWO BALL BEARINGS
- 3-5. WEIGHT-----275 GRAMS(REF.)
- \*3-6. INGRESS PROTECTION LEVEL ----- IP 52  
( \*IP TEST CONDITION IS BASED ON IEC 60529 )

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE----- -20 TO +60 DEGREE C
- 4-2. STORAGE TEMPERATURE----- -40 TO +85 DEGREE C
- 4-3. OPERATING HUMIDITY----- 5 TO 90 % RH
- 4-4. STORAGE HUMIDITY----- 5 TO 95 % RH

5. PROTECTION:

- 5-1. LOCKED ROTOR PROTECTION  
IMPEDANCE OF MOTOR WINDING PROTECTS MOTOR FROM FIRE IN  
96 HOURS OF LOCKED ROTOR CONDITION AT THE RATED VOLTAGE.

6. RE OZONE DEPLETING SUBSTANCES:

- 6-1. NO CONTAINING PBBs, PBBOs, CFCs, PBBEs, PBDPEs AND HCFCs.

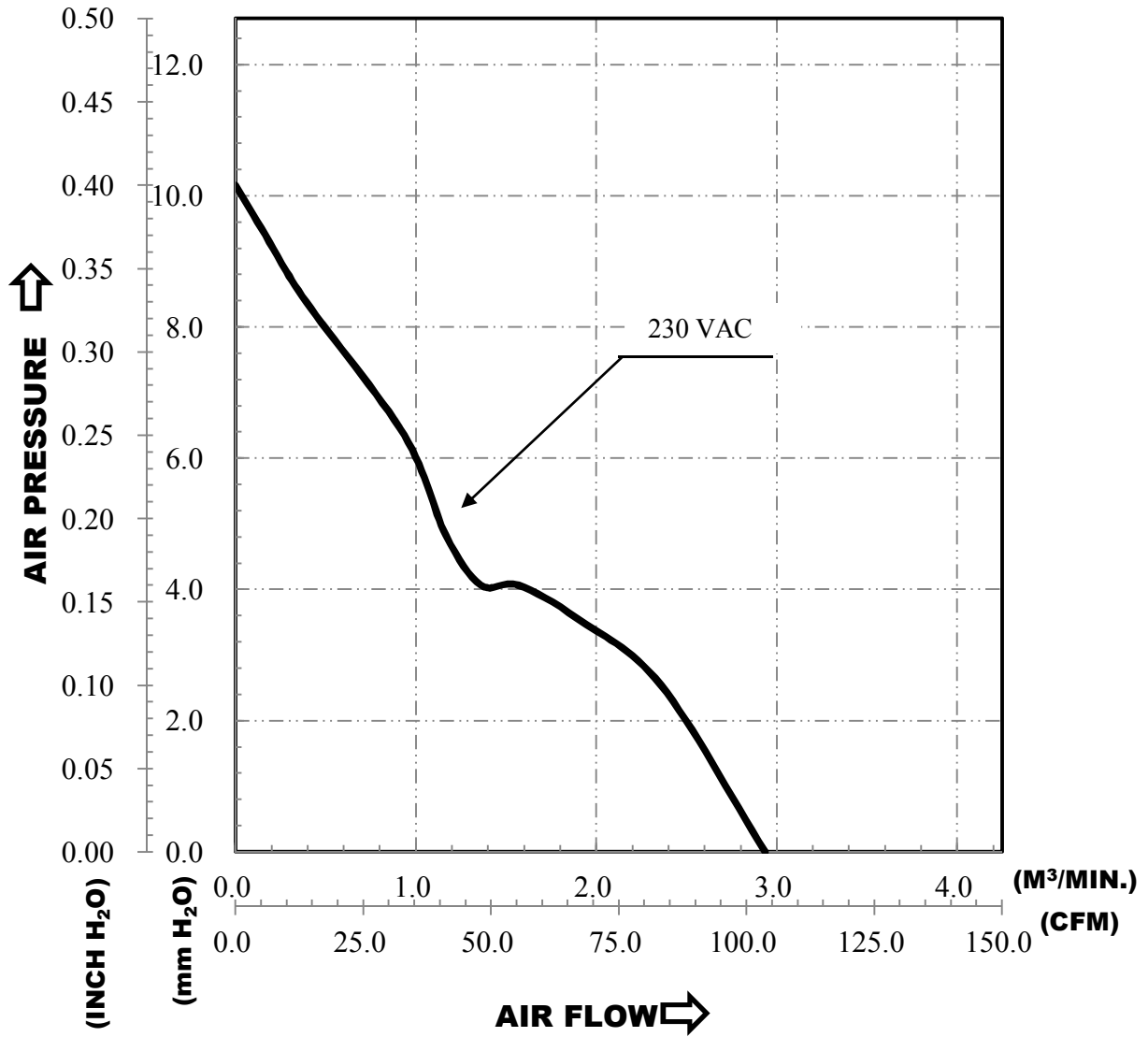
7. PRODUCTION LOCATION

- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA.

PART NO:

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8. P & Q CURVE:



\*TEST CONDITION: INPUT VOLTAGE-----OPERATION VOLTAGE  
TEMPERATURE-----ROOM TEMPERATURE  
HUMIDITY-----65%RH

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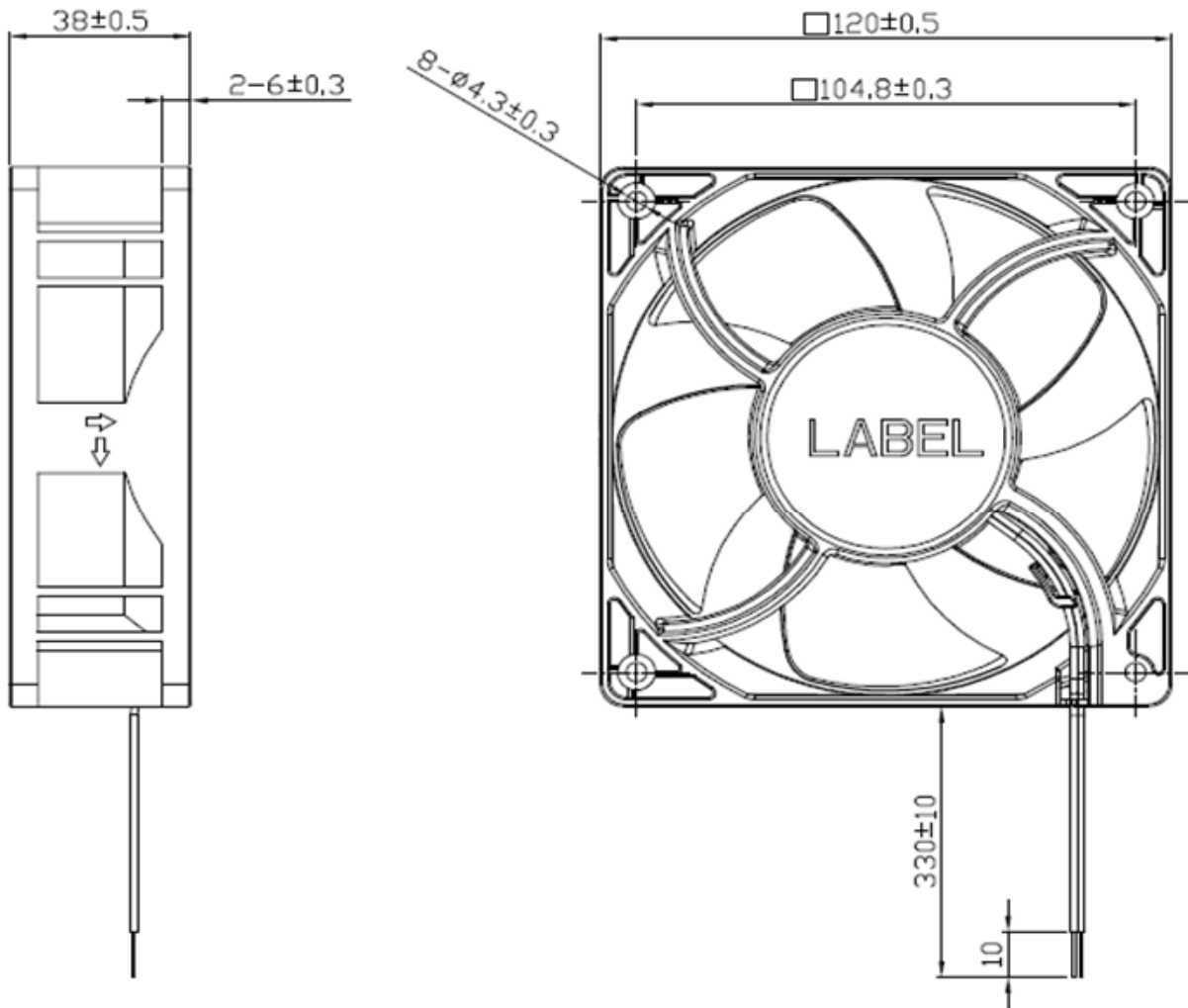
PART NO:

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9. DIMENSION DRAWING:



LEAD WIRE: UL 3266 AWG #24 125°C / 300V  
BLUE WIRE (N)  
BROWN WIRE (L)

UNIT: mm



## ***Application Notice***

- 1. Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.**
- 2. A written request should be submitted to Delta prior to approval if deviation from this specification is required.**
- 3. Please exercise caution when handling fans. Damage may be caused when pressure is applied to the impeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.**
- 4. Except as pertains to some special designs, there is no guarantee that the products will be free from any such safety problems or failures as caused by the introduction of powder, droplets of water or encroachment of insect into the hub.**
- 5. The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.**
- 6. It is very important to establish the correct polarity before connecting the fan to the power source. Positive (+) and Negative (-). Damage may be caused to the fans if connection is with reverse polarity, if there is no foolproof method to protect against such error specifically mentioned in this spec.**
- 7. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.**
- 8. Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans in a high humidity environment. We highly recommend performance testing is conducted before shipping, if the fans have been stored over 6 months.**
- 9. Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impeller for the fans that do not have this function, the performance of those fans will lead to failure.**
- 10. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.**
- 11. It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan to guard against any potential for personal injury.**
- 12. Except where specifically stated, all tests are carried out at room (ambient) temperature and relative humidity conditions of 25°C, 65% RH. The test value is only for fan performance itself.**
- 13. Be certain to connect an “ 4.7μF or greater” capacitor to the fan externally when the application calls for using multiple fans in parallel, to avoid any unstable power.**