



SPECIFICATION FOR APPROVAL

Customer : _____
Description : EST FAN (Energy Saving Technology Fan)
Customer Part No. _____ REV. : _____
Delta Model No. AFL28A2LU-BRA01 REV. : 02
Sample Issue No. _____
Sample Issue Date : Nov. 07 2017

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

APPROVED BY:

DATE :

DELTA ELECTRONICS, INC.
TAOYUAN PLANT
252, SHANG YING ROAD, KUEI SAN INDUSTRIAL ZONE
TAOYUAN SHIEN, TAIWAN, R.O.C.
TEL:886-(0)3-3591968
FAX:886-(0)3-3591991

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

TEL : 886-(0)3-3591968
FAX : 886-(0)3-3591991

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
 FAX : 886-(0)3-3591991

Specification for approval

Customer : _____

Description : EST FAN (Energy Saving Technology Fan)

Customer P/N : _____

rev. : _____

Delta model no. : AFL28A2LU-BRA01

Delta Safety Model No.: AFL28A2LU-BRA01

Sample revision. : 02

Issue no.: _____

Sample issue date : NOV. 07 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
NOMINAL VOLTAGE	230 VAC (50 / 60Hz)
NOMINAL VOLTAGE RANGE	200 ~ 240 VAC
INPUT POWER (FREE AIR)	16 W TYP.
	SAFETY CURRENT ON LABEL: 0.18A
SPEED	1400±10% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	13.10 M ³ /MIN. (TYP.) 460 CFM (TYP.)
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	11.0 mmH ₂ O (TYP.) 0.43 inchH ₂ O (TYP.)
ACOUSTICAL NOISE (AVG.)	55.0 (MAX. 60.0) dB(A)
INSULATION TYPE	UL: CLASS B
LEAKAGE CURRENT	≤ 0.25mA
SAFETY	CE, UL, TUV
	ATEX (MOTOR)
INSULATION STRENGTH	10 MEG OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
DIELECTRIC STRENGTH	5 mA MAX. AT 500 VAC 50/60 Hz ONE MINUTE, (BETWEEN FRAME AND (+) TERMINAL)

(continued)

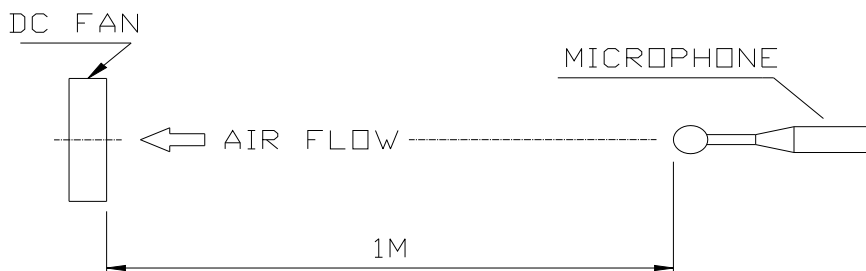
PART NO:

DELTA MODEL: AFL28A2LU-BRA01

LIFE EXPECTANCE (L10) (AT LABEL VOLTAGE)	40,000 HOURS CONTINUOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH.
ROTATION	CLOCKWISE DIRECTIONS FROM NAME PLATE SIDE
OVER CURRENT SHUT DOWN	THE CURRENT WILL SHUT DOWN, WHEN ROTOR LOCKED.
LEAD WIRE	UL SVT 18AWG / 2C (105°C) -LF- BLUE WIRE (N) 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.

PART NO:

DELTA MODEL: AFL28A2LU-BRA01

3. MECHANICAL:

- 3-1. DIMENSIONS----- SEE DIMENSIONS DRAWING
- 3-2. FRAME----- PLASTIC UL: 94V-0
- 3-3. IMPELLER----- PLASTIC UL: 94HB OR 94V-0
- 3-4. BEARING SYSTEM----- TWO BALL BEARINGS
- 3-5. WEIGHT-----1.1 KILOGRAMS(REF.)
- *3-6. INGRESS PROTECTION LEVEL ----- IP 55
(*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

- 5-2. OVER CURRENT PROTECTION

- 5-3. MOTOR OVER TEMP. PROTECTION

6. RE OZONE DEPLETING SUBSTANCES:

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

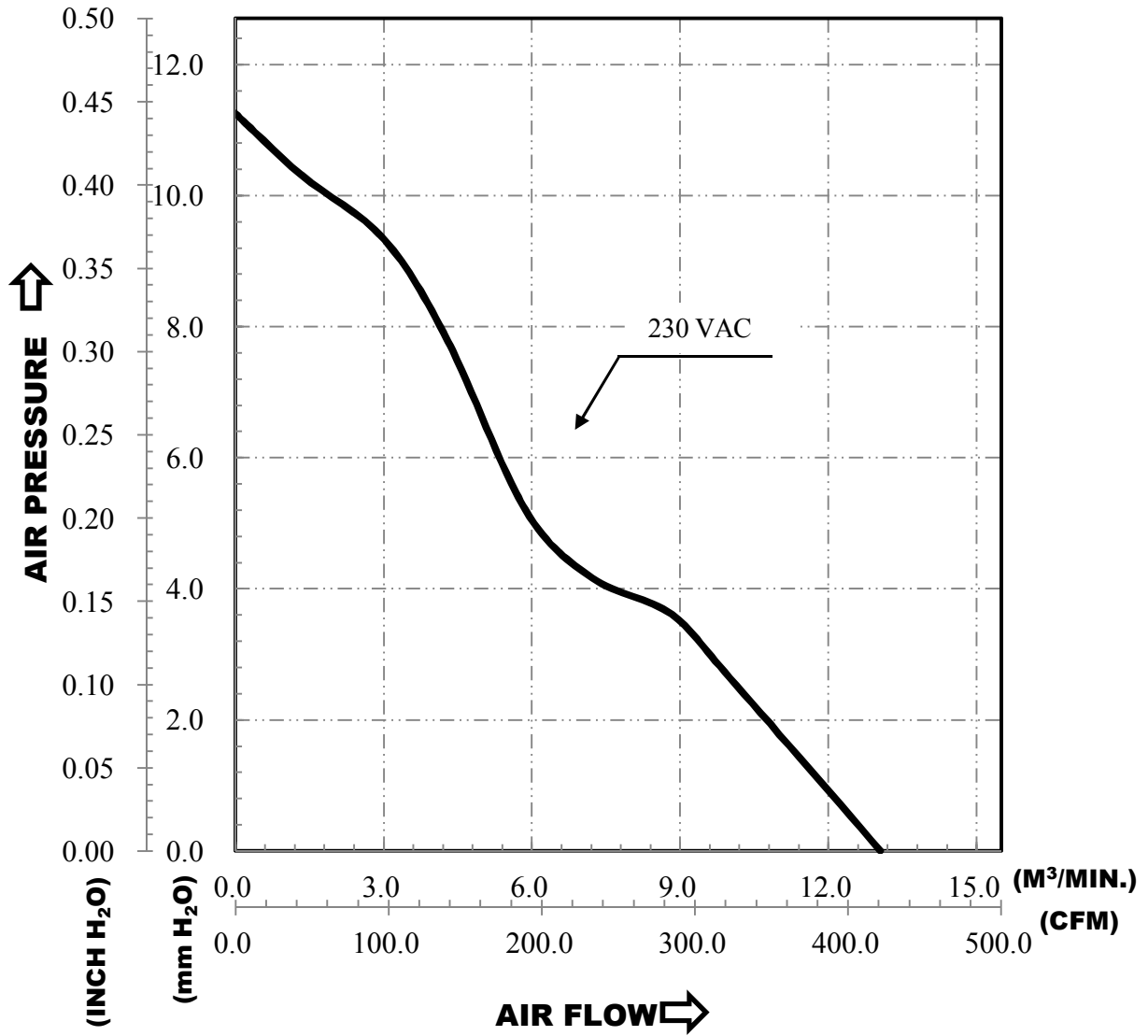
7. PRODUCTION LOCATION

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

PART NO:

DELTA MODEL: AFL28A2LU-BRA01

8. P & Q CURVE:

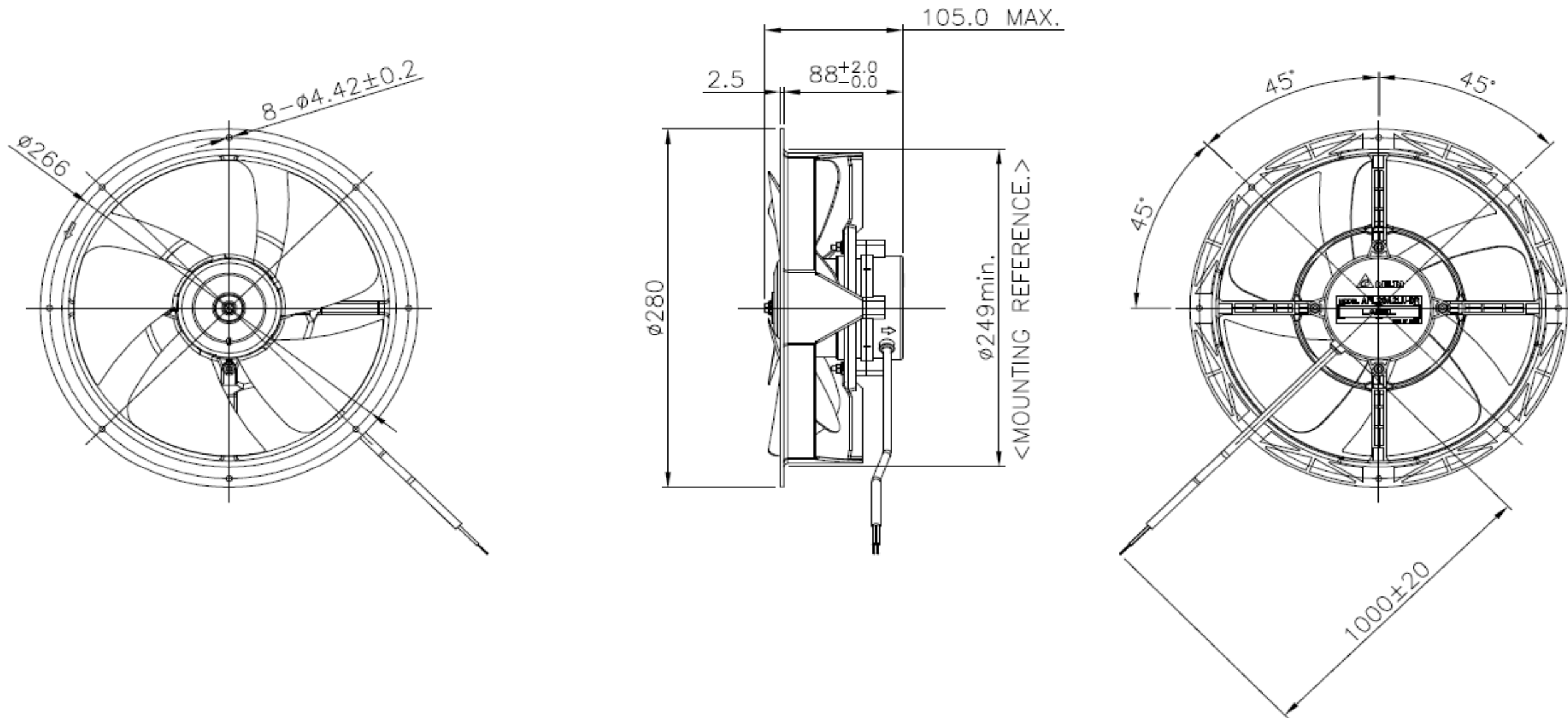


*TEST CONDITION: INPUT VOLTAGE-----OPERATION VOLTAGE
TEMPERATURE-----ROOM TEMPERATURE
HUMIDITY-----65%RH

PART NO:

DELTA MODEL: AFL28A2LU-BRA01

9. DIMENSION DRAWING:



- NOTES: 1. THIS PRODUCT IS RoHS COMPLIANT
2. LEAD WIRE
BLUE WIRE: N
BROWN WIRE: L
UL SVT 18AWG / 2C (105°C) -LF-
3. IMPELLER DIAMETER IS 230mm
4. FINGER GUARD USING SUGGESTION : INTERNAL HEIGHT DIMENSION BETWEEN FINGER GUARD AND TOP SURFACE OF FRAME MUST HAS 15 mm MINIMUM.

UNIT: mm

PART NO:

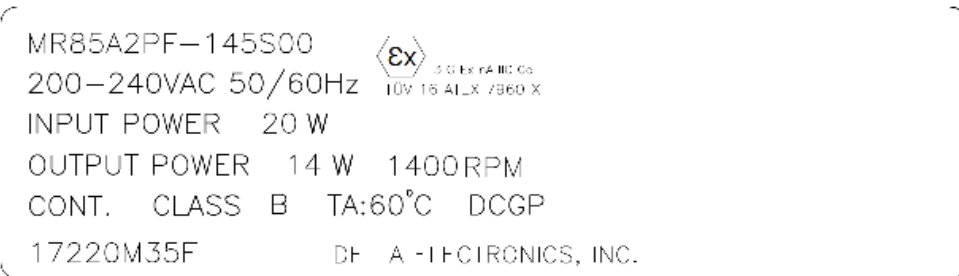
DELTA MODEL: AFL28A2LU-BRA01

10. SAFETY LABEL:

LABEL 1: CE, UL, TUV



LABEL 2: ATEX



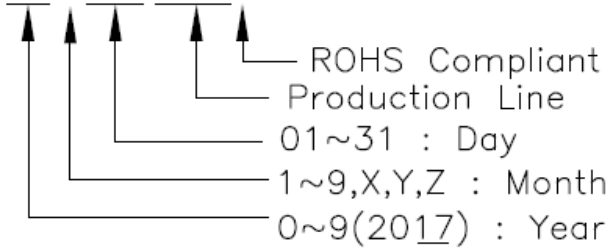
Notes:

Date Code Definition :

Example: 2017/2/20

Production Line: M01, M02, ...

17 2 2 0 M 3 5 F



LABEL 3: CE REQUEST ADDRESS LABEL (OPTIONAL BY SHIPPING REGION)

EU Contact Address :
Delta Electronics (Netherlands) BV
Zandsteen 15, 2132 MZ Hoofddorp, The Netherlands



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. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.**
- 7. 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.**
- 8. 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.**
- 9. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.**
- 10. 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.**
- 11. 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.**