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DELTA ELECTRONICS, INC. 252, SHANG YING ROAD, KUEI SAN TAOYUAN HSIEN 333, TAIWAN.

# SPECIFICATION FOR APPROVAL

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

#### **Customer:**

Description:	EC FAN	
Customer P/N:		REV:
Delta Model NO.:	GTW040FUC15RE	Safety Model NO.:
Sample Rev:	09	Issue NO:
Sample Issue Date:		Quantity:

#### 1. SCOPE:

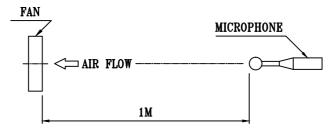
THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THIS AXIAL FAN .

#### 2. NOMINAL DATA:

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

ITEM	DESCRIPTION
NOMINAL VOLTAGE	1ø 230 VAC 50/60Hz
NOMINAL VOLTAGE RANGE	1ø 200 ~ 277 VAC
INPUT POWER @ FREE-AIR	330 ₩
INPUT POWER @ MAX. LOAD	420 W
INPUT CURRENT (MAX.)	3.0 A
SPEED	1650 R.P.M.(REF.)
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	5350 ( MIN. 4815) M <sup>3</sup> H 3147 ( MIN. 2832) CFM
MAX. AIR PRESSURE	178 ( MIN. 144) Pa 0.71 ( MIN. 0.58) inchH20
ACOUSTICAL NOISE (AVG.) @ FREE-AIR	72 (MAX 77) dB(A) @1m

- NOTES: 1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES.
  - 2. THE VALUES WRITTEN IN PARENS, ( ), ARE LIMITED SPEC.
  - 3. ACOUSTICAL NOISE MEASURING CONDITION:



NOISE IS MEASURED AT NOMINAL 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.

# DELTA MODEL: GTW040FUC15RE

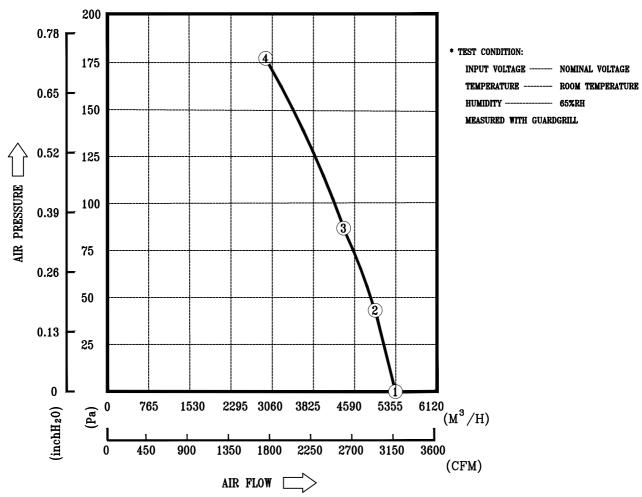
## 3. FEATURES:

<u> </u>	
DIRECTION OF ROTATION	COUNTER-CLOCKWISE, SEEN ON ROTOR
BEARING SYSTEM	BALL BEARINGS
WEIGHT	9.7 K.G. (REF.)
MATERIAL OF ELECTRONICS HOUSING	DIE-CAST ALUMINUM
MATERIAL OF IMPELLER	PPE+30%GF
ELECTRICAL LEADS	LEAD WIRE
MOTOR PROTECTION	OVER TEMPERATURE PROTECTED
LEAKAGE CURRENT	<= 3.5 mA
INSULATION CLASS	В
TYPE OF PROTECTION	IP54
PROTECTION CLASS	I
POWER FACTOR CORRECTION	PASSIVE
OPERATING TEMPERATURE	−25~+60 °C (REF.)
STORAGE TEMPERATURE	−40~+70 °C (REF.)
EMC	EN61000-6-1 / EN61000-6-3 / EN61000-3-2/3
SAFETY	cUL & TUV
LIFE EXPECTANCE	* 60,000 HOURS CONTINOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH.
FUNCTIONS	- CONTROL INPUT 0-10VDC or PWM PATTERN - OUTPUT +10VDC(±10%), max. 10mA - RS485 CONTROL BUS - ALARM RELAY, LOCKED ROTOR PROTECTION, SOFT START - VOLTAGE/CURRENT MONITORING

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#### DELTA MODEL: GTW040FUC15RE

# 4. P & Q CURVE:



#### **MEASURED DATA:**

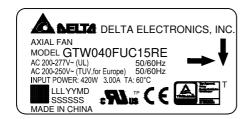
	P	Q	N	P1	I	Lp
	[Pa]	[M3/H]	[R.P.M.]	[W]	[A]	[dB(A)]
1	0	5350	1650	330	2.05	72
2	40	4961	1650	336	2,09	     
3	82	4467	1650	348	2.16	 
4	178	2910	1650	389	2.42	)

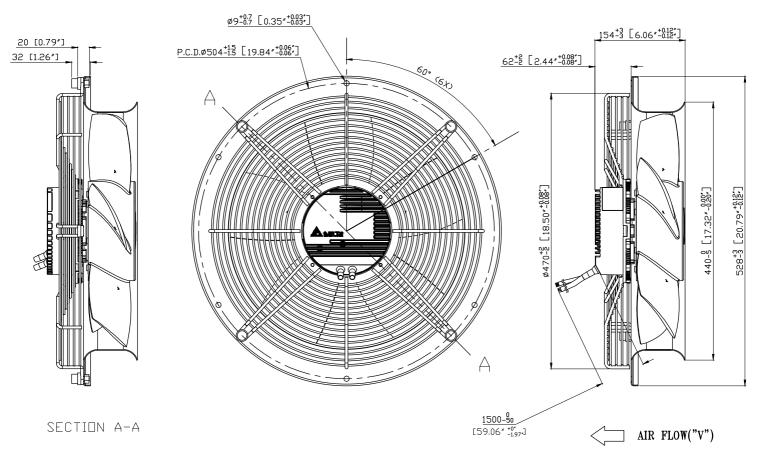
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#### DELTA MODEL: GTW040FUC15RE

#### 5. DIMENSION DRAWING:

#### LABEL 1





NOTE:

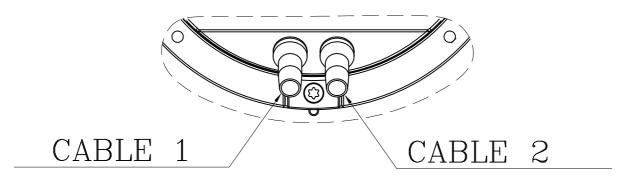
1.THIS PRODUCT IS ROHS COMPLIANT.

UNIT: mm [INCH]

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#### DELTA MODEL: GTW040FUC15RE

## 6. DEFINITION OF CABLE:



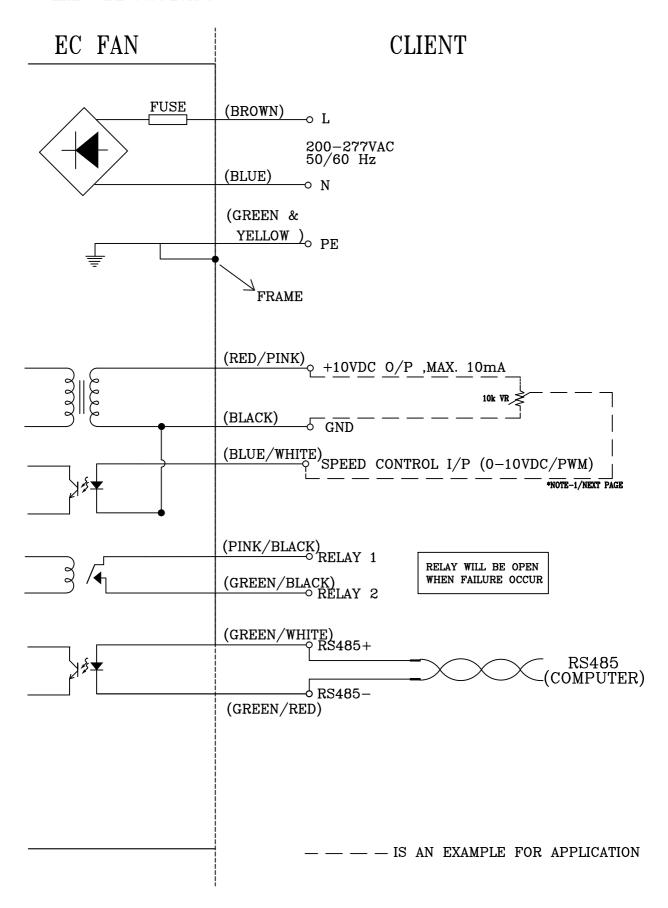
CABLE	COLOR	FUNCTIONS
1	BROWN	L
1	BLUE	N
1	GREEN/YELLOW	EARTH
		==================================
2	RED/PINK	+10V
2	BLUE/WHITE	PWM
2	BLACK	GND
2	GREEN/RED	RS485-
2	GREEN/WHITE	RS485+
2	PINK/BLACK	RELAY 1
2	GREEN/BLACK	RELAY 2

CABLE LENGTH: 1500mm

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#### DELTA MODEL: GTW040FUC15RE

#### 7. LEAD WIRE CONNECTION:



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8. FUNCTION CONTROL: VOLTAGE CONTROL

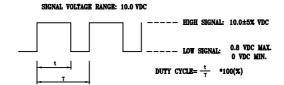
\*NOTE-1: SPEED CONTROL SIGNAL

#### A. VOLTAGE CONTROL

- CONTROL VOLTAGE RANGE SHALL BE 0-10 VDC.
- VOLTAGE AT 10 VDC THE FAN WILL SPIN AT MAXIMUM SPEED.
- VOLTAGE HIGHER THAN 1.5 VDC, THE FAN WILL START UP.
- VOLTAGE LOWER THAN 0.5 VDC, THE FAN WILL STOP.

#### B. PWM CONTROL

- THE AMPLITUDE VOLTAGE SHALL BE 10VDC. (100Hz~100kHz)



- PWM DUTY HIGHER THAN 15 %, THE FAN WILL START UP.
- PWM DUTY LOWER THAN 5 %, THE FAN WILL STOP.

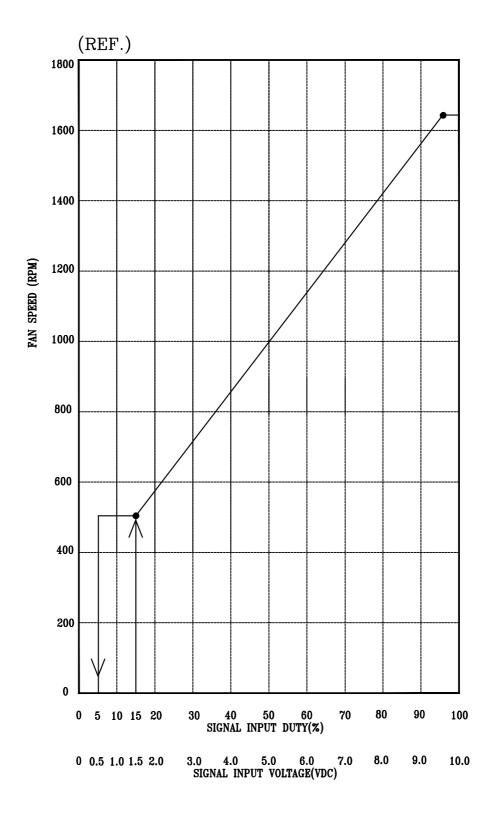
#### - THE SPEED COMPARISON WITH CONTROL LEVEL:

VOLTAGE(V)	PWM DUTY(%)	SPEED (R.P.M.) (REEP.)
0.0	0	0
9.5	95	1650

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## 9. CONTROL LEVEL & SPEED CURVE:



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