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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## SPECIFICATION FOR APPROVAL

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Customer:		
Description:		
Customer P/N:		REV:
Delta Model NO.:	GTB040FUC23R	Safety Model NO.: GTB040FUC23
Sample Rev:	X05	Issue N0:
Sample Issue Date:		

#### 1. SCOPE:

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

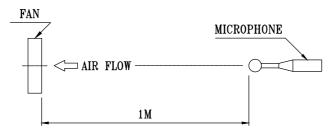
#### 2. NOMINAL DATA:

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	250 W
INPUT POWER @ MAX. LOAD	
INPUT CURRENT (MAX)	3.10 A
SPEED	1500 R.P.M. (REF.)
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	3514 (MIN. 3162) M <sup>3</sup> /H 2068 (MIN. 1861) CFM
MAX. AIR PRESSURE (AT ZERO AIR FLOW)	510.6 ( MIN. 413.6) Pa 2.050 ( MIN. 1.661) inchH <sub>2</sub> 0
ACOUSTICAL NOISE (AVG.) @ FREE-AIR	76.0 (MAX 81.0) dB(A)

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.

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## 3. FEATURES:

DIRECTION OF ROTATION	CLOCKWISE, SEEN ON ROTOR
BEARING SYSTEM	BALL BEARINGS
WEIGHT	6.2 K.G. (REF.)
MATERIAL OF ELECTRONICS HOUSING	DIE-CAST ALUMINUM
MATERIAL OF IMPELLER	ALUMINUM SHEET
ELECTRICAL LEADS	LEAD WIRE
MOTOR PROTECTION	OVER TEMPERATURE PROTECTED
LEAKAGE CURRENT	<= 3.5 mA
INSULATION CLASS	B   B
TYPE OF PROTECTION	
PROTECTION CLASS	I
POWER FACTOR CORRECTION	PASSIVE
OPERATING TEMPERATURE	−25~+60 °C (REF.)
STORAGE TEMPERATURE	-40~+70 °C (REF.)
EMC	EN61000-6-1/3, EN61000-3-2/3
SAFETY	UL, cUL, TUV
	* 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

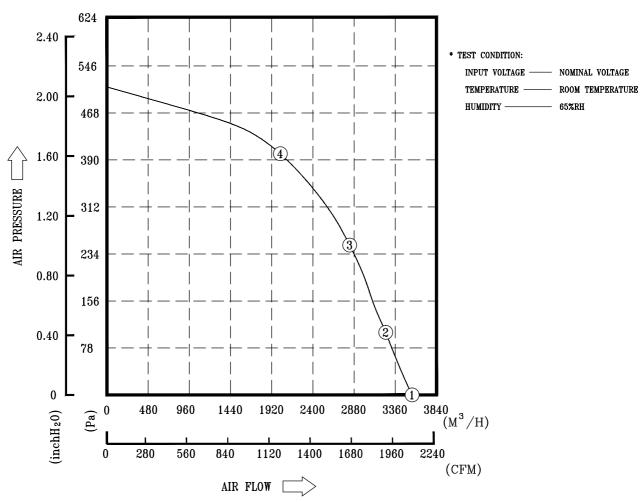
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## 4. P & Q CURVE:



#### MEASURED DATA:

<u> </u>	P		$-\frac{1}{N}$	P1	I	
F		$\left[ \frac{\text{M}^3}{\text{H}} \right]$	[R.P.M.]	- $ [W]$ $-$		$\begin{bmatrix} - & - & - \\ dB(A) \end{bmatrix}$
	0	3514	1504	232	1.44	76.0
	102.1	3223	1505	298	1.85	<u>                                     </u>
	249.1	2795	1498	384	2.39	
	393.6	2064	1488	409	2.54	

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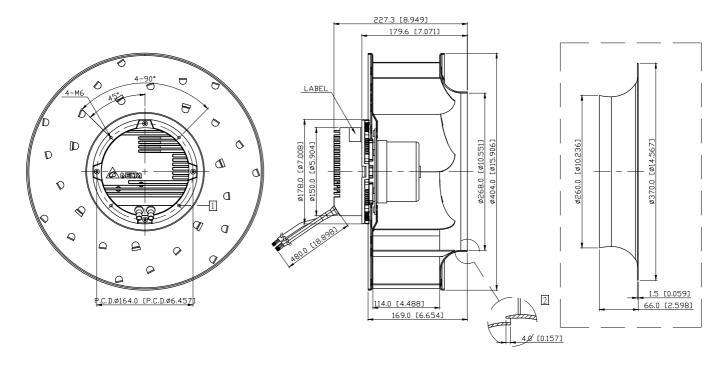
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#### 5. DIMENSION DRAWING:

#### LABEL





UNIT: mm [INCH]

NOTE:

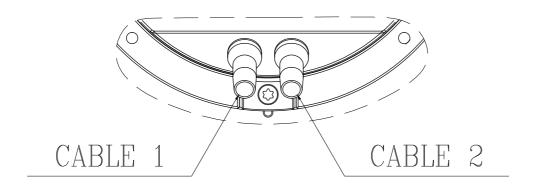
- 1 DEPTH OF SCREW: 6~8mm.
- 2 ACCESSORY: INLET NOZZLE, ALL THE PERFORMANCE DATA ARE MEASURED WITH IT.
- 3. THIS PRODUCT IS ROHS COMPLIANT.

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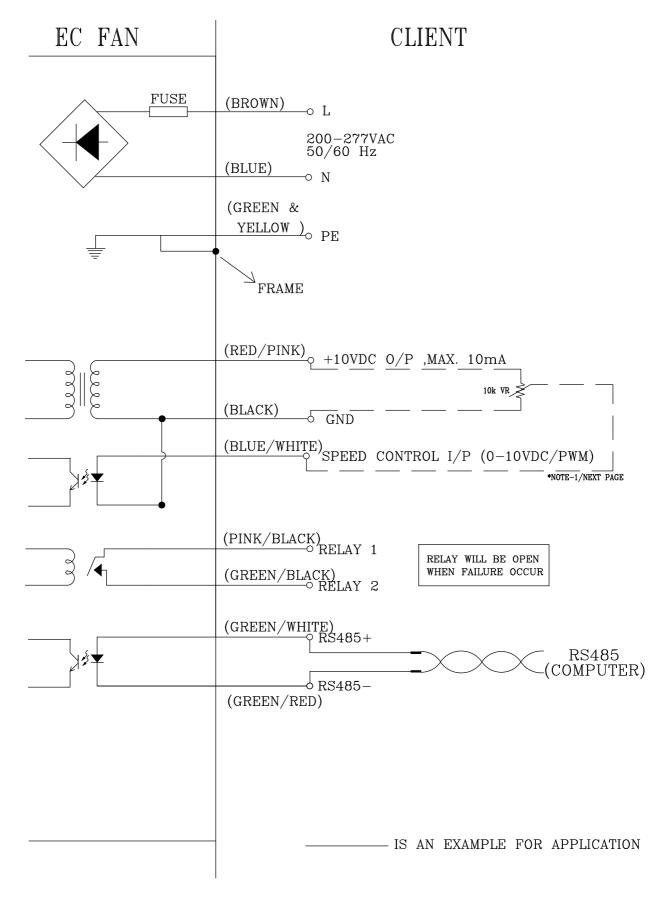
## 6. DEFINITION OF CABLE:



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

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#### 7. LEAD WIRE CONNECTION:



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8. FUNCTION CONTROL: VOLTAGE CONTROL

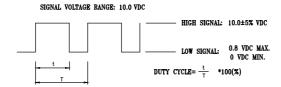
\*NOTE-1: SPEED CONTROL SIGNAL

#### 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.

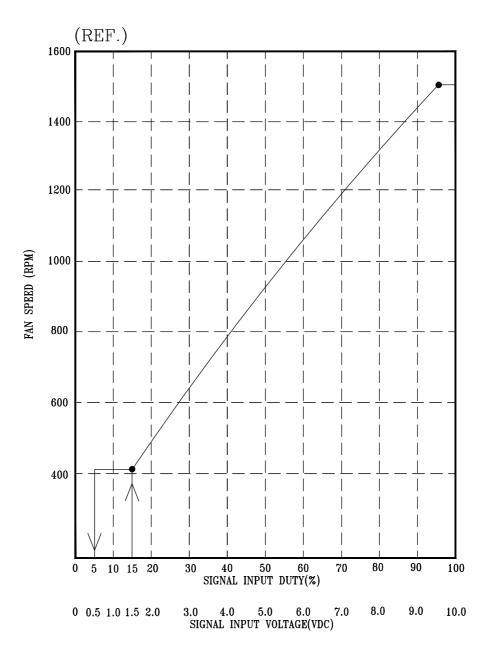
#### - THE SPEED COMPARISON WITH CONTROL LEVEL:

VOLTAGE(V)	PWM DUTY(%)	SPEED (R.P.M.) (REF.)
0.0	0	0
9.5	95	1500

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## 9. CONTROL LEVEL & SPEED CURVE:



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