

SPECIFICATION FOR APPROVAL

Customer:

Description: EC FAN

Customer P/N:

REV:

Delta Model NO.: GTB040FUC23R

Safety Model NO.: GTB040FUC23

Sample Rev: X05

Issue NO:

Sample Issue Date:

Quantity:

1. SCOPE:

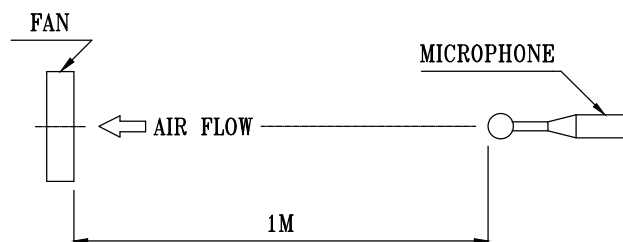
THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THIS CENTRIFUGAL FAN.

2. NOMINAL DATA:

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

ITEM	DESCRIPTION
NOMINAL VOLTAGE	1 ϕ 230 VAC 50/60Hz
NOMINAL VOLTAGE RANGE	1 ϕ 200 - 277 VAC
INPUT POWER @ FREE-AIR	250 W
INPUT POWER @ MAX. LOAD	430 W
INPUT CURRENT (MAX)	3.10 A
SPEED	1500 R.P.M. (REF.)
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	3514 (MIN. 3162) M ³ /H 2068 (MIN. 1861) CFM
MAX. AIR PRESSURE (AT ZERO AIR FLOW)	510.6 (MIN. 413.6) Pa 2.050 (MIN. 1.661) inchH ₂ O
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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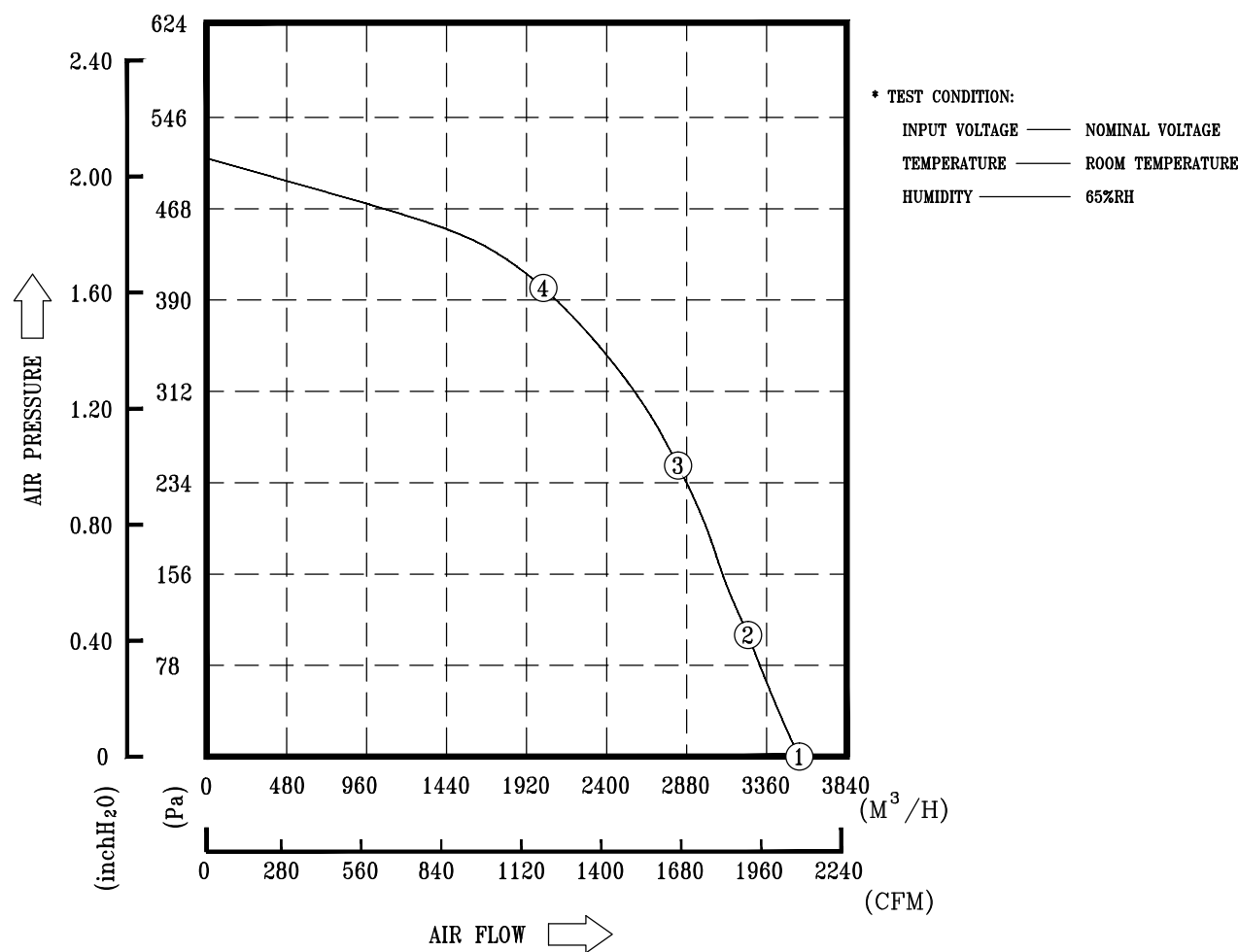
3. FEATURES:

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	$\leq 3.5 \text{ mA}$
INSULATION CLASS	B
TYPE OF PROTECTION	IP54
PROTECTION CLASS	I
POWER FACTOR CORRECTION	PASSIVE
OPERATING TEMPERATURE	$-25 \sim +60 \text{ }^{\circ}\text{C}$ (REF.)
STORAGE TEMPERATURE	$-40 \sim +70 \text{ }^{\circ}\text{C}$ (REF.)
EMC	EN61000-6-1/3 , EN61000-3-2/3
SAFETY	UL , cUL , TUV
LIFE EXPECTANCE	* 60,000 HOURS CONTINUOUS OPERATION AT $40 \text{ }^{\circ}\text{C}$ WITH $15 \sim 65 \text{ \%RH}$.
FUNCTIONS	- CONTROL INPUT 0-10VDC or PWM PATTERN - OUTPUT +10VDC($\pm 10\%$), 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:

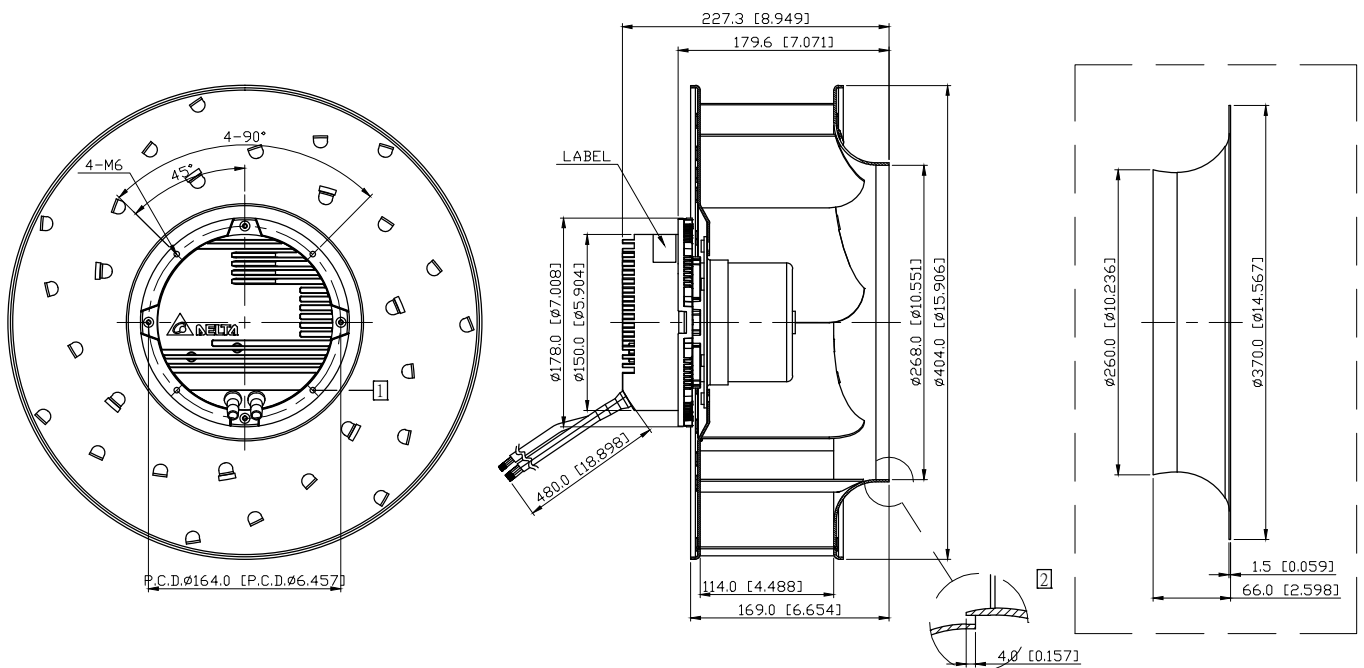
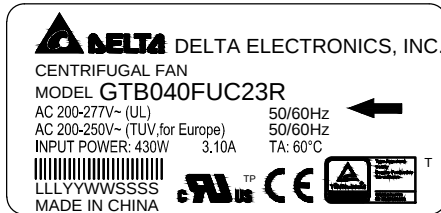
	P	Q	N	P1	I	Lp
	[Pa]	[M ³ /H]	[R.P.M.]	[W]	[A]	[dB(A)]
1	0	3514	1504	232	1.44	76.0
2	102.1	3223	1505	298	1.85	
3	249.1	2795	1498	384	2.39	
4	393.6	2064	1488	409	2.54	

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5. DIMENSION DRAWING:

LABEL



UNIT: mm [INCH]

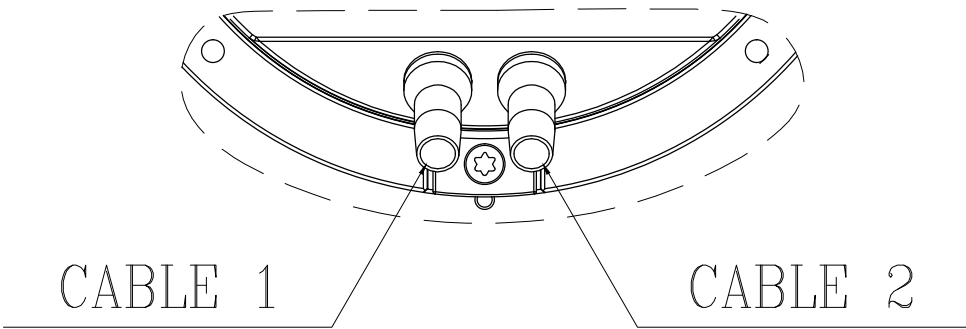
NOTE:

- [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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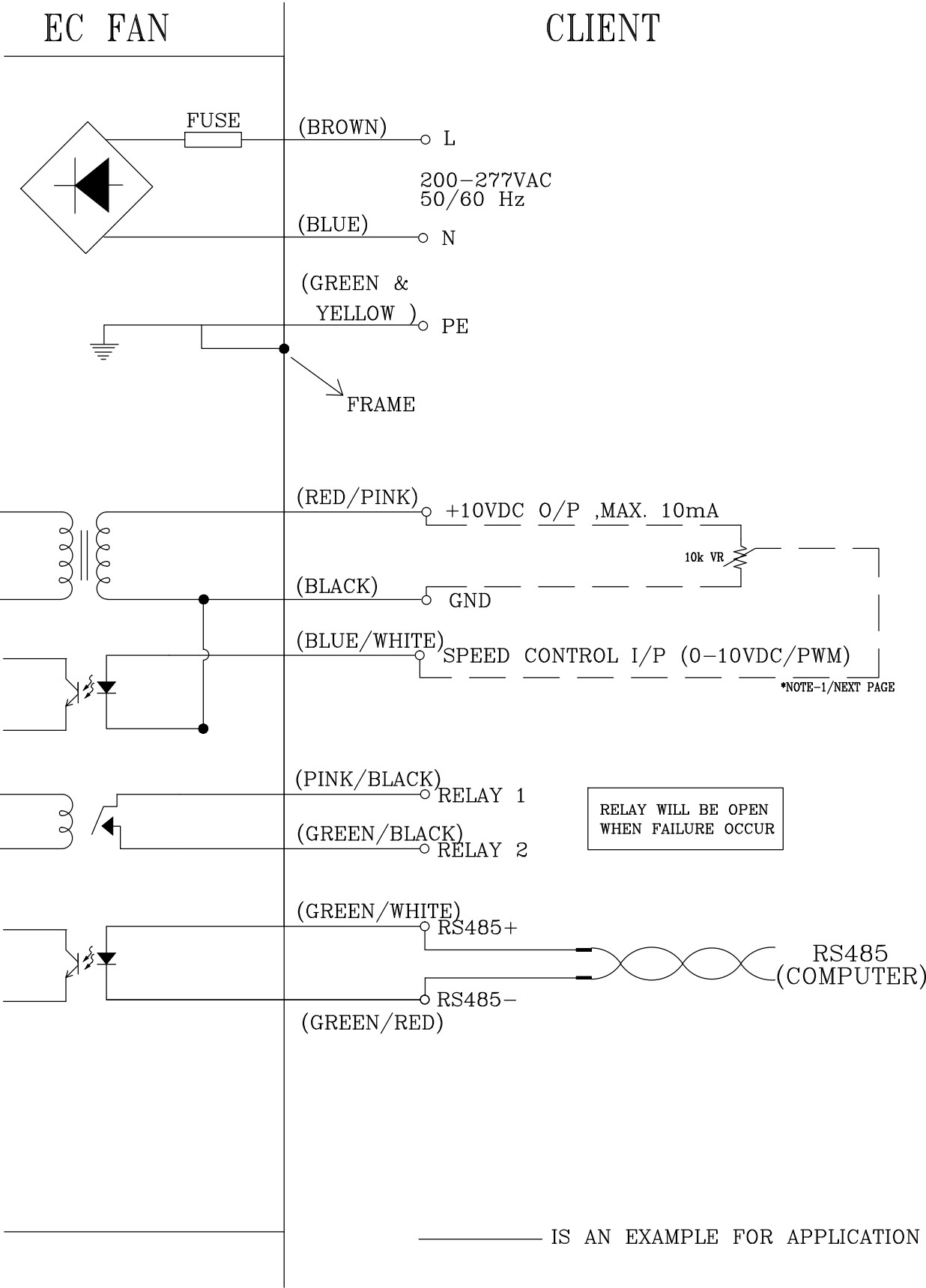
6. DEFINITION OF CABLE:



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

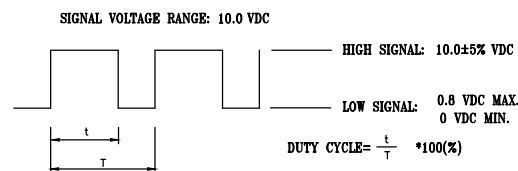
*NOTE-1: SPEED CONTROL SIGNAL

A. VOLTAGE CONTROL

- CONTROL VOLTAGE RANGE SHALL BE 0-10 VDC.
- VOLTAGE AT 10VDC 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:

