



Specification For Approval

Customer : STD
Description : EC FAN
Customer Part No. : _____ Rev : _____
Delta Model No. : GTW017EUB12 Rev : 00
Safety Model No. : GTW017EUB12
Sample Issue No. : _____
Sample Issue Date : 05/17/2016

Please send one copy of this specification back after you signed approval for production pre-arrangement

Approved by : _____

Date : _____

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*** SAMPLE HISTORY***

CUSTOMER: STD

CUSTOMER P/N:

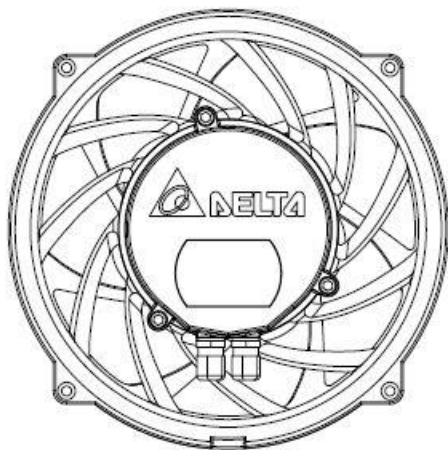
DELTA MODEL: GTW017EUB12

[illegible]

Electronically Commutated (EC) Fan

Axial Fan

(200 x 122 mm)



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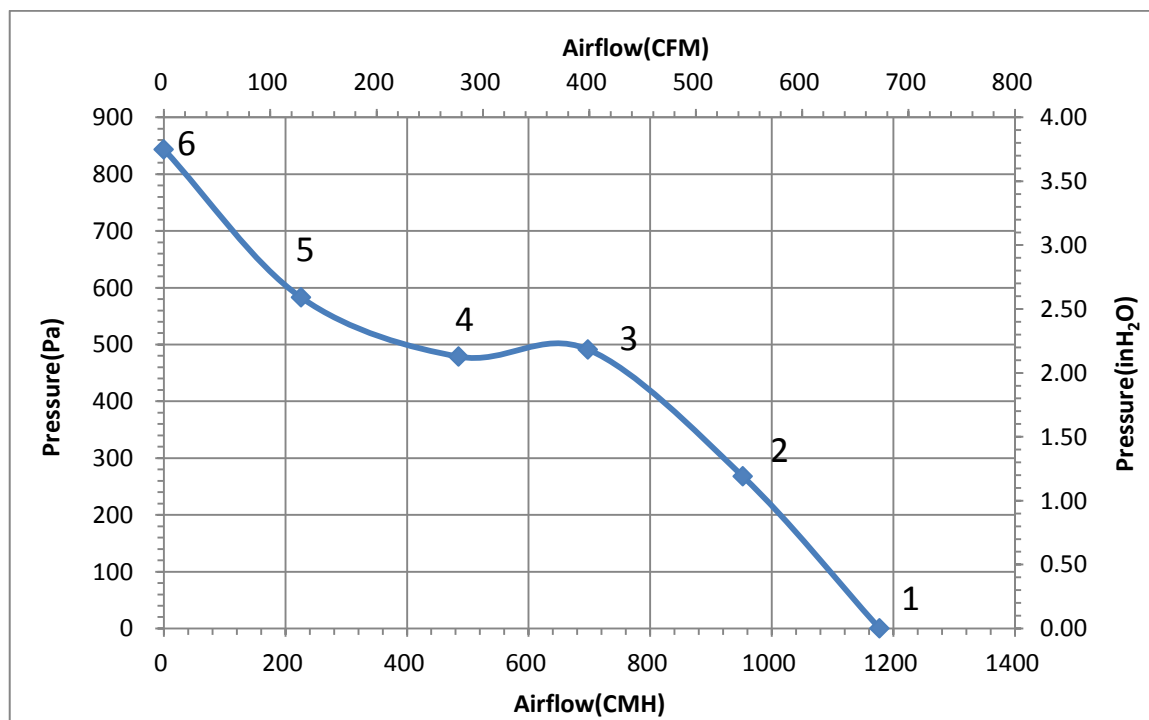
Technical features

Input Side	
Input Source	1~ 200Vac - 240Vac
Power @ Free air	185W
Power @ Max. load	240 W
Power On Label	240W
Output Side	
Speed (RPM)	5800
Qmax. (CMH / CFM)	1177/ 693
Pmax. (Pa / inAq)	844 / 3.39
Noise (dB-A)-FREE AIR	70.5
Functions	
Speed Control input 0-10VDC or PWM pattern.	
Output +12VDC(±10%), max. 5mA.	
Locked rotor protection, Soft start.	
Fan speed signal output	

Physical	
Rotation Direction	CCW seen on rotor
Material (Impeller / Frame)	Plastic / Die-Cast Aluminum
Bearing system	Ball bearings
Weight (kg)	2.7
Electrical leads	Lead wire
Environmental	
Operating temperature range	-25 ~ +60 °C
Storage temperature range	-40 ~ +70 °C
Safety	
Safety	UL & CSA & TUV & CE
IP Level	IP54
EMC	EN61000-6-1 , EN61000-6-3 , EN61000-3-2/3
Protection class	I
Insulation class	A
Leakage current	≤ 3.5 mA
Motor protection	Over temperature protected
Life expectancy	60,000 hrs. at 40 °C / 15 ~ 65 %RH

NOTE : Delta reserves the right to change specifications and other product information without prior notice.

P & Q curves



Measure data:

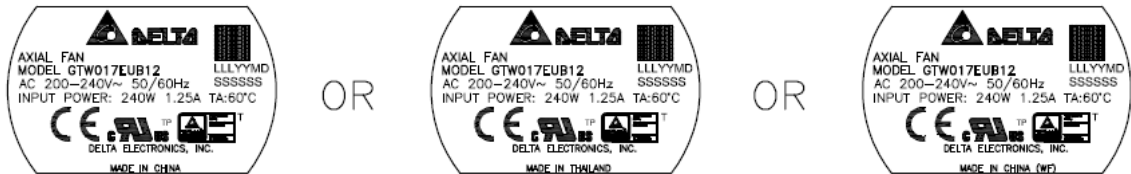
	P [Pa]	Q [CMH]	N [R.P.M.]	P1 [W]	I [A]	Lp [dB(A)]
1	0	1177	5770	185	0.9	70.5
2	268	952	5650	203	1.0	
3	491	697	5653	207	1.0	
4	479	485	5757	189	0.9	
5	583	225	5670	205	1.0	
6	844	0	5478	235	1.1	

Test Condition :

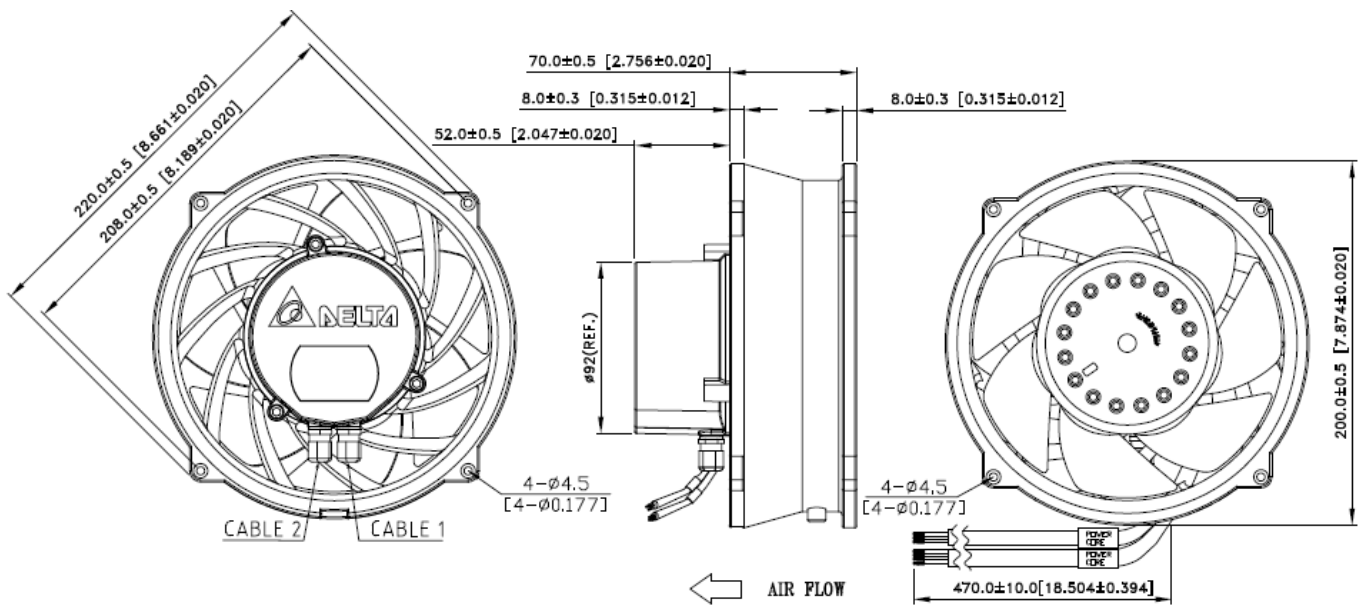
- Input Voltage: Nominal Voltage
- Temperature : Room Temperature
- Humidity : 65%RH
- Measured without fanguard
- Noise (Lp) is measured at a distance of one meter from the intake side.

Dimension drawing

Label :



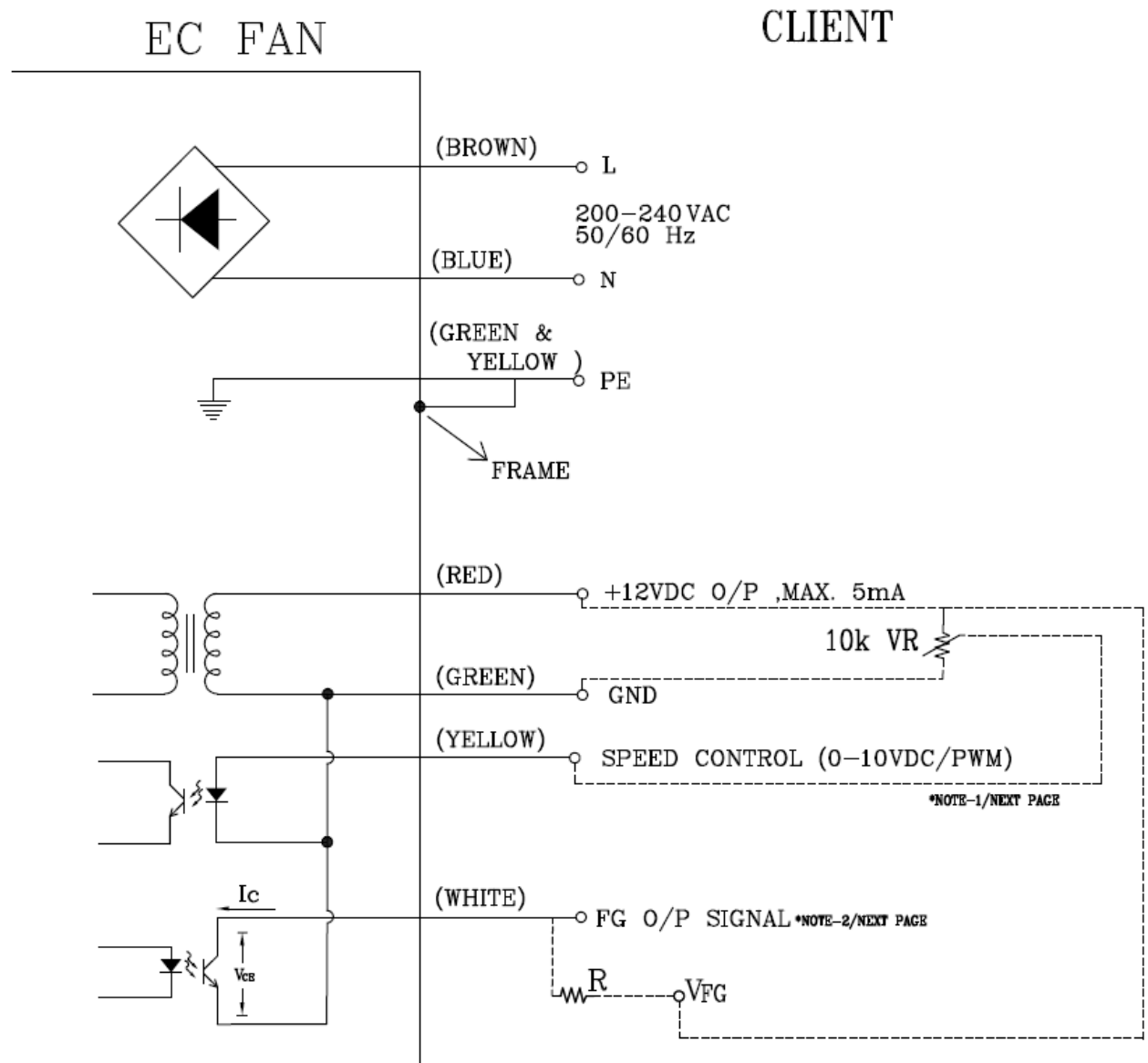
Fan :

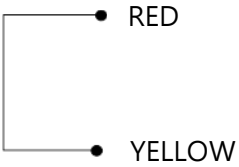
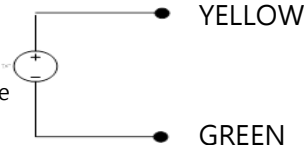


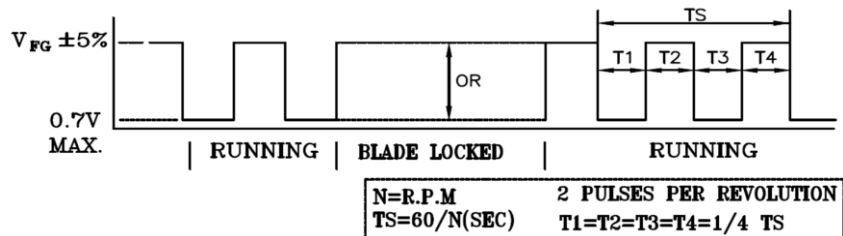
UNIT: mm[INCH]

Cable	WIRE TYPE	Color	Functions
1	UL2464 24#AWG	Green	Ground
		Red	+12 VDC output MAX.5mA
		White	FG O/P
		Yellow	Speed control(0-10VDC/PWM)
2	UL2464 18#AWG	Brown	Line/ AC main (1~ 200-240VAC)
		Blue	Neutral/ AC main (1~ 200-240VAC)
		Green / Yellow	Protective Earth

Lead wire connection

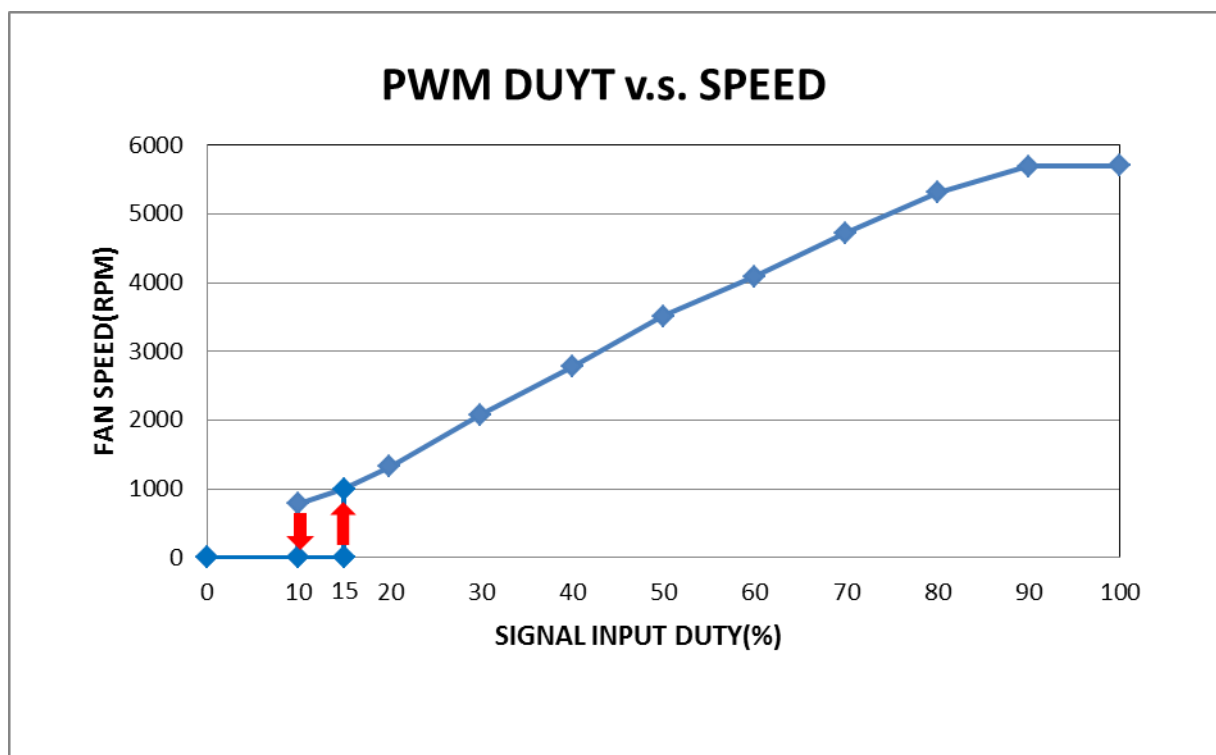


Speed setting	
Full Speed 	Short RED & YELLOW Fan will run full speed.
Voltage Control 0-10V DC Source 	Use voltage source support 0~10VDC voltage DC+ : connector YELLOW DC - : connector GREEN -Voltage higher than 1.5 VDC, fan start up. -Voltage at 10 VDC , the fan will spin at full speed
PWM Control PWM Generator 	PWM duty control PWM amplitude is 10VDC(+/-5%) Frequency Range is 100Hz ~ 100kHz -PWM duty higher than 15%, fan start up ° -PWM duty at 100% , the fan will spin at full speed

Signal function									
Voltage control	The speed comparison will control level <table border="1"> <thead> <tr> <th>Voltage (V)</th><th>Speed (RPM)</th></tr> </thead> <tbody> <tr> <td>0</td><td>0</td></tr> <tr> <td>5.0</td><td>3550±8%</td></tr> <tr> <td>10</td><td>5800±5%</td></tr> </tbody> </table>	Voltage (V)	Speed (RPM)	0	0	5.0	3550±8%	10	5800±5%
Voltage (V)	Speed (RPM)								
0	0								
5.0	3550±8%								
10	5800±5%								
FG	$V_{CE(sat)} = 0.7V \text{ MAX.}$ $V_{FG} = 20.0V \text{ MAX.}$ $I_C = 5mA \text{ MAX.}$ $R \geq V_{FG} / I_C$ Frequency generator waveform  $N = \text{R.P.M}$ 2 PULSES PER REVOLUTION $TS = 60 / N(\text{SEC})$ $T1 = T2 = T3 = T4 = 1/4 \text{ TS}$								

DUTY & SPEED CURVE: (PWM PIN)

Voltage(V)	PWM Duty(%)	Speed R.P.M.(ref.)
0.0	0	0
5.0	50	3550±8%
10.0	100	5800±5%



Voltage	0	0.5	1	1.5	2	3	4	5	6	7	8	9	10	VDC
PWM duty	0	5	10	15	20	30	40	50	60	70	80	90	100	%