



Specification For Approval

Customer : _____
Description : _____ EC FAN _____
Customer Part No. : _____ Rev : _____
Delta Model No. : _____ GTB036FUC23R N1 _____ Rev : 04
Safety Model No. : _____ GTB036FUC23R _____
Sample Issue No. : _____
Sample Issue Date : _____ 02/21/2018 _____

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

Approved by : _____

Date : _____

Delta Electronics, Inc.

No.252, Shangying Road, Guishan Industrial Zone,

Taoyuan City, 33341, Taiwan

TEL : +886-3-359-1968

FAX : +886-3-359-1991

*** SAMPLE HISTORY ***

CUSTOMER :

CUSTOMER P/N :

DELTA MODEL : GTB036FUC23R N1

REV	DESCRIPTION	DRAWN	CHECKED		APPROVED	ISSUE DATE
			ME	EE		
03	Issue spec.	丁威柏 02/07'18	丁威柏 02/07'18	陳士偉 02/07'18	顏承偉 02/07'18	02/07'18
04	Change Dimension drawing.	丁威柏 02/21'18	丁威柏 02/21'18	陳士偉 02/21'18	顏承偉 02/21'18	02/21'18

Electronically Commutated (EC) Fan

Centrifugal Fan

φ 360 x 230 mm



DELTA ELECTRONICS, INC.
 No.252, Shangying Road, Guishan
 Industrial Zone, Taoyuan City, 33341,
 Taiwan
 TEL: +886-3-359-1968
 FAX: +886-3-359-1991
www.deltaww.com



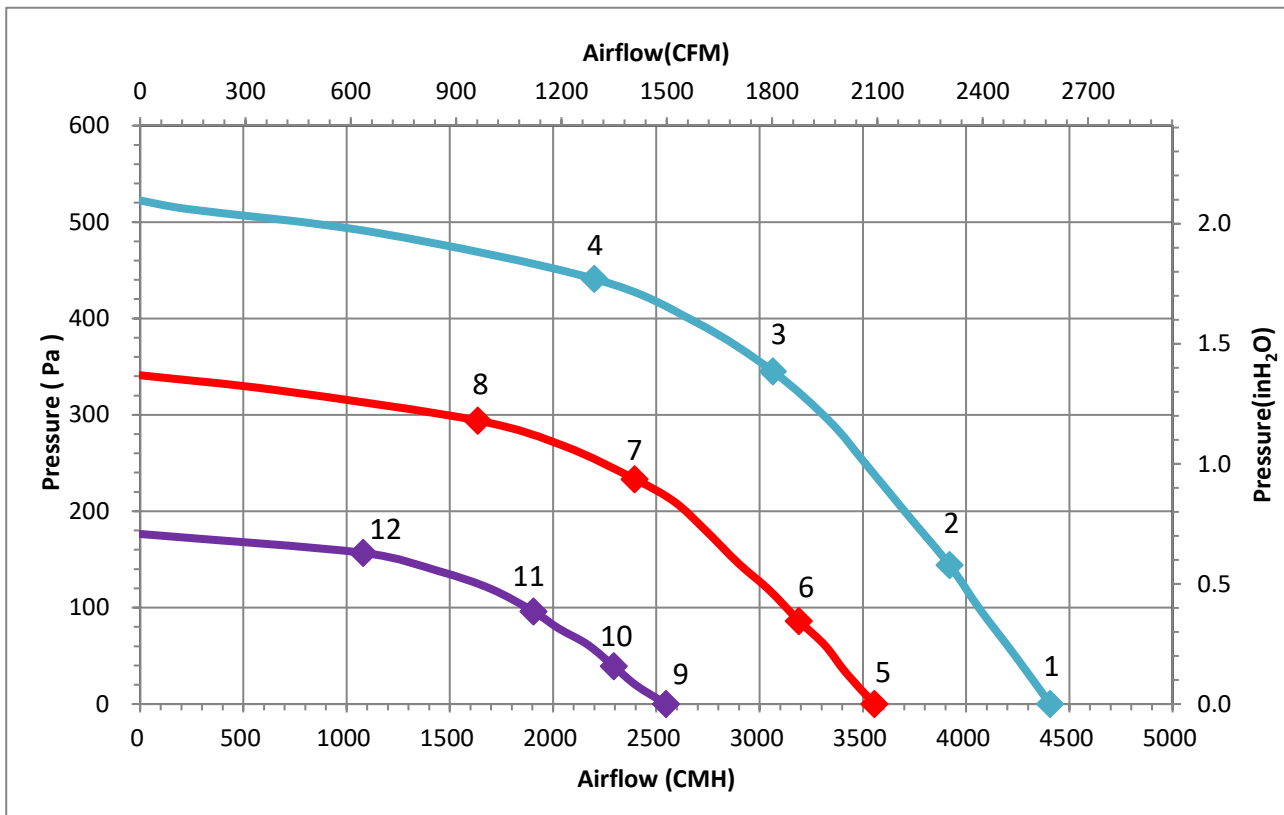
Technical features

Input Side	
Nominal Voltage	1~ 230Vac 50/60Hz
Input Source	1~ 200Vac - 277Vac
Power @ Free air	340 W
Power @ Max. load	500 W
Output Side	
Speed (RPM)	1730
Qmax. (CMH / CFM)	4408 / 2594
Pmax. (Pa / inAq)	522 / 2.1
Noise (dB-A) @ Qmax.	71.5
Functions	
Passive power factor correction	
Control input 0-10VDC / PWM	
Output +10VDC (±10%), max. 10mA.	
RS485 control bus	
Alarm relay, Locked rotor protection, Soft start.	
Voltage / Current monitoring.	

Physical	
Rotation Direction	CW, Seen on rotor
Material (Impeller / Frame)	Aluminum sheet / Die-cast aluminum
Bearing system	Ball bearings
Weight (kg)	7.1
Electrical leads	Lead wire
Environmental	
Operating temperature range	-25 ~ +60 °C
Storage temperature range	-40 ~ +70 °C
Safety	
Safety	UL , cUL , TUV
IP Level	IP54
EMC	EN61000-6-1/3 , EN61000-3-2/3
Protection class	I
Insulation class	B
Leakage current	<= 3.5 mA
Motor protection	Over temperature protected
Life expectance	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	4408	1722	340	2.03	71.5
2	144	3920	1725	430	2.55	
3	345	3065	1721	500	3.09	
4	441	2200	1721	500	2.97	
5	0	3556	1399	190	1.23	67.2
6	86	3191	1394	230	1.49	
7	233	2396	1393	280	1.72	
8	294	1636	1399	268	1.65	
9	0	2547	998	78	0.55	62.9
10	39	2294	997	87	0.64	
11	96	1905	995	107	0.72	
12	157	1081	994	100	0.67	

Test Condition :

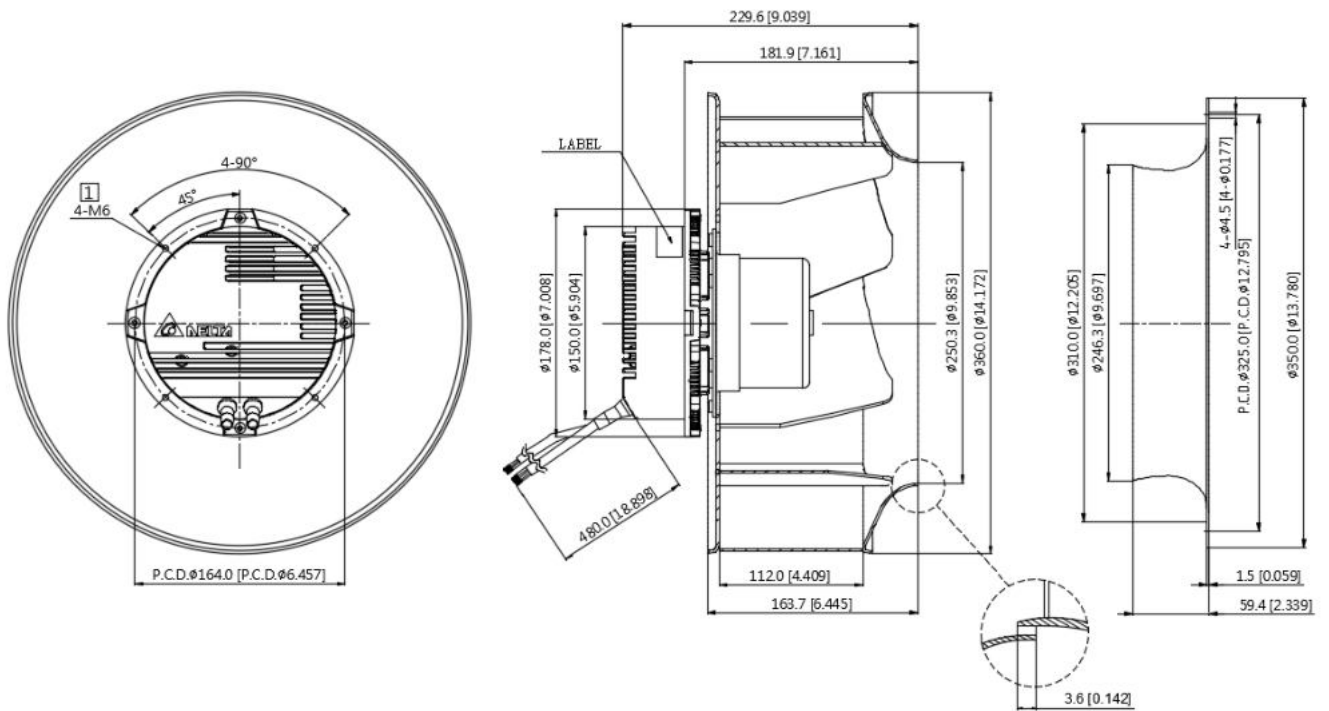
- Input Voltage: Nominal Voltage
- Temperature : Room Temperature
- Humidity : 65%RH
- Measured with inlet cone.
- Noise (Lp) is measured at a distance of one meter from the inlet side.

Dimension drawing

Label :



Fan :

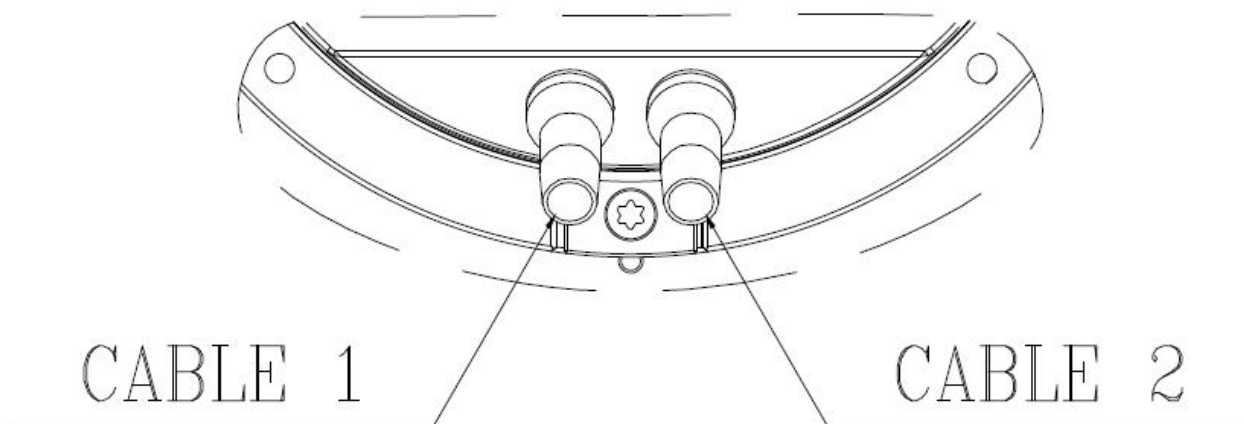


UNIT : mm [INCH]

Note :

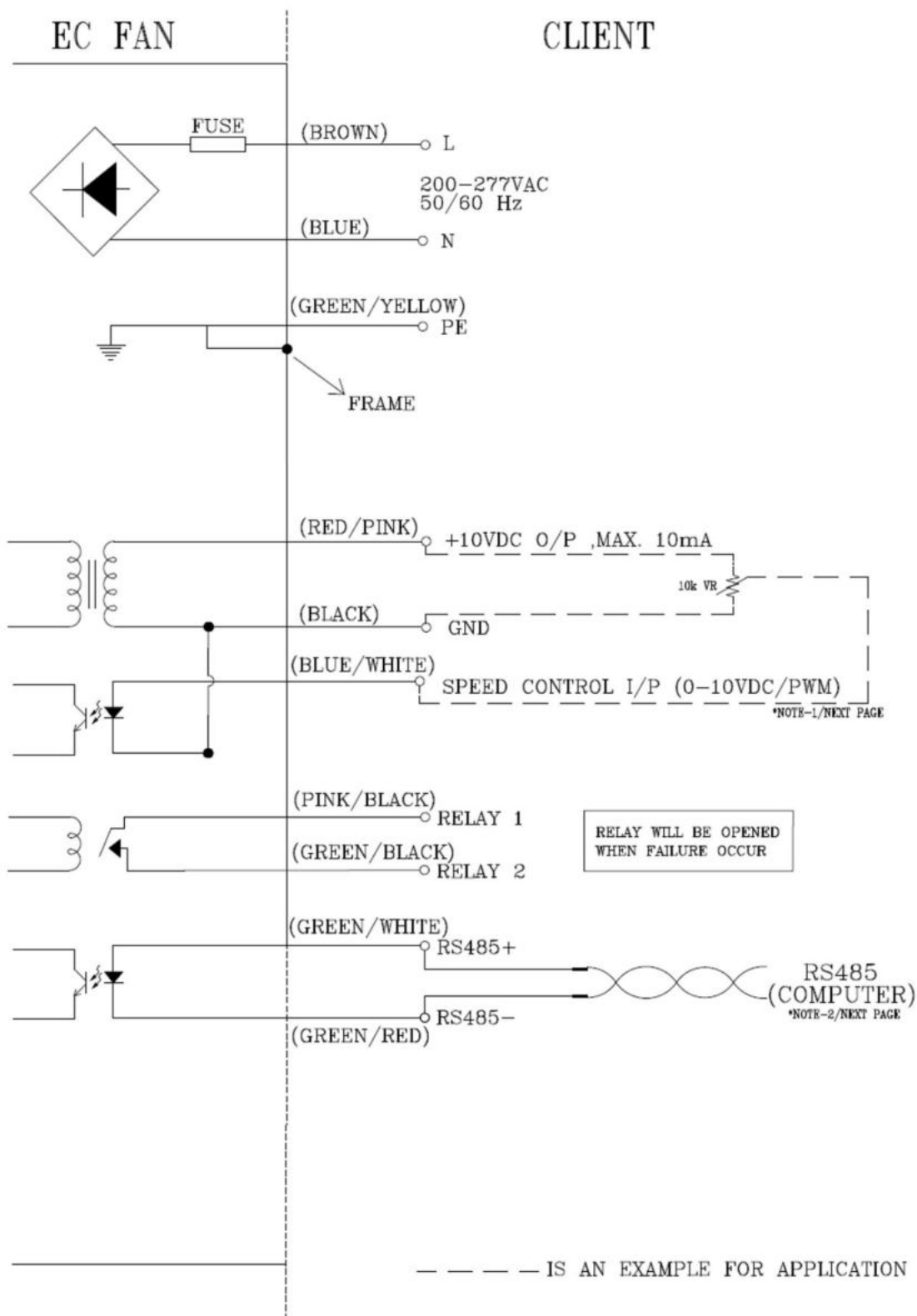
- 1 Depth of screw : 6~8mm.


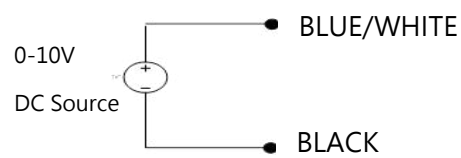
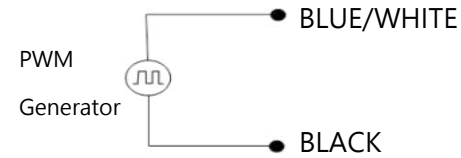
Definition of cable



Cable	Wire type	Text	Functions
1	UL 2464 18AWG 3C	Brown	L
		Blue	N
		Green / Yellow	Earth
2	UL 2464 24AWG 7C	Red / Pink	+10V
		Blue / White	PWM
		Black	GND
		Green / Red	RS485-
		Green / White	RS485+
		Pink / Black	Relay 1
		Green / Black	Relay 2

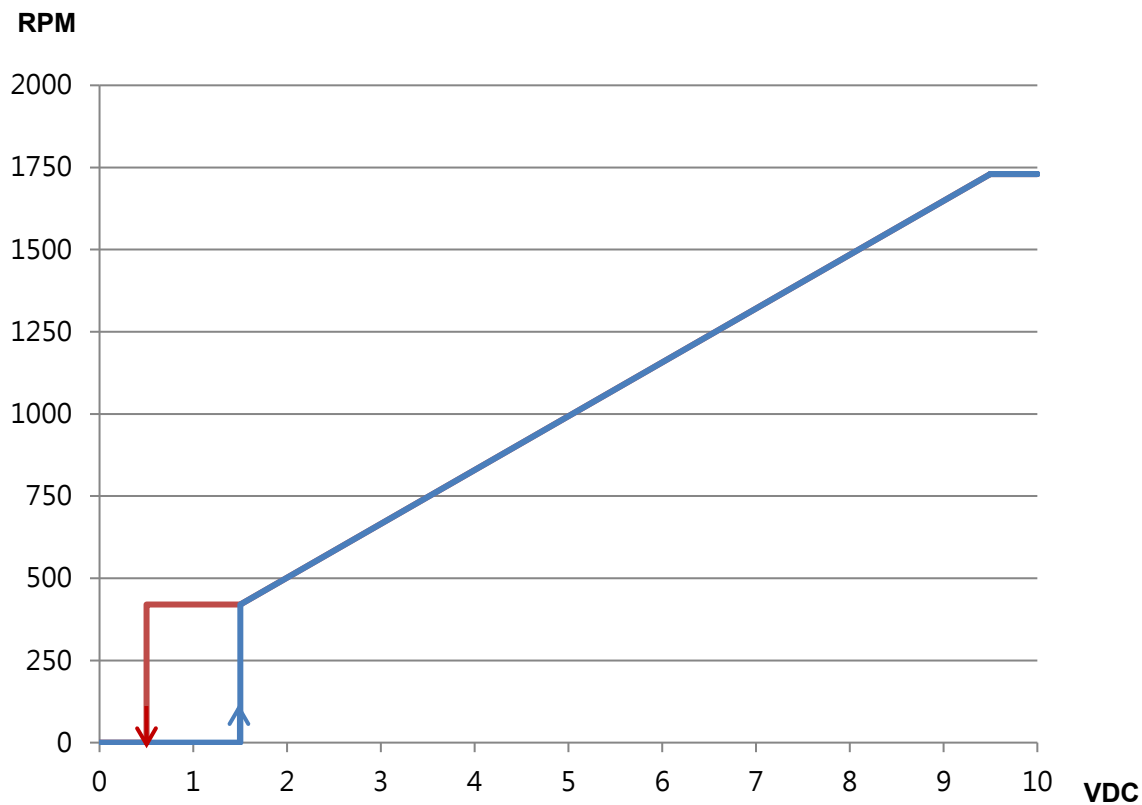
Lead wire connection:



Speed setting	
<p>Full Speed</p> 	<p>Short RED / PINK & BLUE / WHITE</p> <p>Fan will run full speed.</p>
<p>Voltage Control</p> 	<p>Use voltage source support 0~10VDC voltage</p> <p>DC+ : connect to BLUE / WHITE</p> <p>DC - : connect to BLACK</p> <p>-Voltage higher than 1.5 VDC, fan start up.</p> <p>-Voltage lower than 0.5 VDC , fan stop</p>
<p>PWM Control</p> 	<p>PWM duty control</p> <p>PWM amplitude is 10VDC(+/-5%)</p> <p>Frequency Range is 100Hz...100kHz</p> <p>-PWM duty higher than 15%, fan start up °</p> <p>-PWM duty lower than 5%, fan stop °</p>

Signal function																
<p>RS485 control function</p>	<p>RS485 control function</p> <ul style="list-style-type: none"> -Select the control mode of speed, fixed speed or fixed PWM duty -Speed and power consumption feedback. -Allow multiple FANs control and status patrol. 															
<p>Voltage/PWM control</p>	<p>The speed comparison will control level</p> <table border="1"> <thead> <tr> <th>Voltage (V)</th> <th>PWM (%)</th> <th>Speed (RPM) (REF)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>1.5</td> <td>15</td> <td>420 ± 50 RPM</td> </tr> <tr> <td>6.0</td> <td>60</td> <td>1160 ± 8%</td> </tr> <tr> <td>9.5</td> <td>95</td> <td>1730 ± 5%</td> </tr> </tbody> </table>	Voltage (V)	PWM (%)	Speed (RPM) (REF)	0	0	0	1.5	15	420 ± 50 RPM	6.0	60	1160 ± 8%	9.5	95	1730 ± 5%
Voltage (V)	PWM (%)	Speed (RPM) (REF)														
0	0	0														
1.5	15	420 ± 50 RPM														
6.0	60	1160 ± 8%														
9.5	95	1730 ± 5%														
<p>Alarm state</p>	<p>Open with Failure (Relay1/Relay2)</p>															

Control Voltage VS. RPM Curve



Voltage(VDC) , PWM duty (%)

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	%