Specification For Approval

Customer : _____

Description : _____ EC FAN _____

Customer Part No. : _____ Rev : ____

Delta Model No. : _____ GTB031FUC20R N1 _____ Rev : __05__

Safety Model No. : _____ GTB031FUC20R _____

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 : _____

GTB031FUC20RN1 Delta Datasheet
sales@fansco.com www.fansco.com

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www.fansco.com

*** SAMPLE HISTORY ***

CUSTOMER：

CUSTOMER P/N：

DELTA MODEL：GTB031FUC20R N1

REV	DESCRIPTION	DRAWN	CHECKED		APPROVED	ISSUE DATE
			ME	EE		
04	Issue spec.	丁威柏 12/06'17	丁威柏 12/06'17	陳士偉 12/06'17	顏承偉 12/06'17	12/06'17
05	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 319 x 198 mm

Technical features

Input Side	
Nominal Voltage	1~ 230Vac 50/60Hz
Input Source	1~ 200Vac - 277Vac
Power @ Free air	373 W
Power @ Max. load	530 W
Output Side	
Speed (RPM)	2500
Qmax. (CMH / CFM)	3014 / 1774
Pmax. (Pa / inAq)	734 / 2.95
Noise (dB-A) @ Qmax.	74.5
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)	6.3
Electrical leads	Lead wire
Environmental	
Operating temperature range	-25 ~ +60 ℃
Storage temperature range	-40 ~ +70 ℃
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 ℃ / 15 ~ 65 %RH

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

P & Q curves
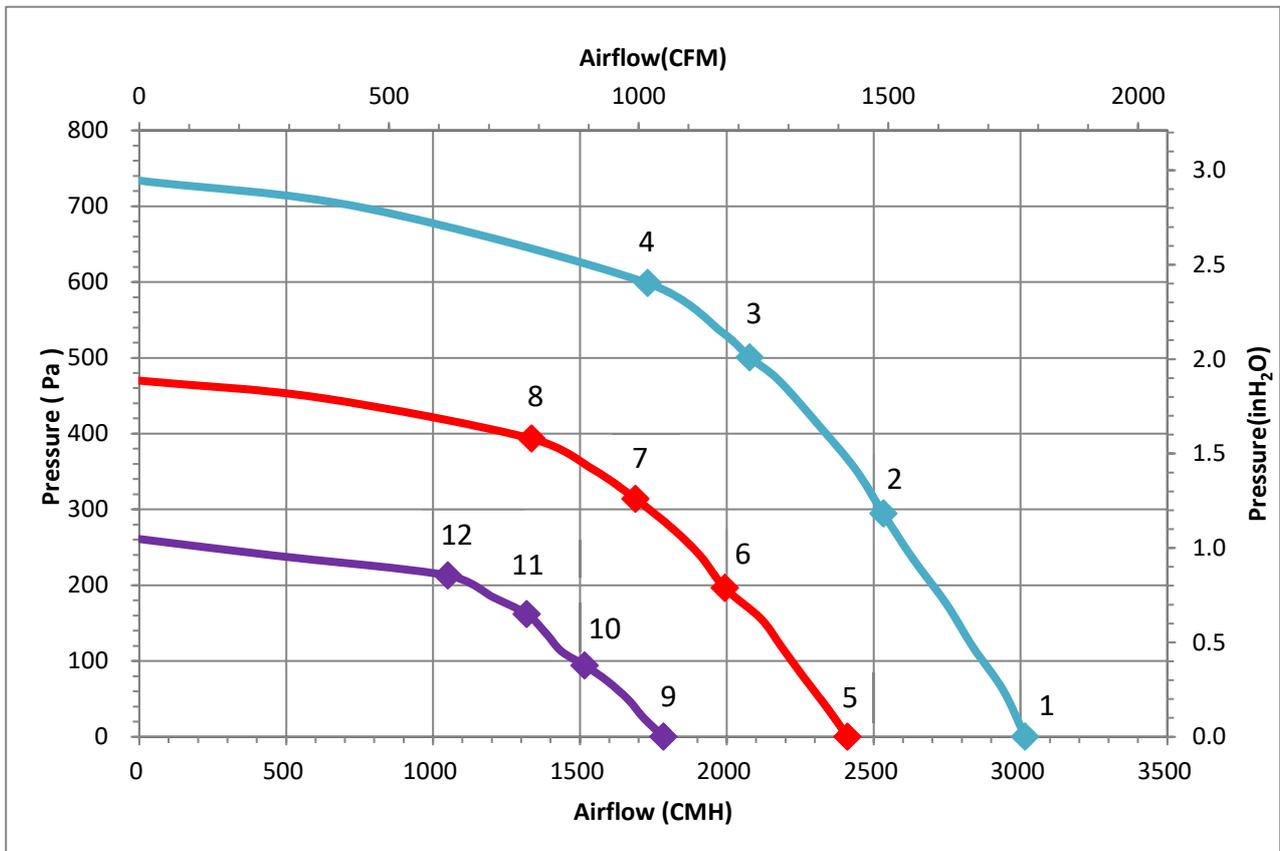
Measure data:

|	P [Pa]	Q [CMH]	N [R.P.M.]	P1 [W]	I [A]	Lp [dB(A)]
1	0	3016	2500	373	2.31	74.5
2	294	2533	2503	461	2.81	
3	500	2079	2496	510	3.11	
4	598	1731	2500	512	3.12	
5	0	2411	2000	195	1.26	69.1
6	196	1994	1998	238	1.52	
7	314	1689	2000	260	1.65	
8	393	1335	1998	259	1.65	
9	0	1785	1500	88	0.62	66.6
10	94	1517	1497	103	0.72	
11	162	1319	1497	113	0.77	
12	213	1051	1494	114	0.78	

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.
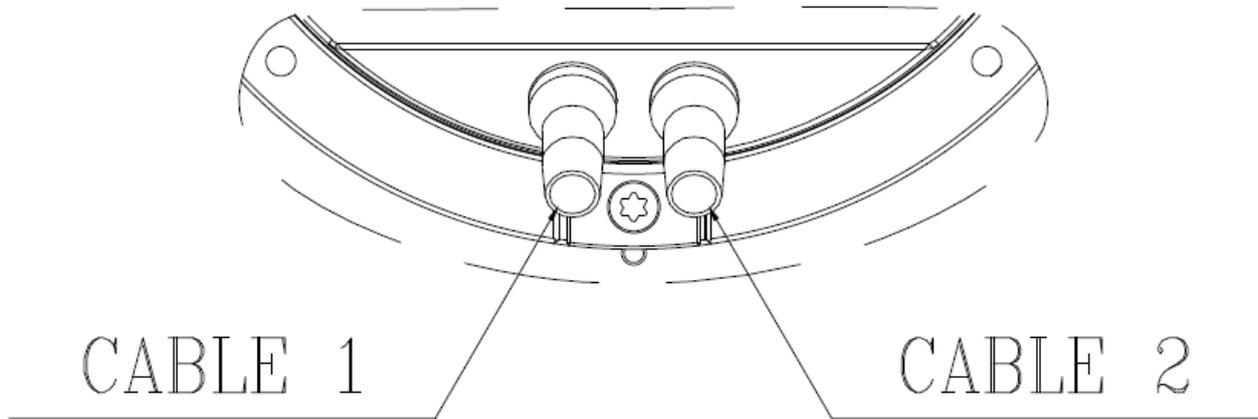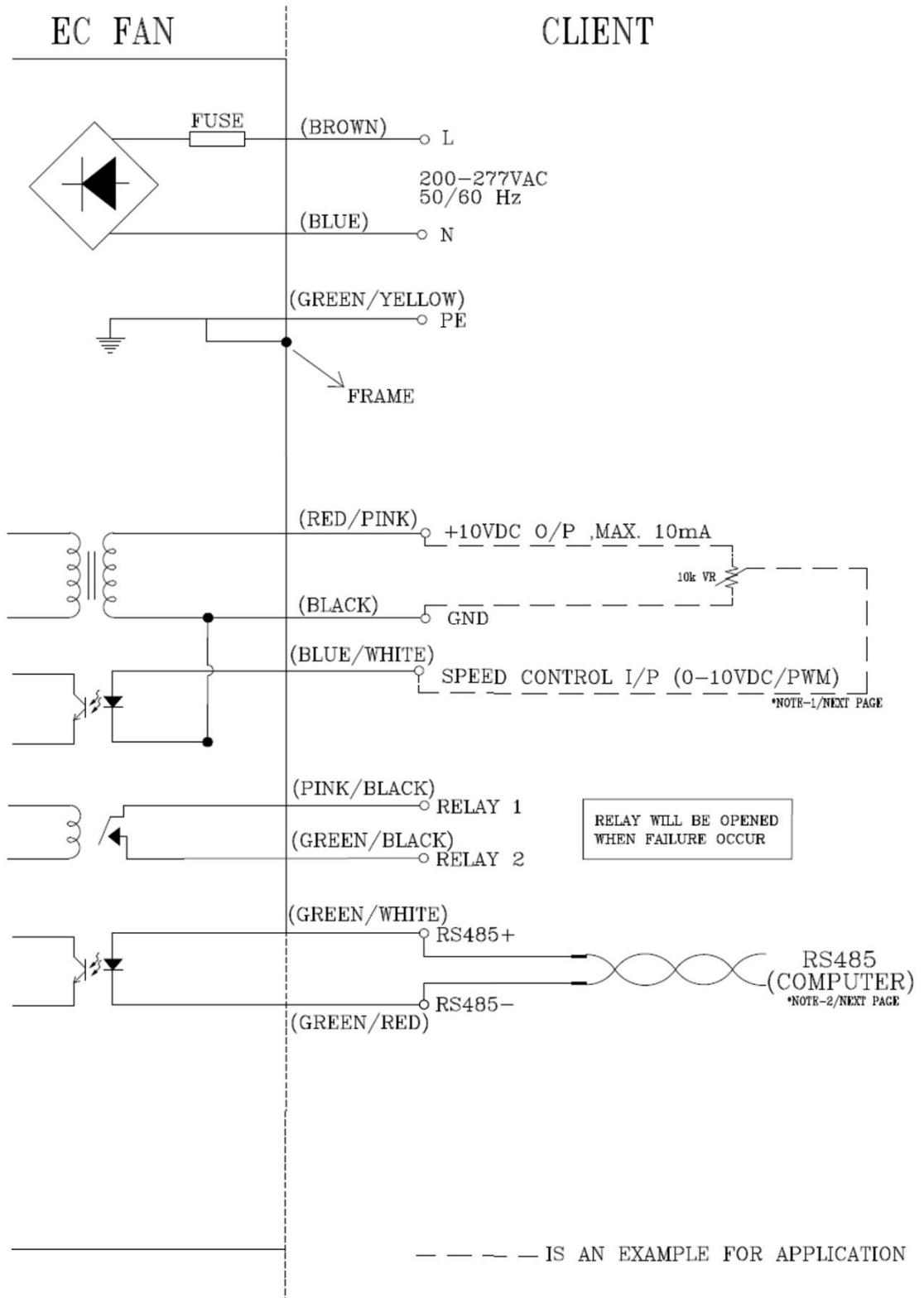
Dimension drawing

Label :

Fan :
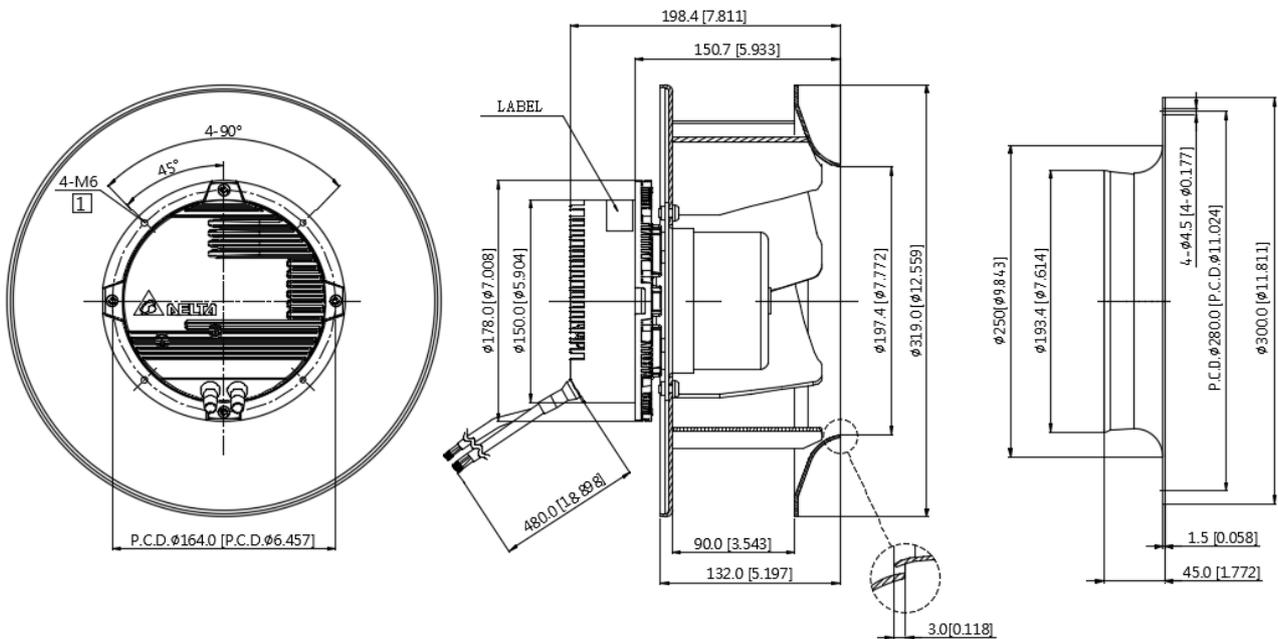
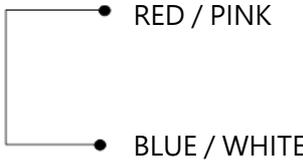UNIT : mm[INCH]

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:

EC FAN

CLIENT

FUSE

(BROWN) ○ L

200–277VAC
50/60 Hz

(BLUE) ○ N

(GREEN/YELLOW) ○ PE

FRAME

(RED/PINK) ○ +10VDC O/P ,MAX. 10mA

10k VR

(BLACK) ○ GND

(BLUE/WHITE) ○ SPEED CONTROL I/P (0–10VDC/PWM)

*NOTE–1/NEXT PAGE

(PINK/BLACK) ○ RELAY 1

(GREEN/BLACK) ○ RELAY 2

RELAY WILL BE OPENED
WHEN FAILURE OCCUR

(GREEN/WHITE) ○ RS485+

RS485
(COMPUTER)
*NOTE–2/NEXT PAGE

○ RS485–
(GREEN/RED)

— — — — IS AN EXAMPLE FOR APPLICATION

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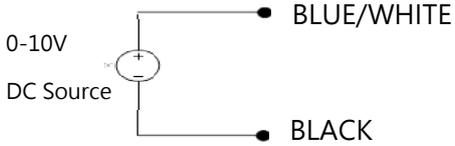
PWM Control
 	
PWM
Generator
 	
BLUE/WHITE
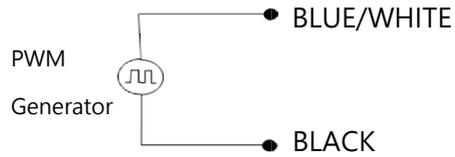 	
BLACK
	PWM duty control
	PWM amplitude is 10VDC(+-5%)
	Frequency Range is 100Hz…100kHz
	   -PWM duty higher than 15%, fan start up。
	   -PWM duty lower than 5%, fan stop。

Signal function			
RS485 control function	**RS485 control function** -Select the control mode of speed, fixed speed or fixed PWM duty -Speed and power consumption feedback. -Allow multiple FANs control and status patrol.		
Voltage/PWM control	The speed comparison will control level		
	Voltage (V)	PWM (%)	Speed (RPM) (REF)
	0	0	0
	1.5	15	500 ± 50 RPM
	6.0	60	1680 ± 8%
	9.5	95	2500 ± 5%
Alarm state	Open with Failure (Relay1/Relay2)		

Control Voltage VS. RPM Curve
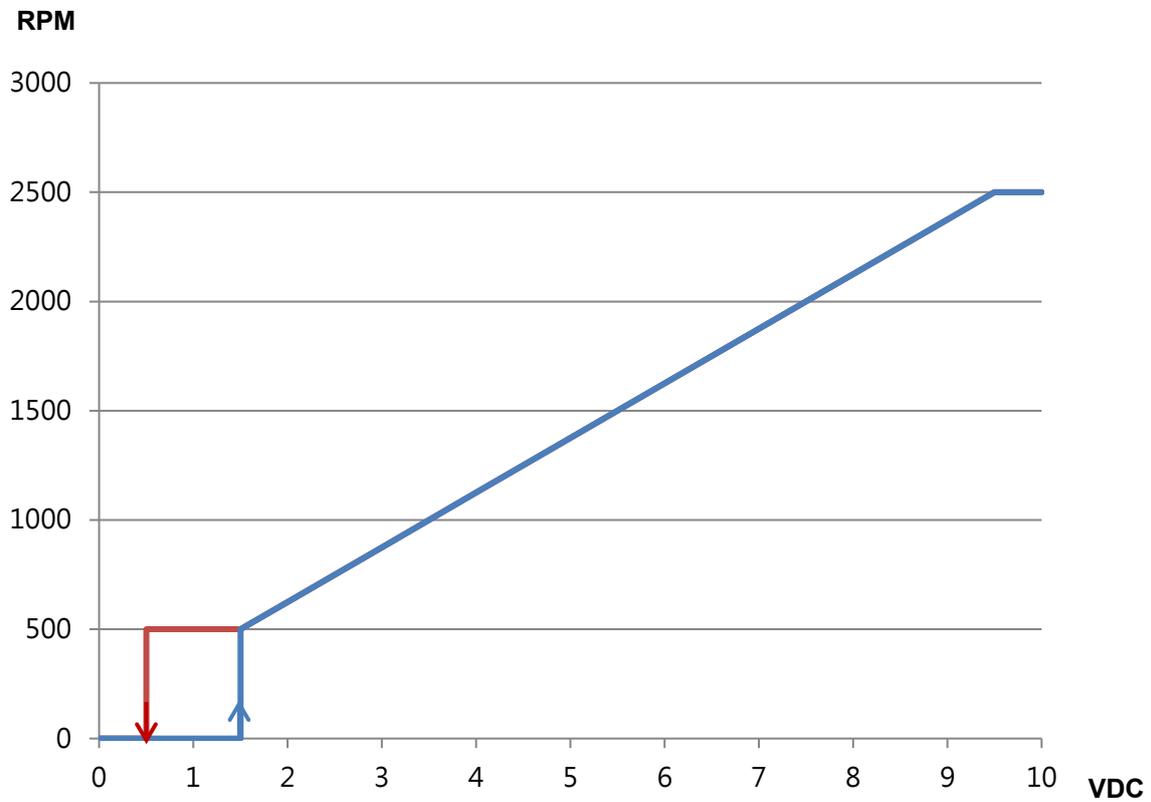
Voltage(VDC) , PWM duty (%)

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	%