Specification For Approval

Customer : Vertiv

Description : EC FAN

Customer Part No. : Rev :

Delta Model No. : GTW050EUD19E-M001 Rev : 03

Safety Model No. :

Sample Issue No. :

Sample Issue Date : 05/03/2022

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

Approved by :

Date :

Delta Electronics, Inc.
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Taoyuan City 333, Taiwan (R.O.C.)FAX : 886-(0)3-3591991

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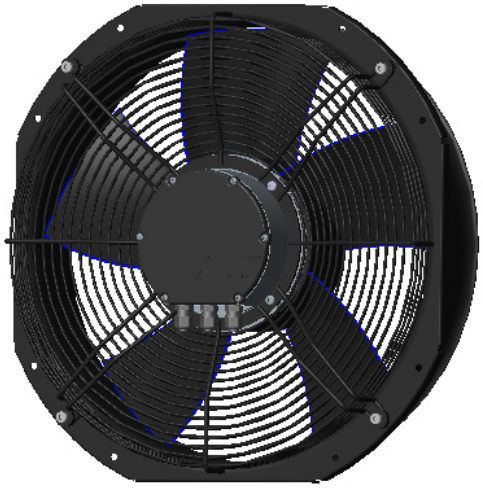
GTW050EUD19E-M001

Electronically Commutated (EC) Fan

Axial Fan

550x550x 186 mm



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Technical features

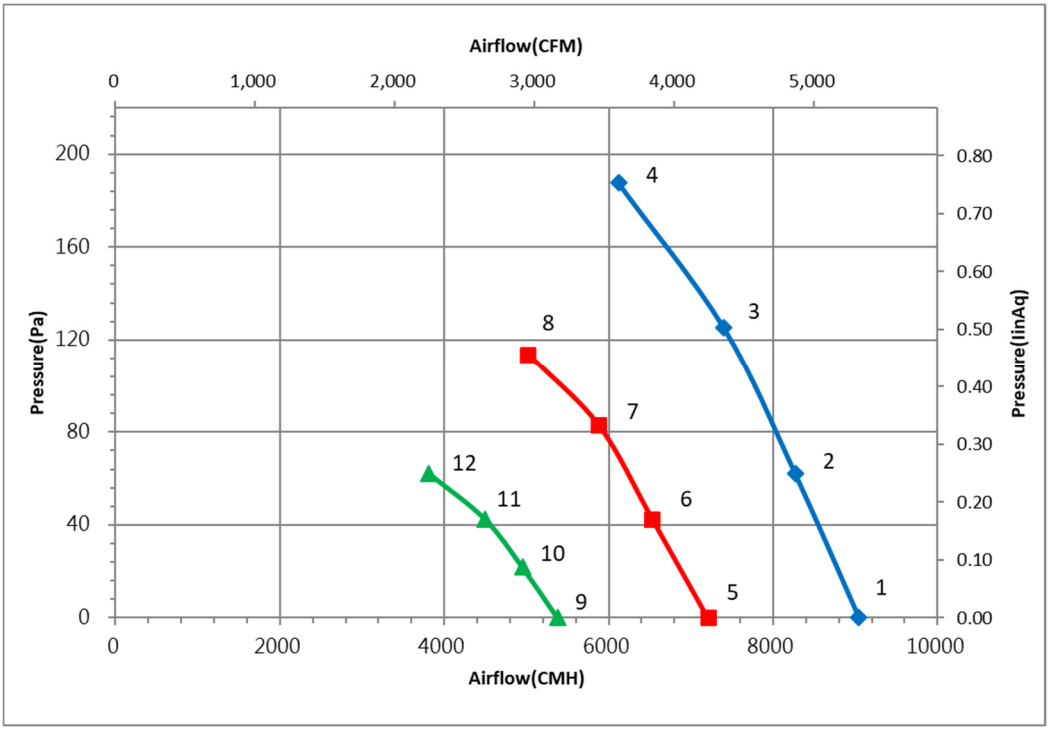
Input Side	
Nominal voltage	1~ 230Vac , 50/60Hz
Input source	1~ 200Vac - 277Vac
Power @ free air	566W
Power @ max. load	800 W
Output Side	
Speed (RPM)	1500
Qmax. (CMH / CFM)	9046 / 5321
Pmax. (Pa / inAq)	187 / 0.75
Noise (dB-A) @ Qmax	81.0
Functions	
Active power factor correction	
0~10V_{DC} analog input.	
Output +20V_{DC} (±10%), max. 30mA.	
RS485 control bus (MODBUS RTU, Baudrate:19200, 8E1,A6)	
Alarm relay, Locked rotor protection, Soft start.	
Voltage / Current monitoring.	

Physical	
Nominal Rotation direction	CCW, seen on rotor
Material (Impeller / Motor Frame)	Plastic / Die-cast aluminum
Material (Wallring / fan guard)	Steel / Steel
Bearing system	Ball bearings
Weight (kg)	17
Electrical leads	cable
Environmental	
Operating temperature range	-25 ~ +70 ℃
Storage temperature range	-40 ~ +70 ℃
Safety	
Safety	CE (in process)
IP Level	IP54
EMC	EN61000-6-1 , EN61000-6-3 , 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

1. Delta reserves the right to change specifications and other product information without prior notice.
2. The Fan can be operated at 70°C ambient temperature with full loading, and the rotation speed will be decreased to 80% of full loading if ambient temperature is higher than 70°C.
3. 75°C ambient temperature is the maximum workable temperature.
4. The Fan can start running at ambient temperature:-40°C

5.The default setting is 0~10V analog control mode

P & Q curves



Measure data:

	P [Pa]	Q [CMH]	N [R.P.M.]	P1 [W]	I [A]	Lp [dB(A)]
1	0	9046	1500	566	2.60	81.0
2	62	8267	1500	632	2.93	80.1
3	125	7397	1500	712	3.29	79.1
4	187	6118	1500	762	3.52	76.9
5	0	7205	1200	297	1.40	75.5
6	42	6528	1200	339	1.57	74.1
7	83	5878	1200	379	1.75	71.9
8	114	5015	1200	396	1.83	70.4
9	0	5377	900	138	0.67	68.0
10	22	4950	900	152	0.74	66.6
11	42	4492	900	168	0.81	64.6
12	62	3803	900	176	0.85	63.8

Test condition:

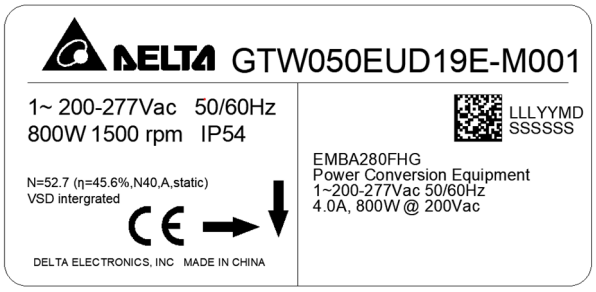
- Input voltage: nominal voltage
- Temperature : room temperature
- Humidity : 65%RH
- Measured with standard fanguard and wallring.
- Noise is measured at a distance of one meter from the fan intake with a sound level meter in anechoic chamber.

ErP Directive:

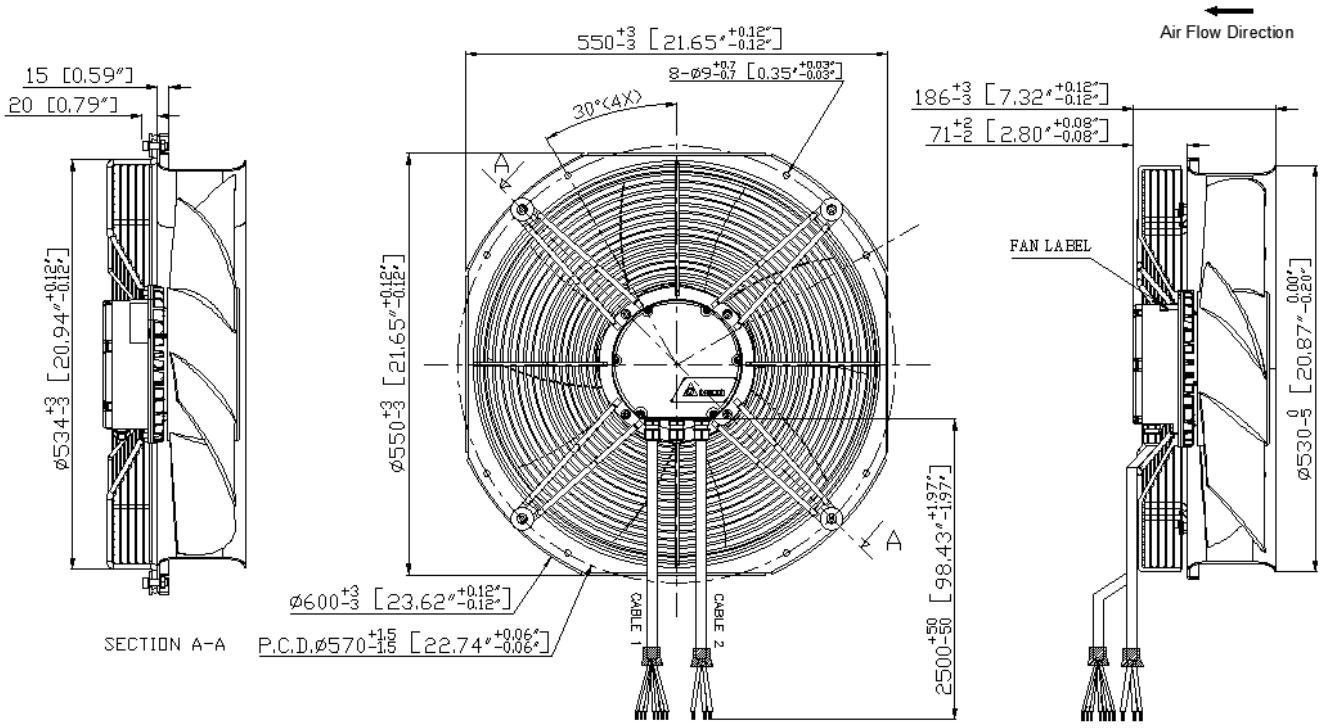
	Actual	2015
Over all Eff (%)	45.6	32.9
Eff Grade N	52.7	40
Power (kW)	0.762	
Air flow (CMH)	6118	
Pressure (Pa)	187	
Speed (RPM)	1500	

Dimension drawing

Label

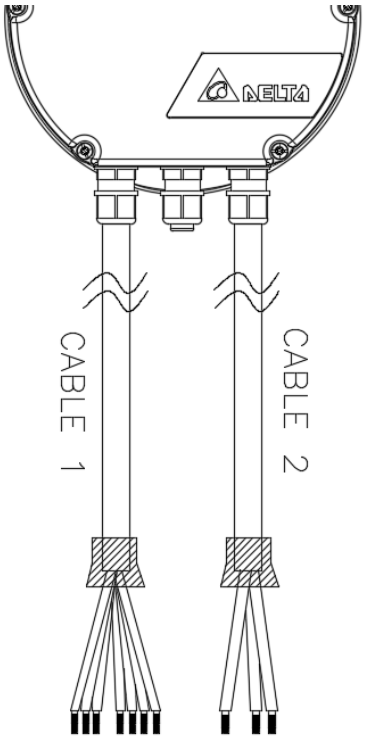


Fan :



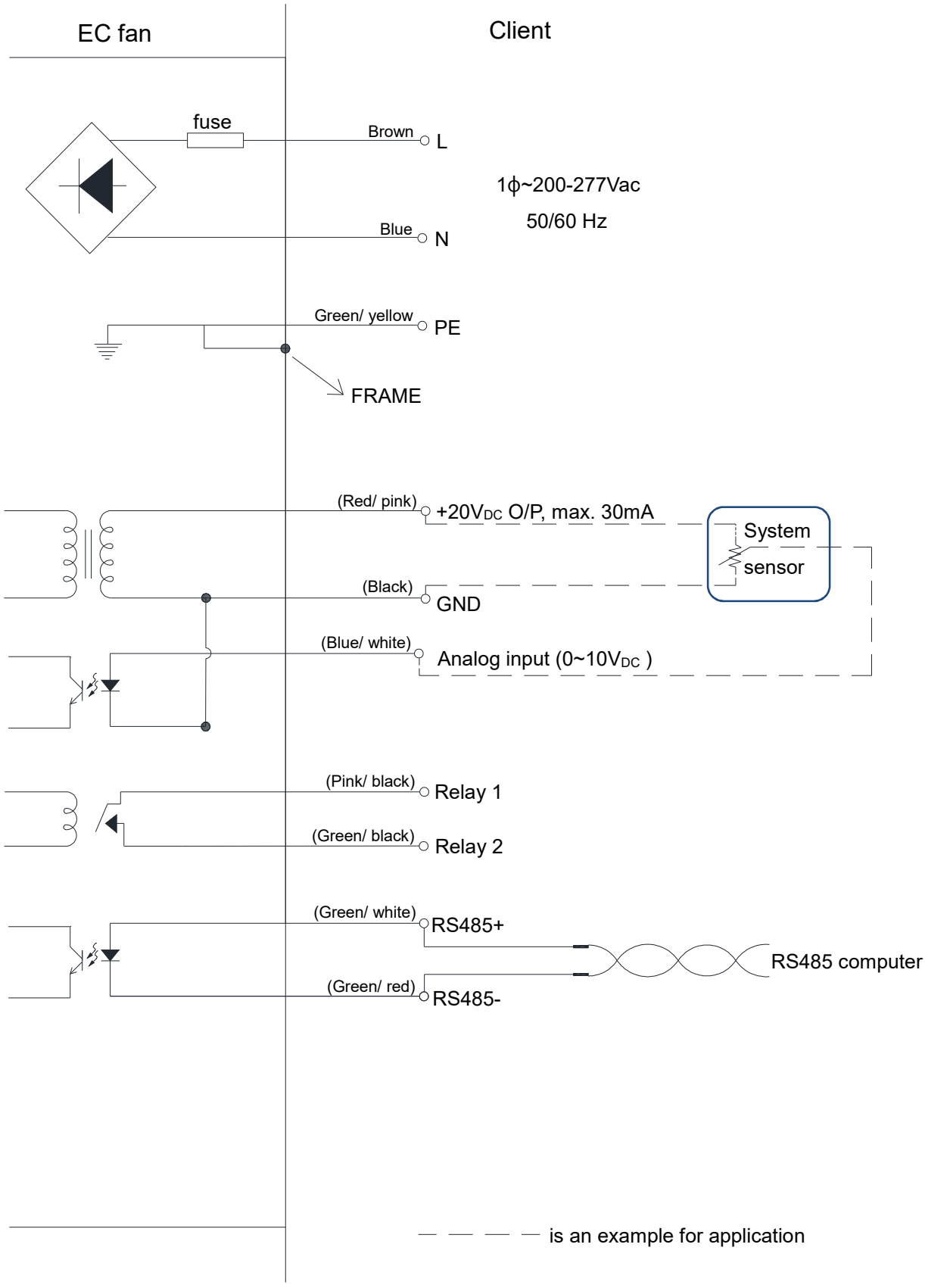
UNIT: mm [inch]

Definition of cable



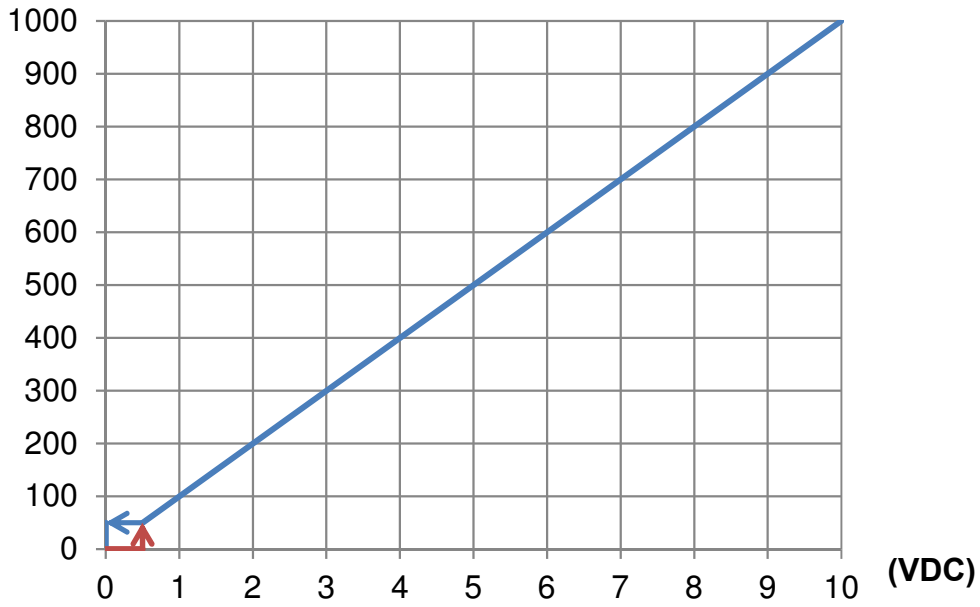
Cable	WIRE TYPE	Color	Functions
Cable 1 Signal	UL2464 24AWG	Red/ pink	+20V_{DC}
		Blue/ white	ANALOG INPUT
		Black	GND
		Green/ red	RS485 -
		Green/ white	RS485 +
		Pink/ black	Relay 1
		Green/ black	Relay 2
Cable 2 Power	UL 2464 18AWG	Brown	L
		Blue	N
		Green/yellow	EARTH

Lead wire connection:



Signal function	
Analog signal input	-The input voltage range shall be 0~10 V_{DC} -The input signal level can be read via RS485 communication, proportion scale value is from 0.5 V_{DC} to 10 $V_{DC.}$ (note-1)
RS485 control function	-Select the control mode of speed, fixed speed or fixed duty. -Speed, power consumption and analog input level feedback. -Allow multiple FANs control and status patrol. -Safety mode function, abnormal duration and speed setting. -Rotation direction control. (note-2)
Relay function	Relay will be open, when fault occur

(Corresponding data)



Analog input level(V_{DC}) vs communication corresponding data

Note:

1. The response data is based on 0-10Vdc AD signal level,
   200 responding data indicates 2Vdc analog input, 1000 indicates 10Vdc analog input.
2. The reverse rotation must be controlled by communication command, and auto return to nominal direction after reverse process, as below diagram.