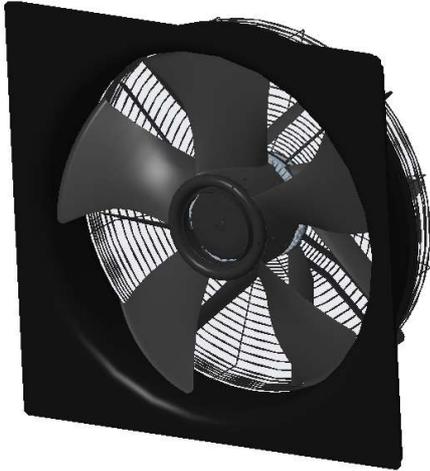




## Electronically Commutated (EC) Fan

Axial Fan

1070 x 1070 x 337 mm



**DELTA ELECTRONICS, INC.**  
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 Industrial Zone, Taoyuan City, 33341,  
 Taiwan  
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### Technical features

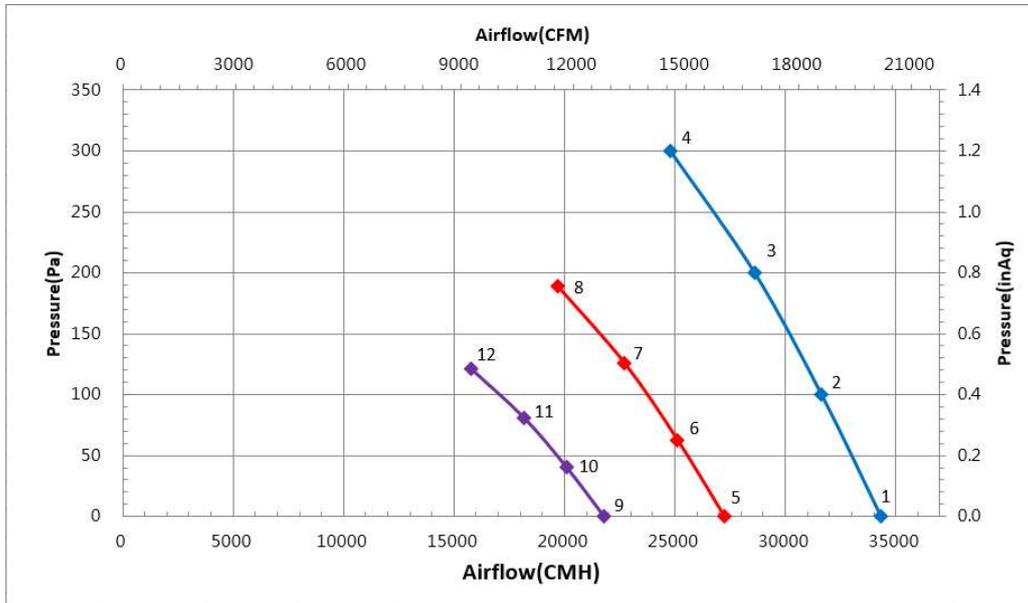
Input Side	
Nominal Voltage	3~ 400V <sub>ac</sub> 50/60Hz
Input Source	3~ 380V <sub>ac</sub> - 480V <sub>ac</sub>
Power @ Free air	2349 W
Power @ Max. load	4000 W
Output Side	
Speed (RPM)	1260
Qmax. (CMH / CFM)	34410 / 20241
Pmax. (Pa / inAq)	364/ 1.46
Noise (dB-A) @ Qmax.	85
Functions	
Passive power factor correction	
Control input 0-10V <sub>DC</sub> / PWM	
Output +10V <sub>DC</sub> (±10%), max. 10mA.	
RS485 control bus (MODBUS (V1.3) RTU / 8N1)	
Alarm relay, Locked rotor protection, Soft start.	
Voltage / Current monitoring.	

**NOTE:**

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

Physical	
Rotation Direction	CCW, Seen on rotor
Material (Impeller / Motor Frame)	Plastic / Die-cast aluminum
Material (Walling / Fan Guard)	Steel / Steel
Bearing system	Ball bearings
Weight (kg)	58
Electrical leads	Via terminal block
Environmental	
Operating temperature range	-25 ~ +65 °C
Storage temperature range	-40 ~ +70 °C
Safety	
Safety	UL, cUL,
IP Level	IP55
EMC	EN61000-6-2 , EN61000-6-3
Protection class	I
Insulation class	F
Leakage current	<= 3.5 mA
Motor protection	Over temperature protected
Life expectancy	60,000 hrs at 40 °C / 15 ~ 65 %RH

P & Q curves(with fanguard condition)



	P [Pa]	Q [CMH]	N [R.P.M.]	P1 [W]	I [A]	Lp [dB(A)]
1	0	34328	1260	2416	4.02	85.0
2	100	31645	1260	2919	4.54	
3	200	28621	1260	3357	4.98	
4	300	24813	1260	3753	5.39	
5	0	27244	1000	1208	2.62	79.0
6	63	25115	1000	1459	2.95	
7	126	22715	1000	1678	3.22	
8	189	19693	1000	1876	3.45	
9	0	21796	800	618	1.65	73.5
10	40	20092	800	747	1.89	
11	81	18172	800	859	2.09	
12	121	15754	800	961	2.25	

Test Condition :

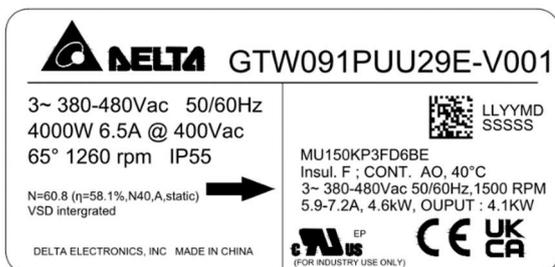
- Input Voltage : Nominal Voltage
- Temperature : Room Temperature
- Humidity : 65%RH
- Noise (Lp) is measured at a distance of one meter from the inlet side.

ErP Directive:

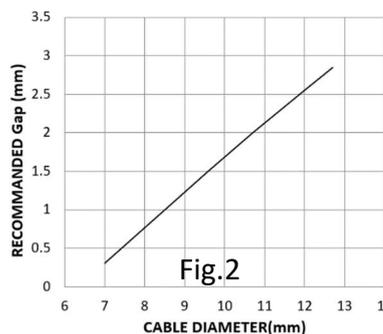
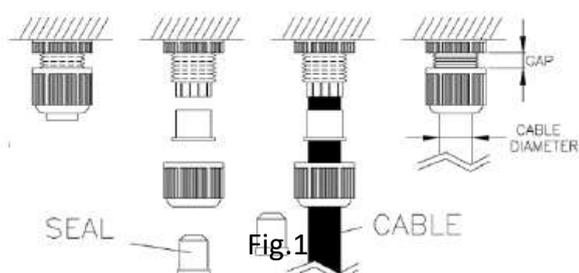
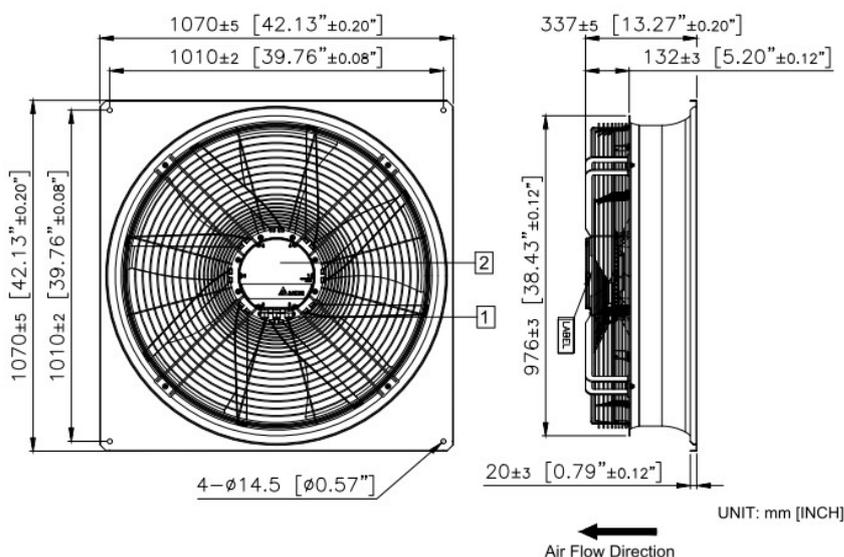
	Actual	2015
Over all Eff (%)	58.1	37.1
Eff Grade N	60.8	40
Power (kW)	3.812	
Air flow (CMH)	24629	
Pressure (Pa)	310	
Speed (RPM)	1266	

Dimension drawing

Label :



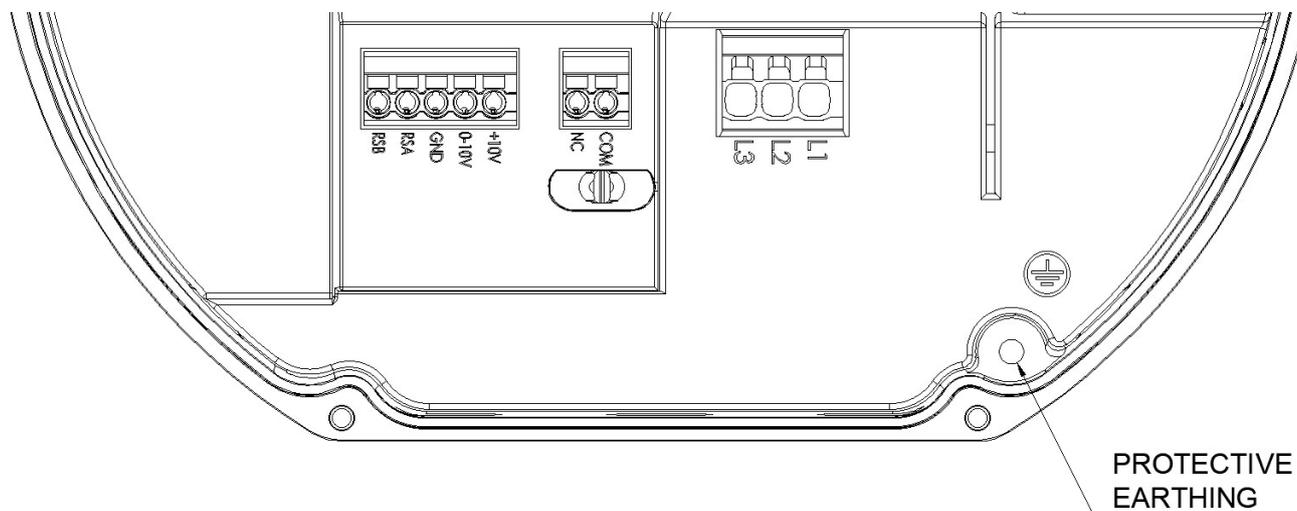
Fan :



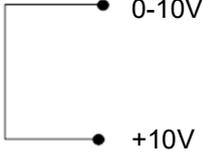
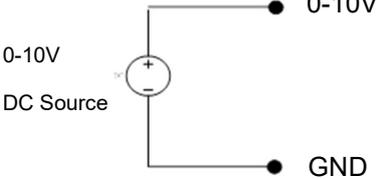
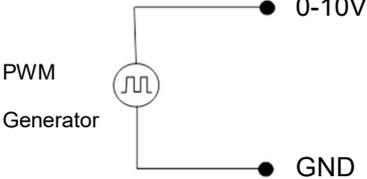
Note :

- 1 Cable gland: M20xP1.5 (3 pcs), Material: Nylon, Cable Diameter:  $\phi$  7.0~  $\phi$  12.7mm  
Cable gland nut' s gap refer Fig.1 & 2
- 2 Open the cover and refer to definition of terminal block, screw tightening torque  $17 \pm 10\%$  kgf-cm. Cover material - Metal (ADC12).

Definition of terminal block

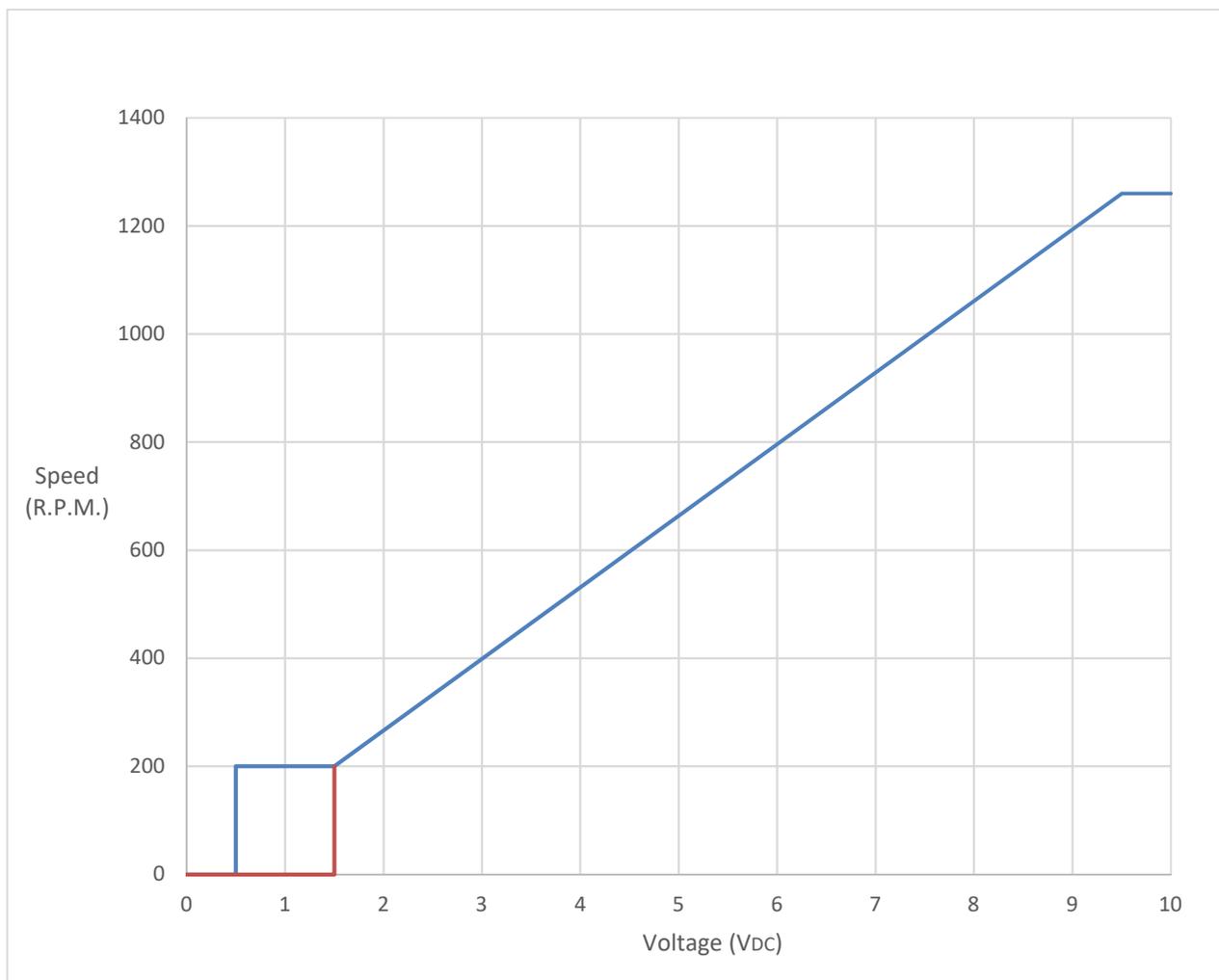


	Text	Functions
Power	L1	AC main (3~ 380-480VAC)
	L2	AC main (3~ 380-480VAC)
	L3	AC main (3~ 380-480VAC)
Status	COM	Alarm relay, common (2A/250VAC)
	NC	Alarm relay, open by failure
Signal	+10V	10VDC output, MAX 10mA (For external potentiometer)
	0-10V	Speed control, input 0-10VDC
	GND	Ground
	RSA	RS485-A
	RSB	RS485-B

Speed setting	
<p><b>Full Speed</b></p> 	<p><b>Short 0-10V &amp; +10V</b> Fan will run at full speed.</p>
<p><b>Voltage Control A</b></p> 	<p><b>Connector 1-10kΩ variable resistor</b> Between +10V with GND and 0-10V Vary the variable resistance · to change the '(0-10V)' voltage (0...10V), then change FAN speed °</p>
<p><b>Voltage Control B</b></p> 	<p><b>Use voltage source supply 0~10V<sub>DC</sub> voltage</b> DC+ : connect to (0-10V) (+) DC - : connect to GND (-)</p>
<p><b>PWM Control</b></p> 	<p><b>PWM duty control</b> 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 °</p>

Signal function			
RS485 control function	RS485 control function		
	<ul style="list-style-type: none"> <li>-Select the control mode of speed, fixed speed or fixed PWM duty</li> <li>-Speed and power consumption feedback.</li> <li>-Allow multiple FANs control and status patrol.</li> </ul> <p>Note: A MODBUS over Serial Line Cable must be shielded. At one end of each cable its shield must be connected to protective ground.</p>		
Voltage / PWM	The reference of speed control level as below table		
	Voltage (V) ± 5%	PWM(%) ± 5%	Speed (RPM)
	0 ~ 0.5	0 ~ 5	0
	1.5	15	200 ± 50 RPM
	6.0	60	800 ± 8%
	9.5	95	1260 ± 5%
Alarm state	<p>Normal State: NC and COM will CLOSE.</p> <p>Alarm State (power off ): NC and COM will OPEN.</p>		

Control Voltage VS. RPM Curve



Voltage (V<sub>DC</sub>), PWM duty (%), 4~20mA table

Voltage	0	0.5	1	1.5	2	3	4	5	6	7	8	9	10	V <sub>DC</sub>
PWM duty	0	5	1	15	20	30	40	50	60	70	80	90	100	%