Specification For Approval

Customer : STD

Description : EC FAN

Customer Part No. : _____ Rev : _____

Delta Model No. : GTW091PUU29E-V001 Rev : 06

Safety Model No. : MU150KP3FD6BE

Sample Issue No. : _____

Sample Issue Date : 07/18/2024

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

Approved by : _____

Date : _____

Smarter. Greener. Together

GTW091PUU29E-V001

Electronically Commutated (EC) Fan

Axial Fan

1070 x 1070 x 337 mm

GTW091PUU29E-V001 Delta Datasheet sales@fansco.com www.fansco.com

Technical features

Input Side	
Nominal Voltage	3~ 400V_{ac} 50/60Hz
Input Source	3~ 380V_{ac} - 480V_{ac}
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_{DC} / PWM	
Output +10V_{DC} (±10%), max. 10mA.	
RS485 control bus (MODBUS (V1.3) RTU / 8N1)	
Alarm relay, Locked rotor protection, Soft start.	
Voltage / Current monitoring.	

Physical	
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)	58
Electrical leads	Via terminal block
Environmental	
Operating temperature range	-25 ~ +65 ℃
Storage temperature range	-40 ~ +70 ℃
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 expectance	60,000 hrs at 40 ℃ / 15 ~ 65 %RH

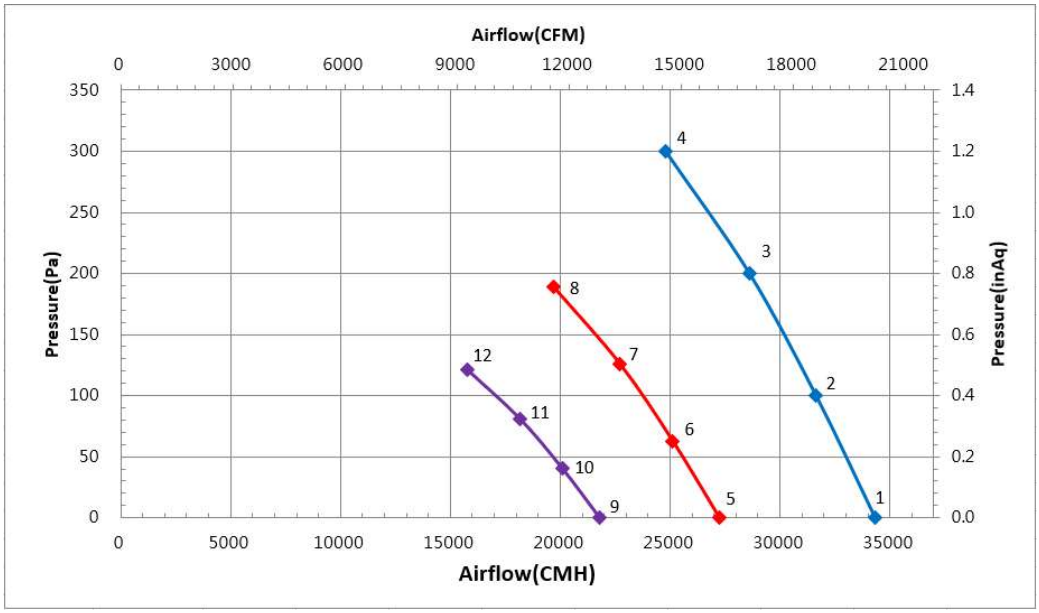
NOTE:

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

Smarter. Greener. Together

GTW091PUU29E-V001

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:

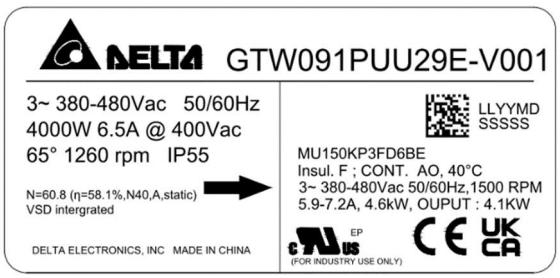
	Actual	2015
Over all Eff (%)	58.1	37.1
Eff Grade N	60.8	40
Power (kW)	3.812	
Air flow (CMH)	24629	
Pressure (Pa)	310	
Speed (RPM)	1266	

Smarter. Greener. Together

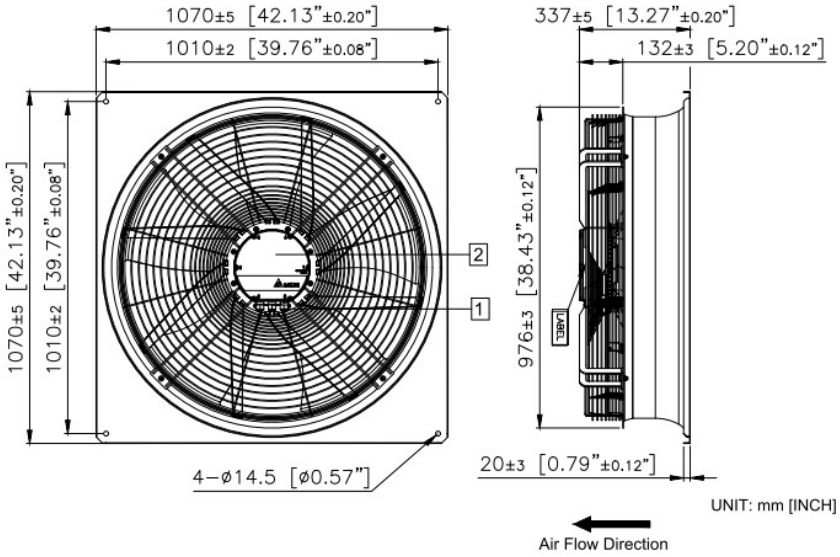
GTW091PUU29E-V001

Dimension drawing

Label :



Fan :



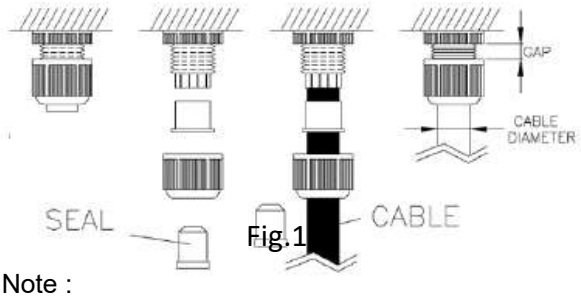


Fig.1

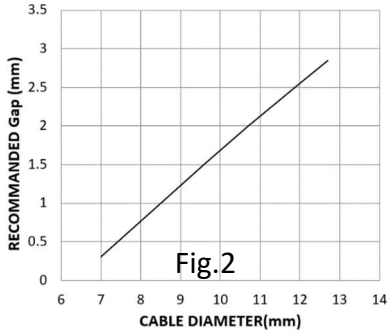


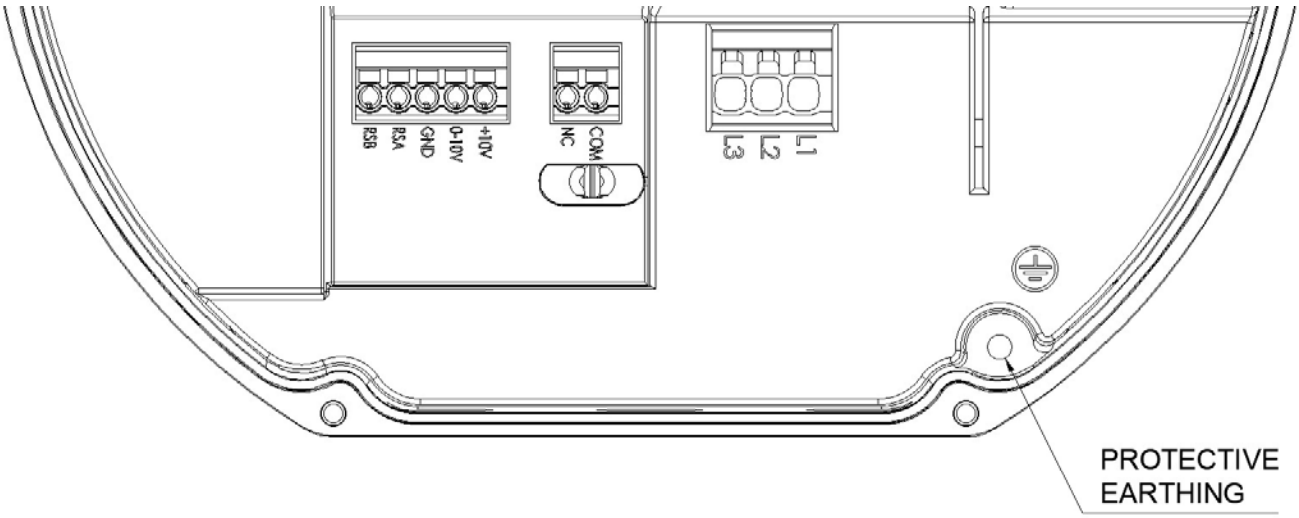
Fig.2

Note :

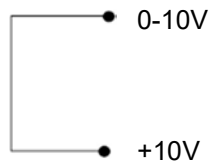
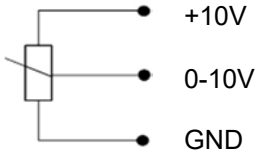
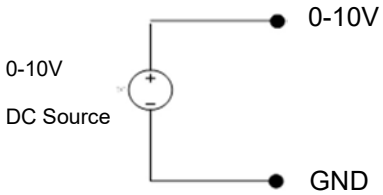
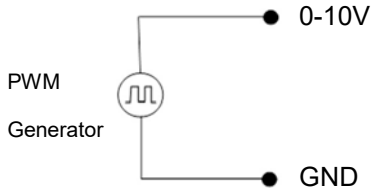
1 Cable gland: M20xP1.5 (3 pcs), Material: Nylon, Cable Diameter: ϕ 7.0~ ϕ 12.7mm
Cable gland nut' s gap refer Fig.1 & 2

2 Open the cover and refer to definition of terminal block, screw tightening torque 17±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

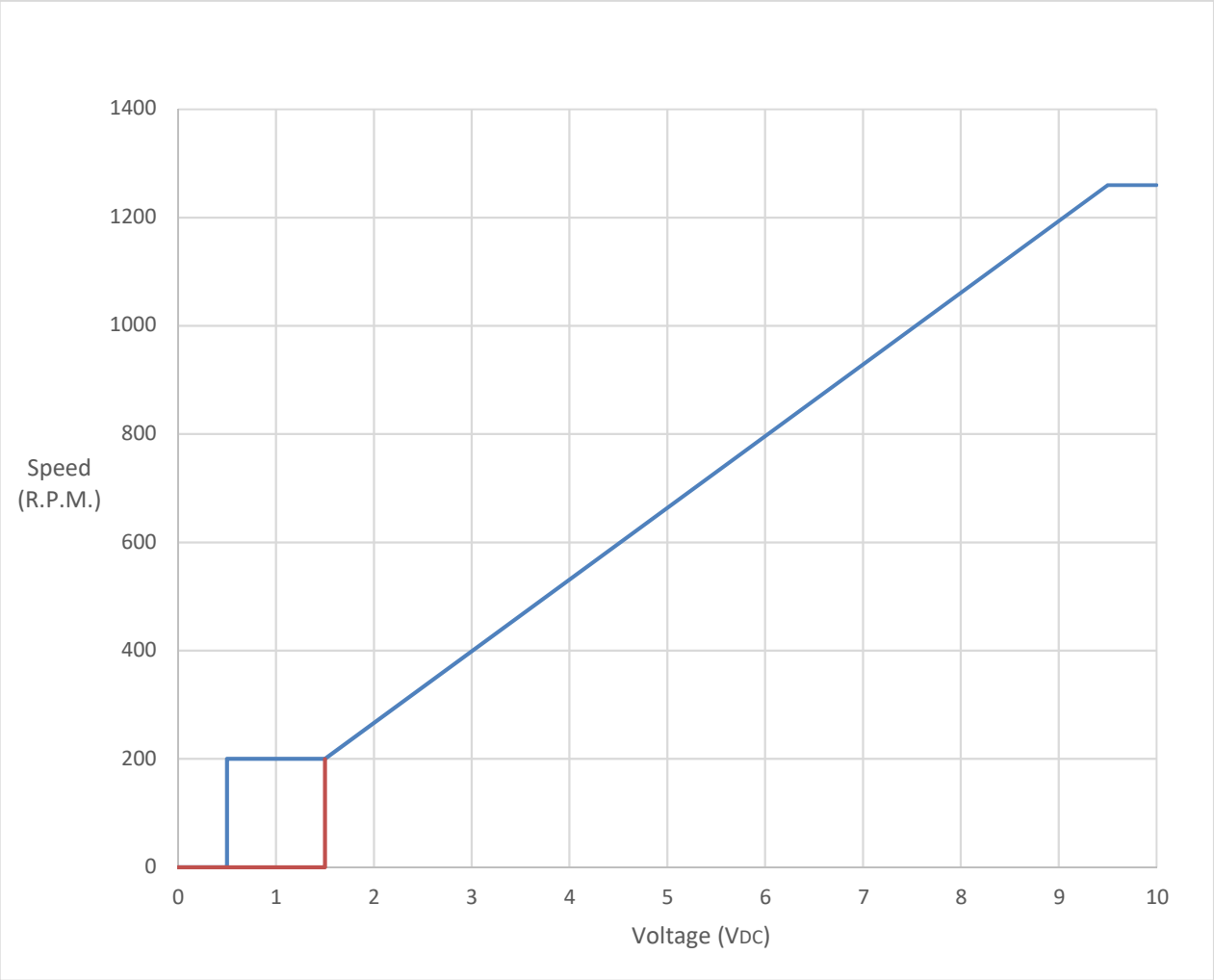
Speed setting	
Full Speed  	**Short 0-10V & +10V** Fan will run at full speed.
Voltage Control A  	**Connector 1-10kΩ variable resistor** Between **+10V** with **GND** and 0-10V Vary the variable resistance，to change the ‘(0-10V)’ voltage (0...10V), then change FAN speed。
Voltage Control B  	**Use voltage source supply 0~10V_{DC} voltage** DC+ : connect to (0-10V) (+) DC - : connect to GND (-)
PWM Control  	**PWM duty control** PWM amplitude is 10VDC (+-5%) Frequency Range is100Hz...100kHz -PWM duty higher than 15%, fan start up。 -PWM duty lower than 5%, fan stop。

<table>
<tr><th colspan="2">Signal function</th></tr>
<tr><td>RS485 control function</td><td>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.
Note: A MODBUS over Serial Line Cable must be shielded. At one end of each cable its shield must be connected to protective ground.</td></tr>
<tr><td>Voltage / PWM</td><td>The reference of speed control level as below table
<table>
<tr><th>Voltage (V) ± 5%</th><th>PWM(%) ± 5%</th><th>Speed (RPM)</th></tr>
<tr><td>0 ~ 0.5</td><td>0 ~ 5</td><td>0</td></tr>
<tr><td>1.5</td><td>15</td><td>200 ± 50 RPM</td></tr>
<tr><td>6.0</td><td>60</td><td>800 ± 8%</td></tr>
<tr><td>9.5</td><td>95</td><td>1260 ± 5%</td></tr>
</table></td></tr>
<tr><td>Alarm state</td><td>Normal State: NC and COM will CLOSE.
Alarm State (power off): NC and COM will OPEN.</td></tr>
</table>

Smarter. Greener. Together

GTW091PUU29E-V001

Control Voltage VS. RPM Curve



Voltage (V_{DC}), PWM duty (%), 4~20mA table

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