



FAX : +886-3-359-1991

\*\*\* SAMPLE HISTORY \*\*\*

CUSTOMER :

CUSTOMER P/N :

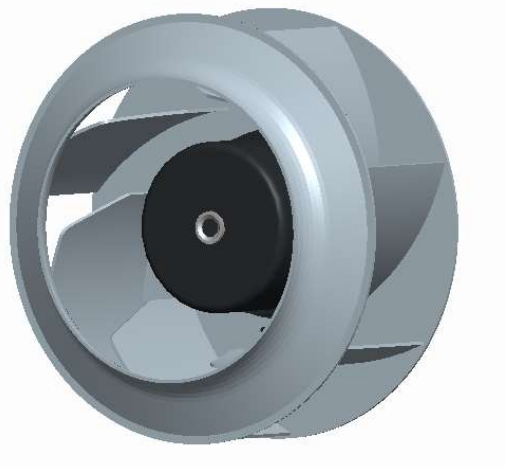
DELTA MODEL : GTB025FUC19R N1

| REV | DESCRIPTION                                     | DRAWN           | CHECKED         |                 | APPROVED | ISSUE DATE |
|-----|-------------------------------------------------|-----------------|-----------------|-----------------|----------|------------|
|     |                                                 |                 | ME              | EE              |          |            |
| X03 | ISSUE SPEC.                                     | 邱滢美<br>11/02'16 | 邱滢美<br>11/02'16 | 林科亦<br>11/02'16 |          |            |
| 04  | Change Technical features,<br>and P & Q curves. | 徐偉峻<br>12/05'17 | 徐偉峻<br>12/05'17 | 林科亦<br>12/05'17 |          |            |
|     |                                                 |                 |                 |                 |          |            |

## Electronically Commutated (EC) Fan

### Centrifugal Fan

φ 254 x 194 mm



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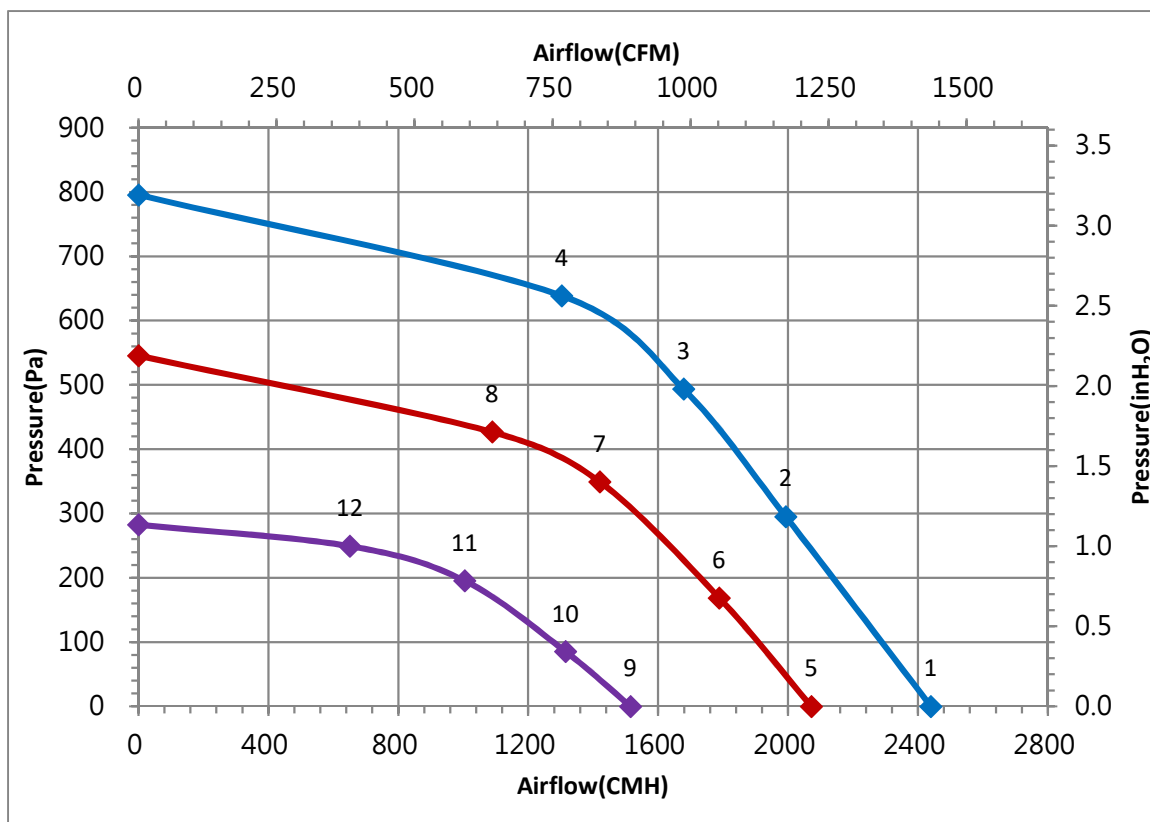
## Technical features

| Input Side                                        |                    |
|---------------------------------------------------|--------------------|
| Nominal Voltage                                   | 1~ 230Vac 50/60Hz  |
| Input Source                                      | 1~ 200Vac - 277Vac |
| Power @ Free air                                  | 375 W              |
| Power @ Max. load                                 | 530 W              |
| Output Side                                       |                    |
| Speed (RPM)                                       | 3050               |
| Qmax. (CMH / CFM)                                 | 2440 / 1435        |
| Pmax. (Pa / inAq)                                 | 795.6 / 3.193      |
| Noise (dB-A) @ Qmax.                              | 79.0               |
| Functions                                         |                    |
| Passive power factor correction                   |                    |
| Control input 0~10VDC / PWM pattern.              |                    |
| Output +10V <sub>DC</sub> (±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)                 | 5.3                                |
| 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 expectancy             | 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<br>[Pa] | Q<br>[CMH] | N<br>[R.P.M.] | P1<br>[W] | I<br>[A] | Lp<br>[dB(A)] |
|----|-----------|------------|---------------|-----------|----------|---------------|
| 1  | 0         | 2440       | 3044          | 375       | 2.33     | 79.0          |
| 2  | 295       | 1993       | 3049          | 449       | 2.79     |               |
| 3  | 493       | 1678       | 3046          | 500       | 3.11     |               |
| 4  | 639       | 1303       | 3045          | 488       | 3.03     |               |
| 5  | 0         | 2072       | 2502          | 233       | 1.45     | 72.2          |
| 6  | 169       | 1788       | 2495          | 265       | 1.65     |               |
| 7  | 349       | 1420       | 2501          | 289       | 1.80     |               |
| 8  | 427       | 1089       | 2502          | 275       | 1.71     |               |
| 9  | 0         | 1515       | 1838          | 102       | 0.63     | 68.3          |
| 10 | 85        | 1315       | 1836          | 115       | 0.71     |               |
| 11 | 195       | 1005       | 1839          | 121       | 0.75     |               |
| 12 | 249       | 651        | 1837          | 108       | 0.67     |               |

### Test Condition :

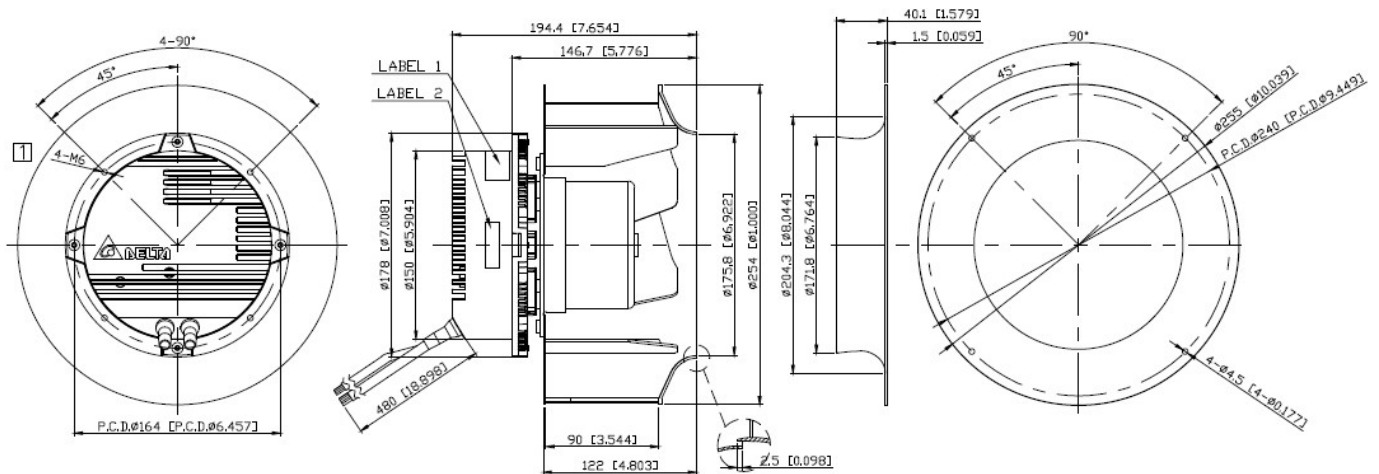
- Input Voltage: Nominal Voltage
- Temperature : Room Temperature
- Humidity : 65%RH
- Measured with inlet cone.
- Noise (Lp) is measured at a distance of one meter from the inlet side.

## Dimension drawing

Label :



Fan :

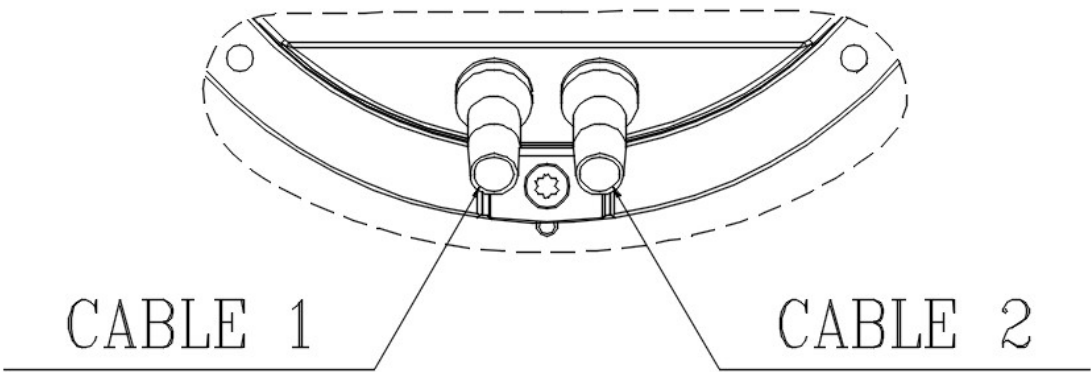


Note :

1. Depth of screw : 6 ~ 8 mm.

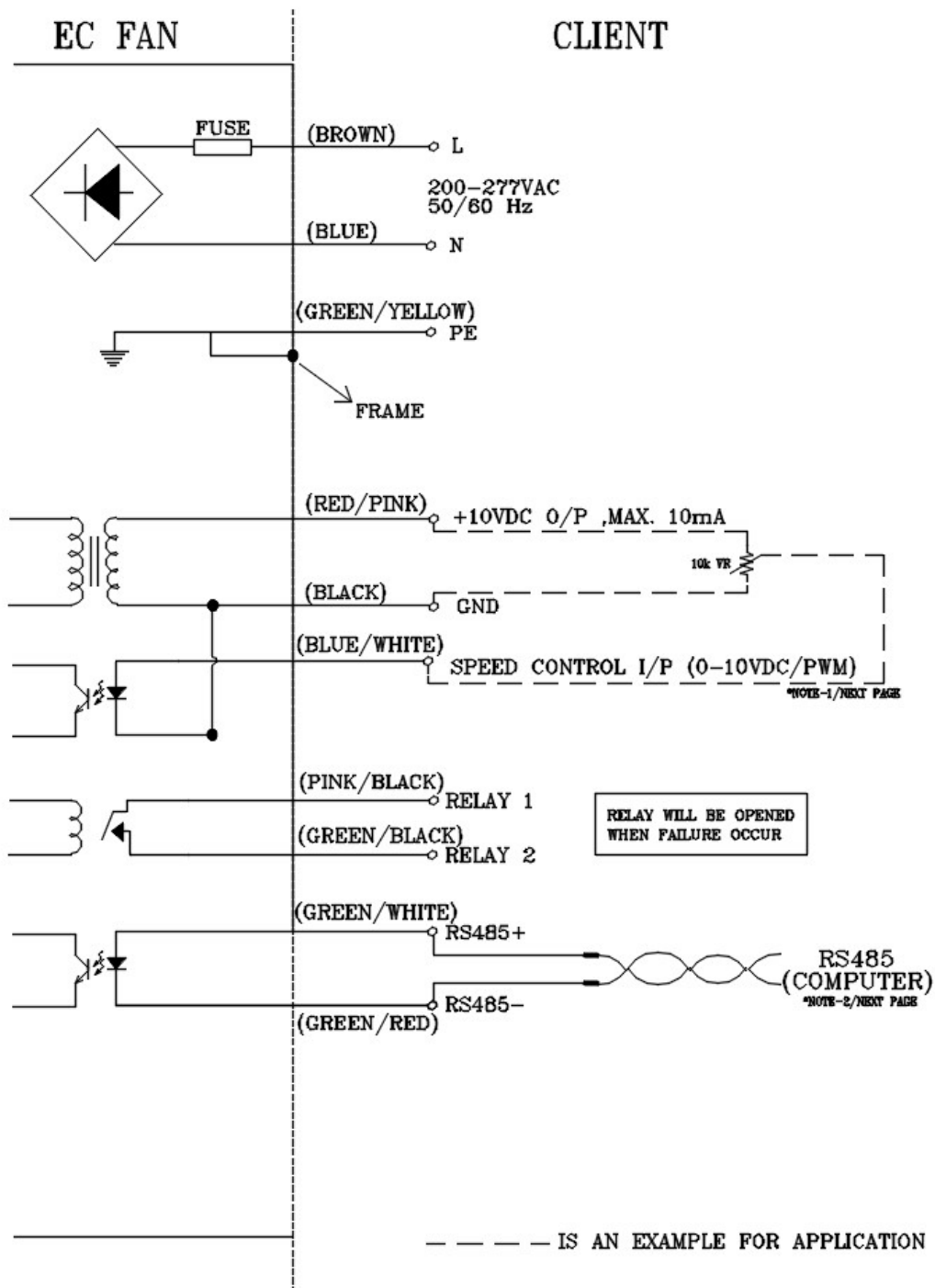
UNIT : mm[INCH]

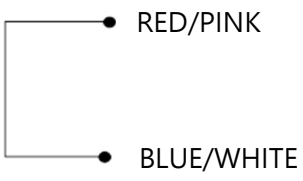
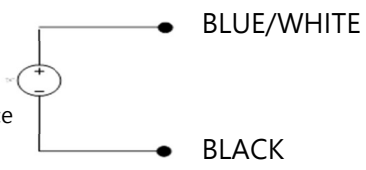
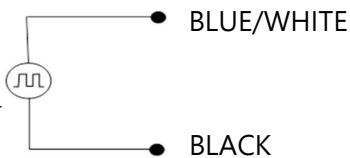
# Definition of terminal block



| Cable | Wire type                                                | Text           | Functions |
|-------|----------------------------------------------------------|----------------|-----------|
| 1     | CCC 60227<br>IEC 52(RVV)300/300<br>3x0.75mm <sup>2</sup> | Brown          | L         |
|       |                                                          | Blue           | N         |
|       |                                                          | Green / Yellow | Earth     |
| 2     | UL 2464 MULTI-<br>CONDUCTOR<br>JACKETED CABLE            | 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:



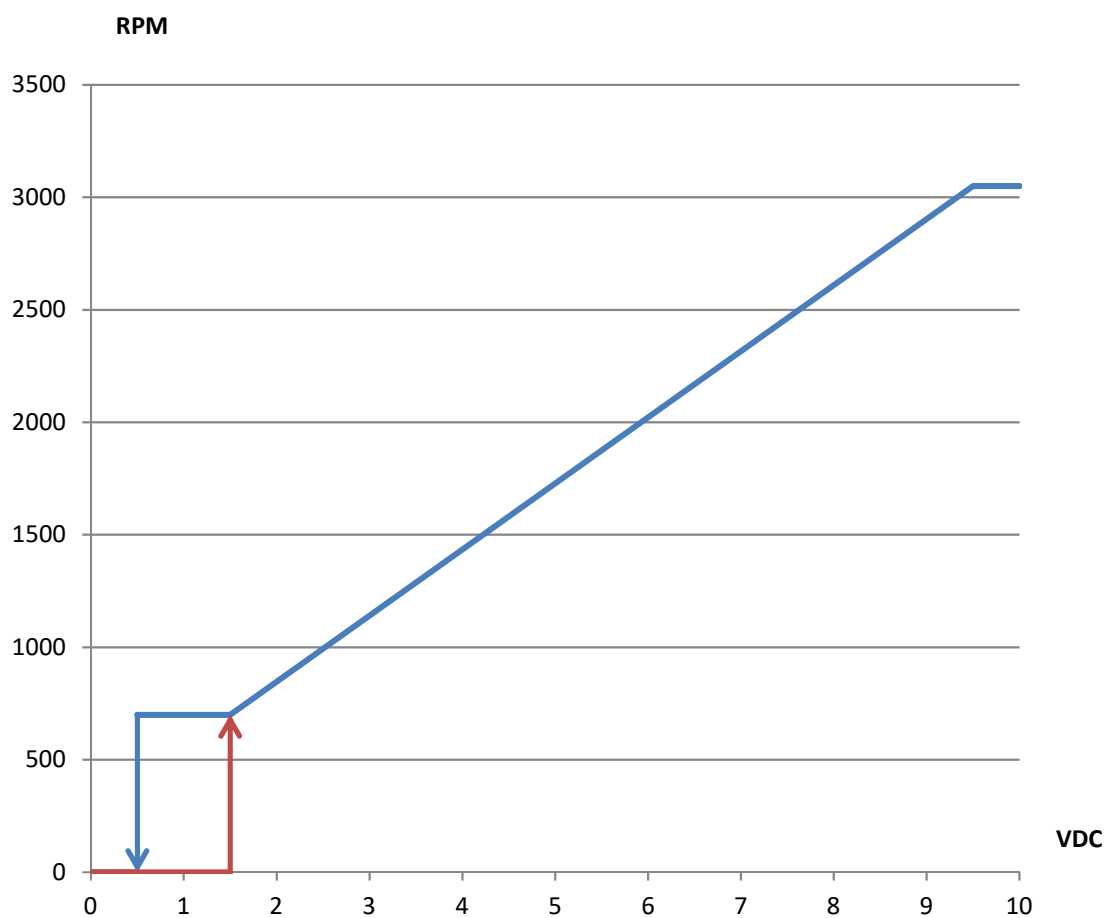
| Speed setting                                                                                                                     |                                                                                                                                                                       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

| Signal function        |                                                                                                                                                                                                                       |                   |             |         |                   |   |   |   |     |    |      |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|---------|-------------------|---|---|---|-----|----|------|
| RS485 control function | RS485 control function<br>-Select the control mode of speed, fixed speed or fixed PWM duty<br>-Speed and power consumption feedback.<br>-Allow multiple FANs control and status patrol.                               |                   |             |         |                   |   |   |   |     |    |      |
| Voltage control        | The speed comparison will control level<br><table><tr><td>Voltage (V)</td><td>PWM (%)</td><td>Speed (RPM) (REF)</td></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>9.5</td><td>95</td><td>3050</td></tr></table> |                   | Voltage (V) | PWM (%) | Speed (RPM) (REF) | 0 | 0 | 0 | 9.5 | 95 | 3050 |
| Voltage (V)            | PWM (%)                                                                                                                                                                                                               | Speed (RPM) (REF) |             |         |                   |   |   |   |     |    |      |
| 0                      | 0                                                                                                                                                                                                                     | 0                 |             |         |                   |   |   |   |     |    |      |
| 9.5                    | 95                                                                                                                                                                                                                    | 3050              |             |         |                   |   |   |   |     |    |      |
| Alarm state            | Relay 1 and Relay 2 Will be Open with Failure.                                                                                                                                                                        |                   |             |         |                   |   |   |   |     |    |      |



## Control Voltage VS. RPM Curve

| Voltage(V) | PWM Duty(%) | Speed R.P.M.(ref.) | Power(W) |
|------------|-------------|--------------------|----------|
| 0.0        | 0           | 0                  | 10       |
| 9.5        | 95          | 3050               | 530      |



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 | %   |