# Model No. B3P225-EC092-040

EC Backward Curved Centrifugal Fan+

This specification is specified for 3-phase DC brushless motor. Items except having indicated in the specification, are applied to China compulsory product Certification and CE, and to meet the EU ERP requirements.

## Technical data

| | |
|---|---|
| **Voltage** [1] | AC 230 [V] |
| **Frequency** | 50/60 [Hz] |
| **Speed** | 3000 ±10% [min$^{-1}$] |
| **Power nom. / Current nom.** | 200 [W] / 1.3 [A] |
| **Power max. / Current max** | 226 [W] / 1.62 [A] |
| **Air flow** | max. 1500 [m³/h] |
| **Noise** | 71 [dBA] |
| **Leakage current** [2] | max. 3,5 [mA] |
| **Insulation class** [3] | B class |
| **Dielectric resistance** | AC 1800 V |
| **Control input** [4] | 0-10V VDC/PWM |
| **Output** | +10VDC |
| **Tach output** [5] | 1 Pulse/R |
| **Protected mode** | Over-temperature / over-current/ locked protected |
| **Appearance** | There should not be any defects and dirty which Spoil goods value |
| **Mass** | Approx 2.2 [Kg] |
| **Lead wire pulled Out strength** | min. 20 |
| **L10 life** | min. 40000 [h] |

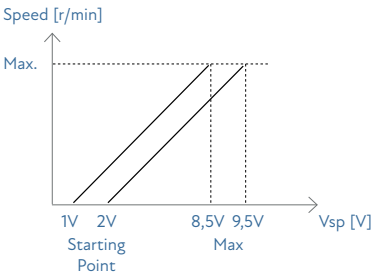


Fig. 1

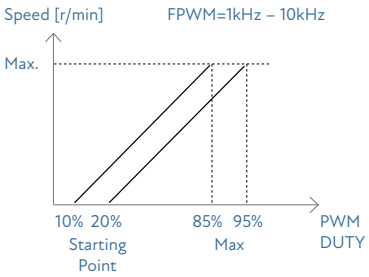


Fig. 2

## Environmental requirement

| | |
|---|---|
| **Storage temperature range** | -25 – 60 [°C] |
| **Operating, storage humidity** | 30 – 95 [%] RH non condensing |
| **Operating temperature range** | -25 ~ 60 [°C] |
| | heat sink of ic 115 [°C] max |
| | other electronic parts 85 [°C] max |
| | ball bearing 80 [°C] max |
| | coil 120 [°C] max |

[1] AC 200 – 277 V range
[2] Testing conditions: AC 260 V, 3s
[3] Tripping current: 10 mA
[4] See Fig.1, Fig.2
[5] Duty 30% ~ 70%, +10V, tach output 10KΩ, it needs 10KΩ pull-up resistance between +10V line and tach output line

| Angle Tolerance | Classification of a shorter side of subjected angle | | | |
|---|---|---|---|---|
| | X≤10 | 10<X≤50 | 50<X≤120 | 120<X≤400 |
| **Tolerance** | ±1° | ±30’ | ±20’ | ±10’ |

| General Tolerance | Classification of basic dimension | | | |
|---|---|---|---|---|
| | X≤6 | 6<X≤30 | 0<X≤120 | 120<X≤400 |
| **Tolerance** | ±0.1 | ±0.2 | ±0.3 | ±0.5 |

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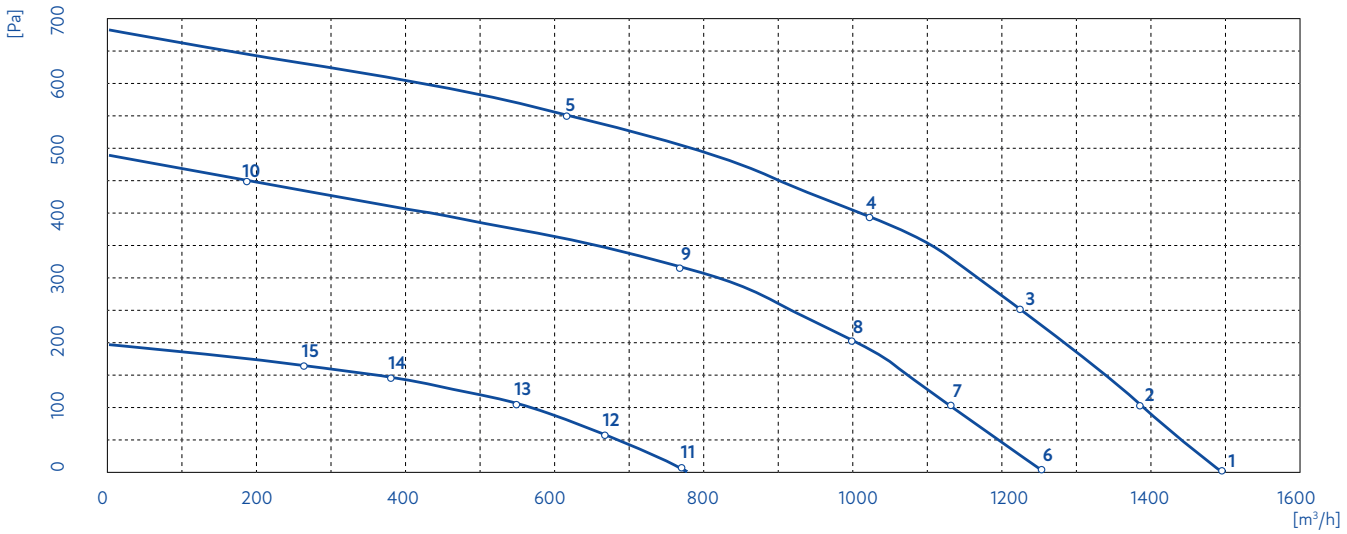
## Note in use

- Since this motor has no reversing connection, to prevent motor damaged by over starting current, the peak current can not exceed 2.5A,
- Please do not perform extraction and insertion of the connector under revolution irrespective of power on and power off,
- Do not add shock to the ball bearing,
- Fan can be cooled by ventilation, please consider ventilated condition around the fan when using it,
- Do not carry with lead wires when handle a fan, if add huge strength to lead wires that the soldered part in fan may be shed,
- Do not use relay or other mechanical switch on power supply line, because impact voltage may damage the fan,
- Switch on/off the device by the control input,
- Evaluate the fan refer to this specifications. If the load or power supply voltage of the motor should be changed, please contact with us.

## Others

- The intellectual asset of the fan in the form of patent belongs to our corporation so any patent problem will not be caused during the actual application. Our corporation will not be responsible for any patent dispute or problem that caused by the product method and new technique project which are developed by using this fan,
- It should be assured that this specification can not be revealed to any third party without the consent of our corporation,
- Materials of motor contain six substances pb CR (VI+) Cd Hg PBB and PBDE those contents comply with the rohs instruction.

## Air performance




| Item | Voltage [V] | Frequency [Hz] | Speed [m$^{-1}$] | Power [W] | Current [A] | Airflow [m$^3$/h] | Pressure | Vsp |
|---|---|---|---|---|---|---|---|---|
| **1** | 230 | 50 | 2951 | 177 | 1.29 | 1491 | 0 | |
| **2** | 230 | 50 | 2952 | 195 | 1.42 | 1386 | 101 | |
| **3** | 230 | 50 | 2947 | 218 | 1.57 | 1228 | 249 | 10V |
| **4** | 230 | 50 | 2945 | 226 | 1.62 | 1025 | 389 | |
| **5** | 230 | 50 | 2943 | 204 | 1.48 | 619 | 546 | |
| **6** | 230 | 50 | 2487 | 106 | 0.82 | 1253 | 0 | |
| **7** | 230 | 50 | 2482 | 121 | 0.92 | 1130 | 102 | |
| **8** | 230 | 50 | 2484 | 131 | 0.98 | 997 | 200 | 7V |
| **9** | 230 | 50 | 2487 | 131 | 0.99 | 764 | 313 | |
| **10** | 230 | 50 | 2482 | 85 | 0.68 | 188 | 444 | |
| **11** | 230 | 50 | 1539 | 28 | 0.26 | 766 | 0 | |
| **12** | 230 | 50 | 1539 | 32 | 0.28 | 668 | 52 | |
| **13** | 230 | 50 | 1538 | 33 | 0.29 | 547 | 100 | 4V |
| **14** | 230 | 50 | 1539 | 32 | 0.29 | 379 | 140 | |
| **15** | 230 | 50 | 1539 | 30 | 0.27 | 264 | 158 | |

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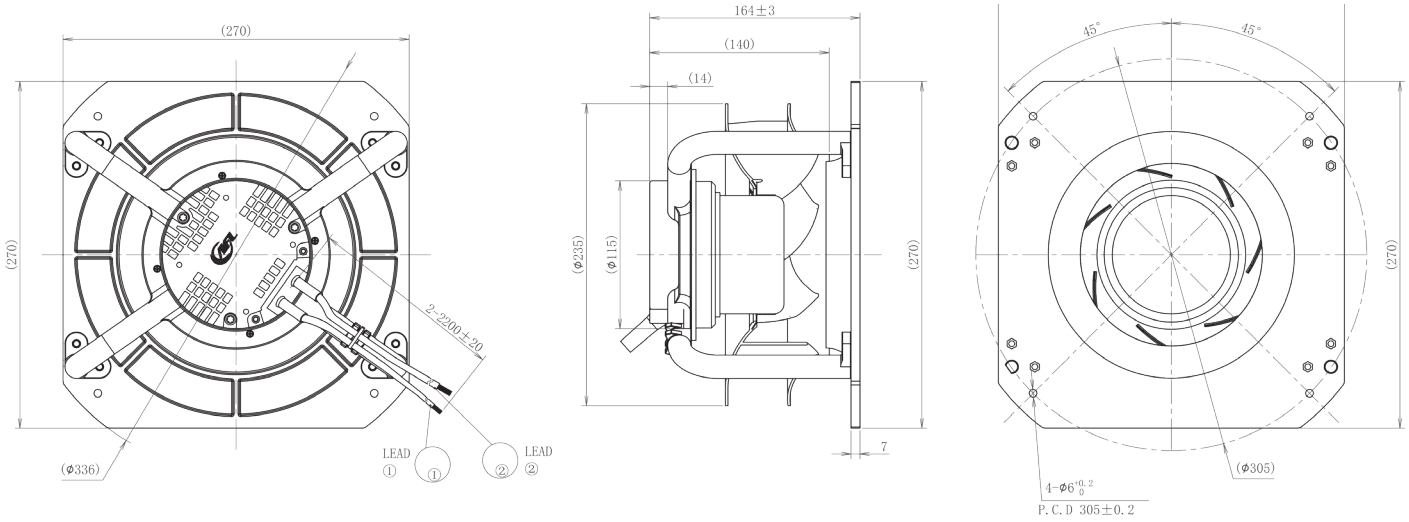
## Product drawing




| Line | Connection | Color | Function |
|---|---|---|---|
| 1 | L | brown | Single-phase 50/60 Hz |
| | N | blue | |
| | PE | yellow / green | Protective earth |
| 2 | Vcc | red | DC 10V |
| | Vsp | yellow | 0-10V/PWM |
| | GND | blue | GND |
| | FG | white | 1 Pulse/R |

## Notes on various control possibilities and their applications