

# BA8060-E

BA8060H02B-E-Unintergrated



## Features:

- 220 VAC rated input
- An external drive is required
- High efficiency three-phase brushless DC motor
- Environmentally friendly materials

## Advantages:

- High pressure 15032 pa
- All aluminum material
- High temperature resistance
- Anti-corrosion
- waterproof
- High reliability
- Compact mini
- Low inertia

## Applications:

- Vacuum system
- Air cushion machine
- Seafood transporter
- Pressure bed
- Lampblack exhaust system
- 3D Printer
- Medical equipment
- High voltage low noise applications

The TKFAN-BA8060B-E blower is equipped with a three-phase brushless DC motor and integrates high energy rare earth magnet technology to significantly improve the torque output efficiency; Frame and impeller are made of high-strength aluminum alloy, both lightweight and structural rigidity, more than 30% weight reduction than traditional steel, reduce the inertia load of equipment; Built-in high reliability ball bearing system, through precision machining and strengthening material technology, can withstand long-term high-speed operation of mechanical stress, extend the life cycle of equipment; With dust-proof and anti-corrosion treatment, to ensure stable operation in dust, wet and other complex environments.

With innovative technology and precision design at its core, TKFAN-BA8060B-E blower provides efficient and reliable airflow solutions for industrial and commercial applications. By integrating cutting-edge powertrains and optimized aerodynamics, the product achieves superior performance output in a compact volume, making it ideal for high-density Spaces and demanding environments.

## 1 .Technical Data

| Electrical                         | Unit               | Value      |
|------------------------------------|--------------------|------------|
| Dimension                          | [Mm]               | 86X83X68   |
| Voltage Range                      | [V <sub>ac</sub> ] | 220        |
| Rated Voltage                      | [V <sub>ac</sub> ] | 180 to 240 |
| Rated Current                      | [A]                | 0.9        |
| Rated Power                        | [W]                | 138        |
| Rated Speed                        | [rpm/min]          | 45000      |
| Static Pressure (When Air Flow= 0) | [Pa]               | 15032      |
| Air Flow (In Free Air)             | [l/min]            | 653.9      |

## Environmental

|                                  |        |           |
|----------------------------------|--------|-----------|
| Ambient temperature(operating)   | [°C]   | -40 to 60 |
| Ambient temperature(storage)     | [°C]   | -40 to 60 |
| Relative humidity(noncondensing) | [% RH] | 10 to 85  |
| Waterproof level                 |        | IP68      |
| Maximumoxygen concentration      | [% ]   | N/A       |

## Motor

|                          |  |                                |
|--------------------------|--|--------------------------------|
| Type                     |  | Brushless direct current motor |
| Winding insulation class |  | F, 155 °C                      |
| NTC type                 |  | N/A                            |

## Lifetime

|                                  |     |       |
|----------------------------------|-----|-------|
| L10 at 25 °C ambient temperature | [h] | 10000 |
|----------------------------------|-----|-------|

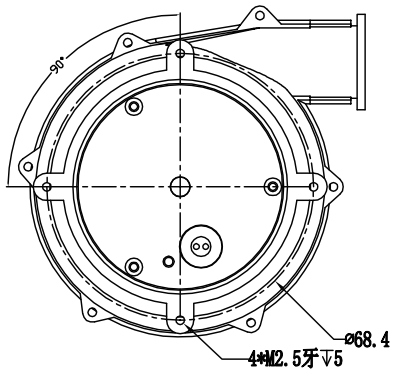
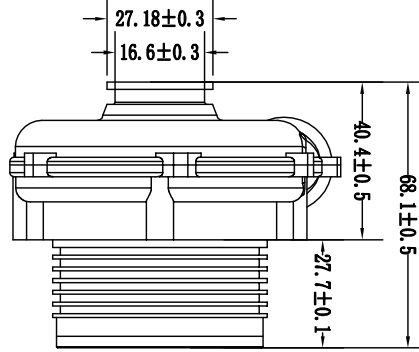
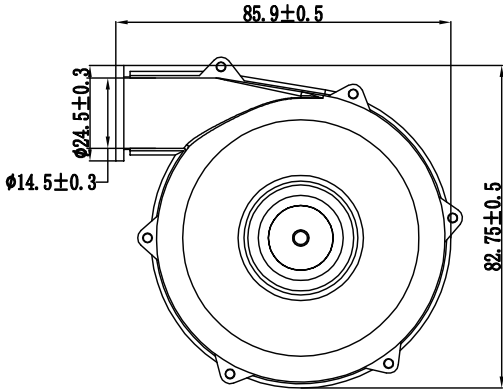
## Noise

|                      |        |      |
|----------------------|--------|------|
| Sound pressure level | [dB-A] | 88.7 |
|----------------------|--------|------|

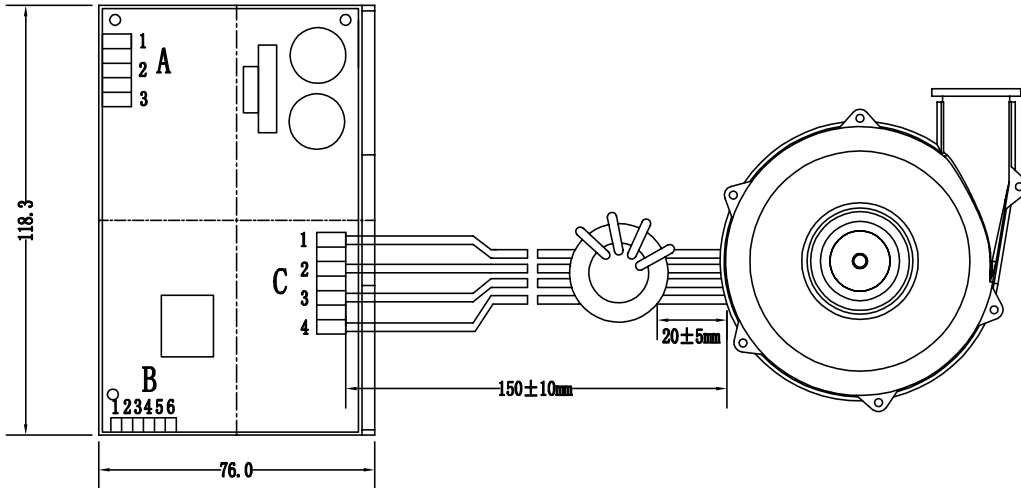
## Mechanical

|               |     |       |
|---------------|-----|-------|
| Blower weight | [g] | 626.5 |
|---------------|-----|-------|

## 2 .Mechanical Structure Diagram



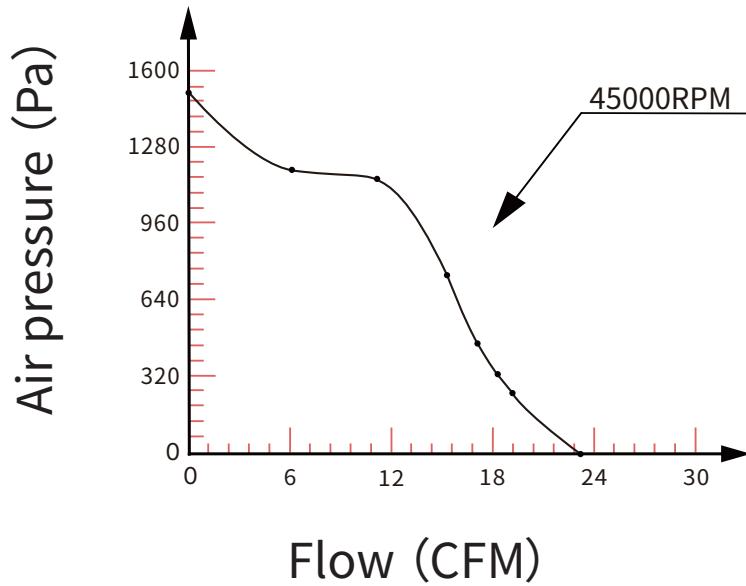
### 3. Electrical Connection Diagram



| Wire model         | Wire Number | Colour | Function |
|--------------------|-------------|--------|----------|
| A UL1332 #20AWG OR | 1           | PE     |          |
|                    | 2           | Red    | ACL      |
|                    | 3           | White  | ACN      |
| B UL3239 #24AWG OR | 1           |        | +5V      |
|                    | 2           |        | VSP      |
|                    | 3           |        | SGND     |
|                    | 4           |        | EN       |
|                    | 5           |        | NC       |
|                    | 6           |        | FG       |
| C UL3132 #18AWG OR | 1           | Black  | MG       |
|                    | 2           | Yellow | U        |
|                    | 3           | Blue   | V        |
|                    | 4           | White  | W        |

## 4 .P-Q Data and Curve

### 4.1 PQ Curve

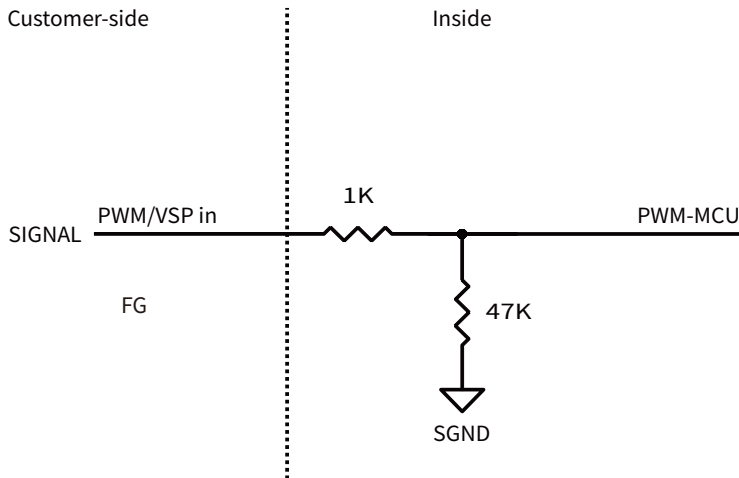


### 4.2 PQ Data

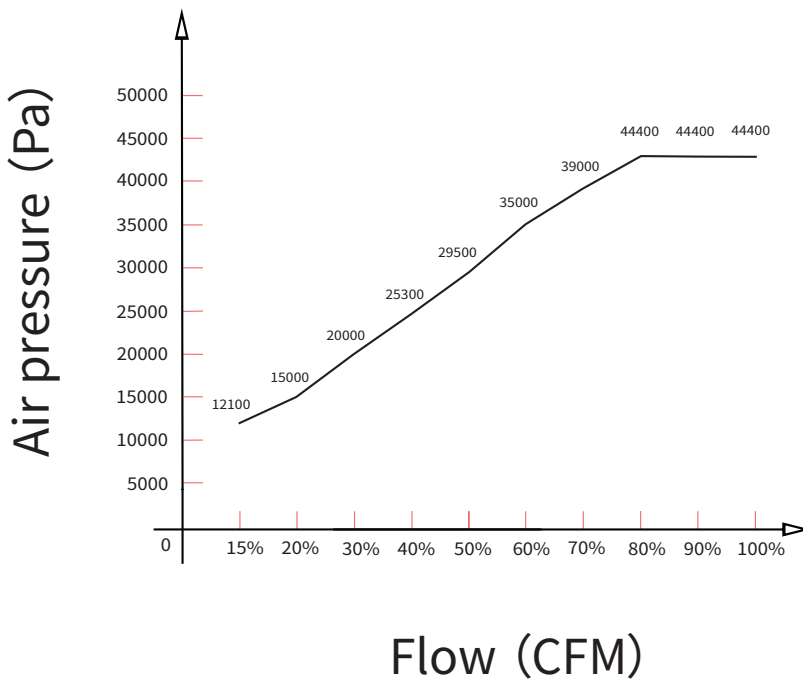
| NO. | mmAq    | CFM   | A | Watt |
|-----|---------|-------|---|------|
| 1   | 1503.2  | 0.01  |   |      |
| 2   | 1373.65 | 6.14  |   |      |
| 3   | 1134.10 | 10.97 |   |      |
| 4   | 743.26  | 15.67 |   |      |
| 5   | 462.64  | 16.96 |   |      |
| 6   | 330.24  | 18.33 |   |      |
| 7   | 252.29  | 19.34 |   |      |
| 8   | 0       | 23.05 |   |      |

## 5. PWM Curve

### 5.1 PWM Connecting Diagram

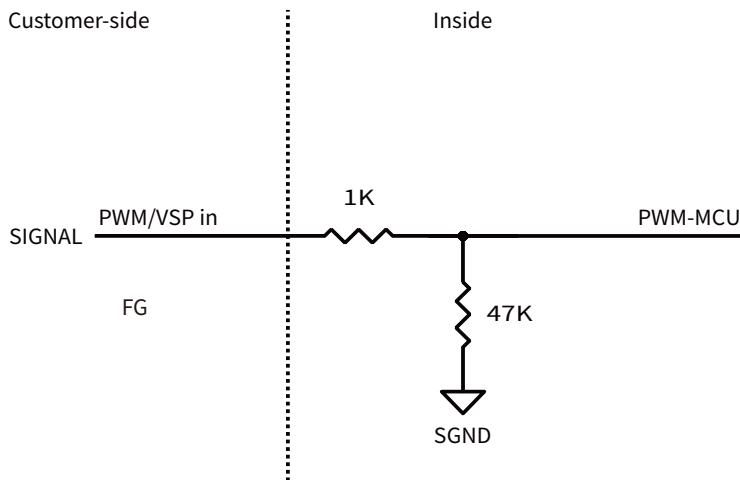


### 5.2 PWM data curve

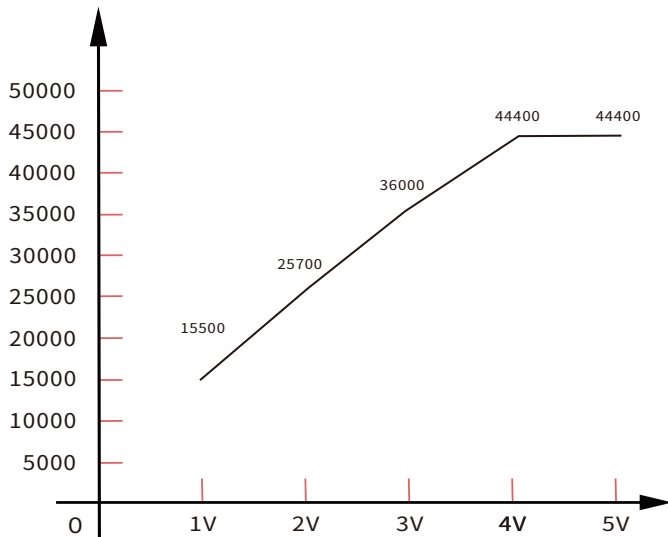


## 6. 6. 0-5V Speed Control

### 6.1 5V Connetcting Diagram

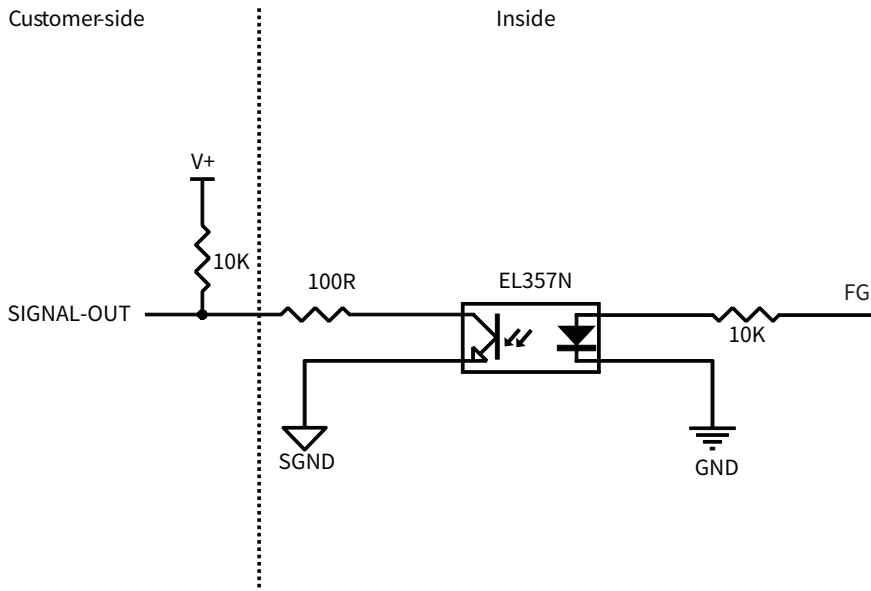


### 6.2 0-5V data curve

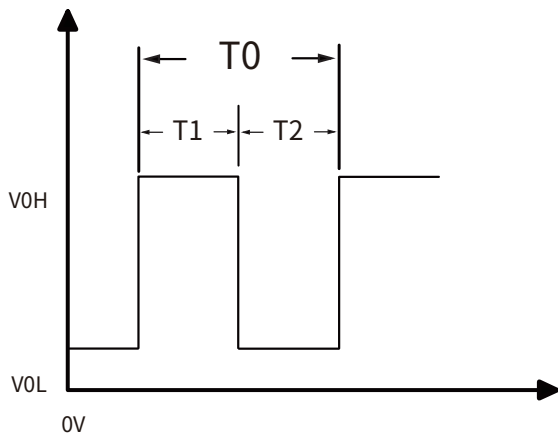


## 7 . FG Speed Feedback Diagram

### 7.1 Signal output diagram

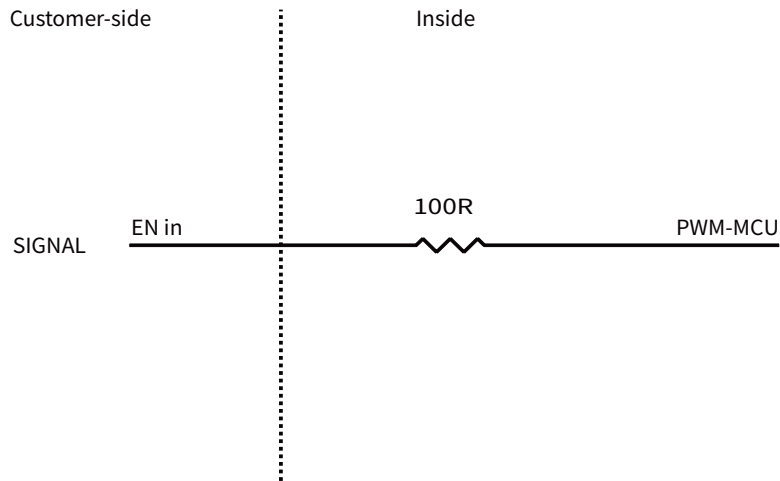


### 7.2 Rotational speed frequency

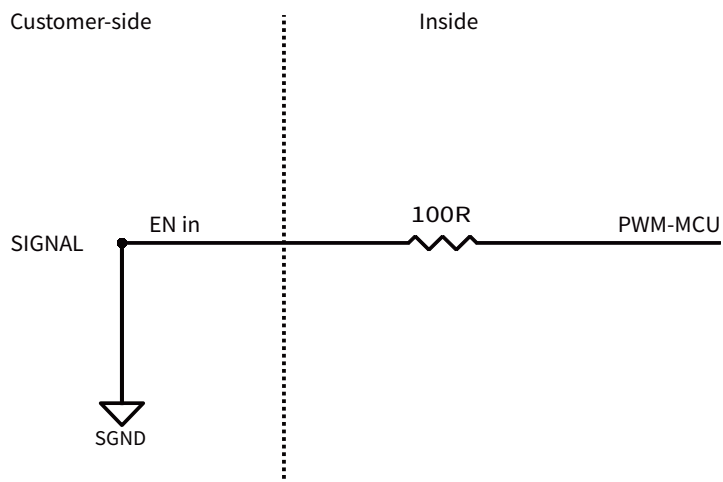


## 8 . The EN signal controls the operation

### 8.1 Blower control is available when EN in is high level or disconnected



### 8.2 Blower will be stop working when EN signal in is low level



## 9. Temperature Test Report

NC

## 10. Related Products

| Model | Dimension | Voltage | RPM | Air Flow | Air Pressure | Watt |
|-------|-----------|---------|-----|----------|--------------|------|
|       |           |         |     |          |              |      |
|       |           |         |     |          |              |      |
|       |           |         |     |          |              |      |
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|       |           |         |     |          |              |      |
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|       |           |         |     |          |              |      |
|       |           |         |     |          |              |      |
|       |           |         |     |          |              |      |

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However, to ensure that you can smoothly find the relevant person in charge and receive timely reception, it is recommended that you make an appointment in advance by phone or email.