

BA8050-A

BA8050H12B-A-Integrated



Features:

- 12 VDC rated input
- Built-in integrated driver PCB
- PWM input speed control
- High efficiency three-phase brushless DC motor
- Environmentally friendly materials

Advantages:

- High pressure 10.5kpa
- The aluminum base has fast heat dissipation
- High efficiency
- Dust-proof
- waterproof
- High reliability
- Compact mini
- Low inertia

Applications:

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

The TKFAN-BA8050-A-Integrated blower is a high-performance DC blower designed with DC voltage and equipped with an integrated drive module. It can be quickly started by simply connecting an external power cord and is easy to operate. Its innovative cavity structure independently separates the air flow channel from the motor, effectively isolating water vapor and dust. It has excellent waterproof and moisture-proof performance, ensuring the long-term durability of the motor in harsh environments. The product achieves high air pressure output within a compact body, which can flexibly meet the installation requirements in narrow Spaces. At the same time, it offers two air inlet options: short nozzle and long nozzle, to meet the airflow optimization needs in different scenarios. We are dedicated to providing customers with all-round customized services and solutions, supporting parameter adjustment, special specification design and complex application integration, to help your projects be implemented efficiently. With reliable quality and flexible service at its core, TKFAN-BA8050-A-Integrated blower is committed to providing long-lasting and stable power support for industrial equipment, electronic heat dissipation, medical instruments and other fields. Welcome to consult at any time to obtain exclusive technical support and cooperation plans!

1. Technical Data

Electrical	Unit	Value
Dimension	[Mm]	87.3X83.2X51.3
Rated Voltage	[V _{dc}]	12
Voltage Range	[V _{dc}]	9.5 to 16
Rated Current	[A]	7.5
Rated Power	[W]	90
Rated Speed	[rpm/min]	37000
Static Pressure (When Air Flow= 0)	[Pa]	10530
Air Flow (In Free Air)	[l/min]	572

Environmental

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

Motor

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

Lifetime

L10 at 25 °C ambient temperature	[h]	10000
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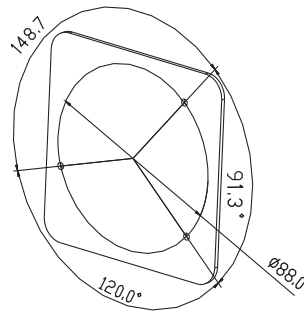
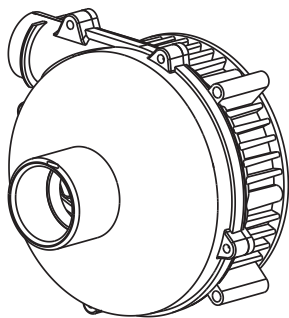
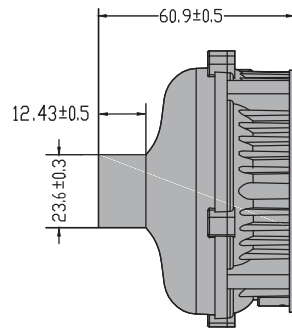
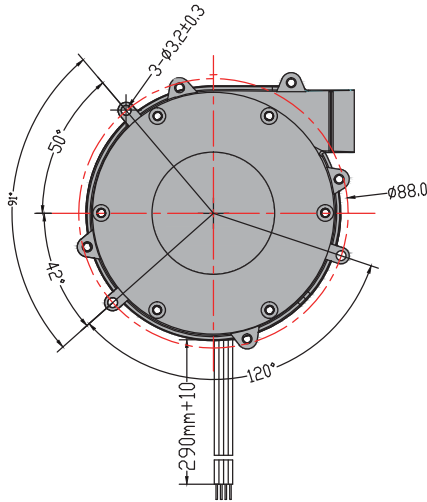
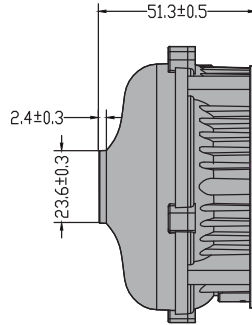
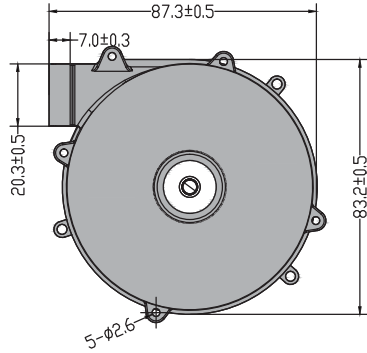
Noise

Sound pressure level	[dB-A]	77.1
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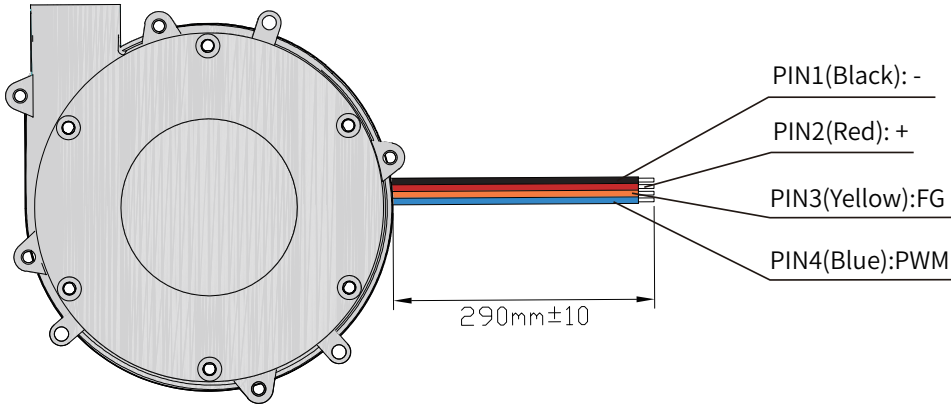
Mechanical

Blower weight	[g]	337
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2. Mechanical Structure Diagram



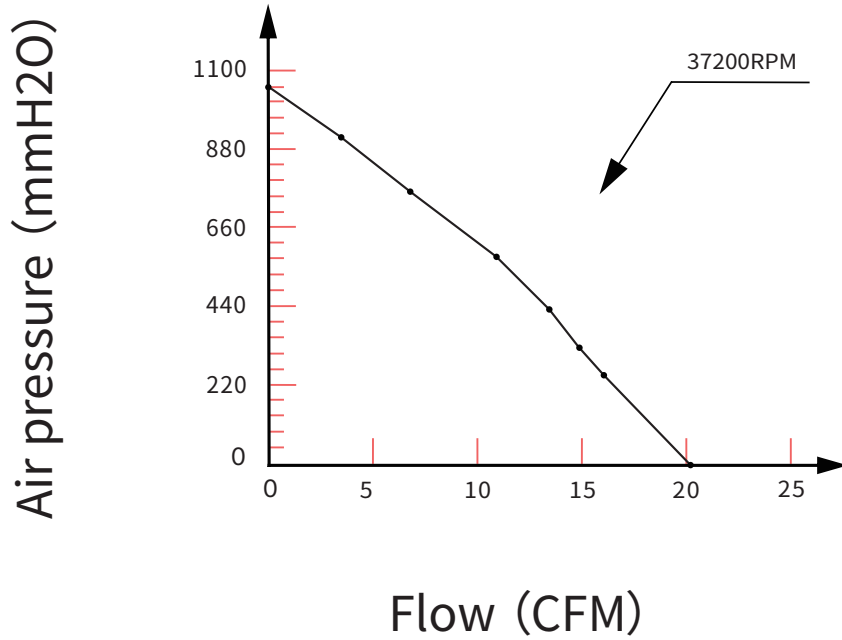
3. Electrical Connection Diagram



Wire model	Wire Number	Colour	Function
UL 1332#18AWG	1	Black	-
	2	Red	+
	3	Yellow	FG
	4	Blue	PWM

4. P-Q Data and Curve

4.1 PQ Curve

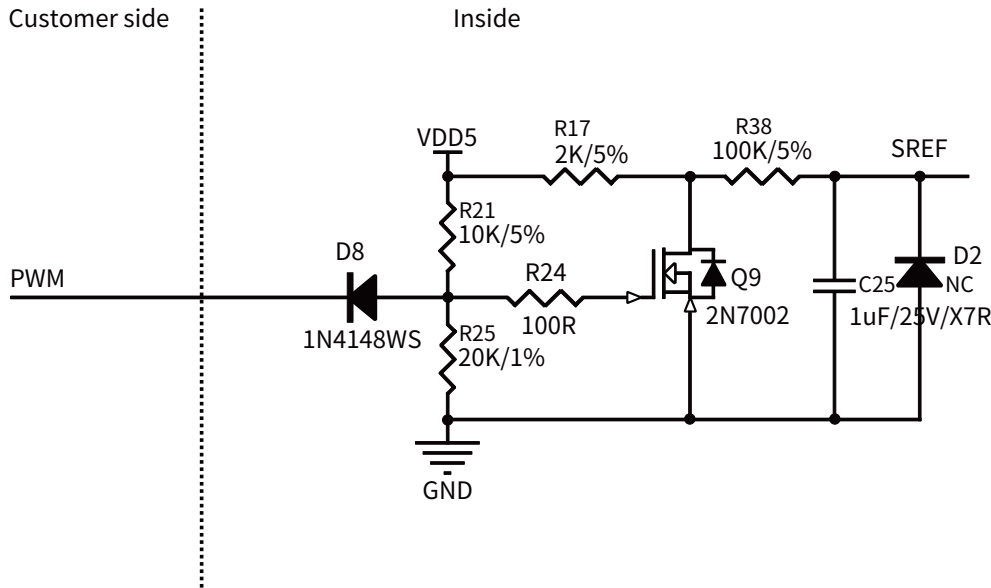


4.2 PQ Data

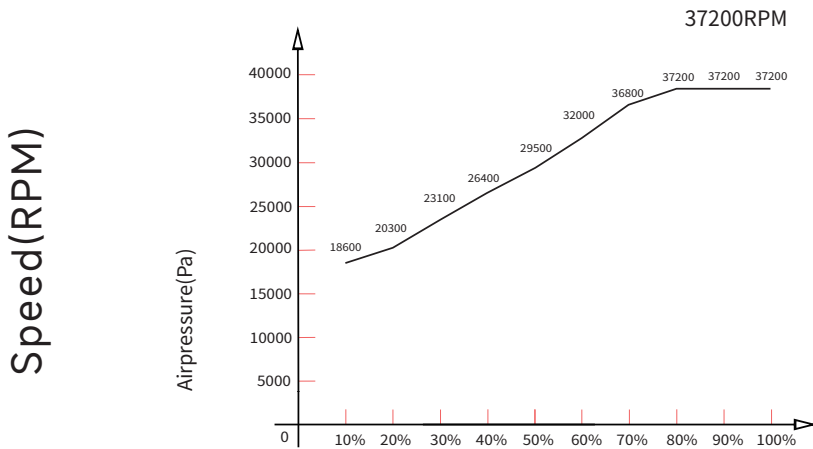
NO.	mmAq	CFM	A	Watt
1	1053	-0.02	3.92	47.1
2	909	3.45	5.5	66
3	755.5	6.71	6.62	79.4
4	578	10.87	7.57	90.8
5	429	13.48	7.94	95.2
6	323	14.88	7.6	91.2
7	244.5	16.06	7.53	90.4
8	0	20.22	7.37	88.4

5. PWM Curve

5.1 PWM Connecting Diagram



5.2 PWM data curve



6. 0-5V Speed Control

6.1 5V Connetcting Diagram

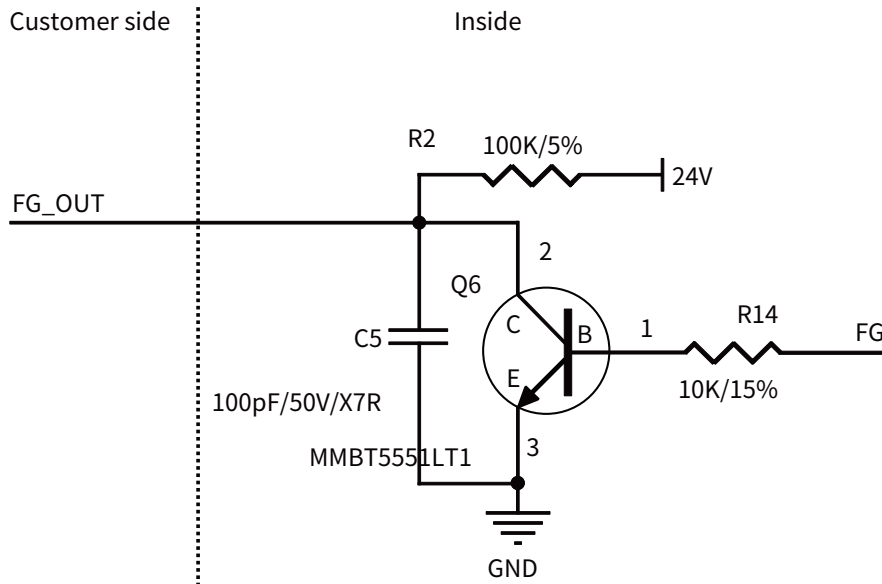
NC

6.2 0-5V data curve

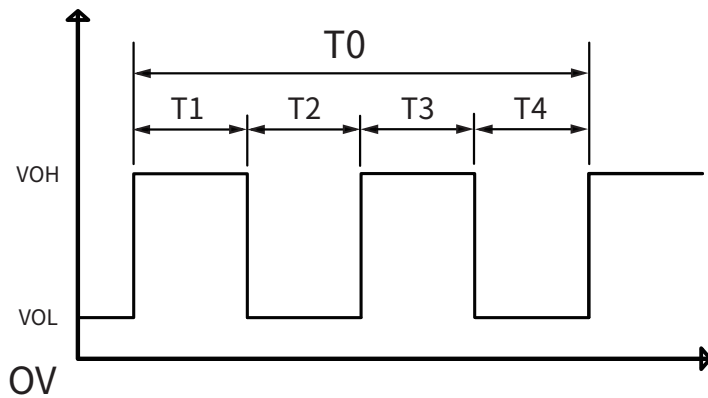
NC

7. FG Speed Feedback Diagram

7.1 Signal output diagram



7.2 Rotational speed frequency



8. Temperature Test Report

Temperature Test Report	
Rated Voltage :	12V
Coil :	113°
Environment Temperature :	85°

9. Related Products

Model	Dimension	Voltage	RPM	Air Flow	Air Pressure	Watt

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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.