

2026-03-30

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PBM

SPECIFICATION FOR APPROVAL

Customer: Customer
Model No: PA12038B48T
Motor Type: External rotor DC motor



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Customer Approved

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This specification defines the Mechanical and Electrical characteristics of the DC brushless external rotor motorized axial fan and backward curved impeller.

Model: PA12038B48T**Motor: External rotor DC motor****◆ 1.General Characters**

1-1	Rated Voltage	48VDC
1-2	Operating Voltage	28~56VDC
1-3	Starting Voltage	28VDC
1-4	Rated Speed	12000RPM
1-5	Input Current	2.4A
1-6	Input Power	115.2W
1-7	Air Flow	509.4m ³ /H
1-8	Static Pressure	1269Pa
1-9	Acoustical Noise	76dB(A)
1-10	Life Expectance	50,000 Hours(L10) At 40℃ room, humidity 15%~65%RH.
1-11	Direction of Rotation	Counter-clockwise seen on rotor
1-12	Direction of Air Flow	Suction
1-13	Insulation Class	Class A
1-14	Insulation Resistance	10 Mega Ohm minimum at 500 VDC Between frame and (+) terminal
1-15	Dielectric Strength	5 mA maximum at 500VAC 50/60Hz one minute Between frame and (+) terminal

Model: PA12038B48T**Motor: External rotor DC motor****◆ 2. Mechanical**

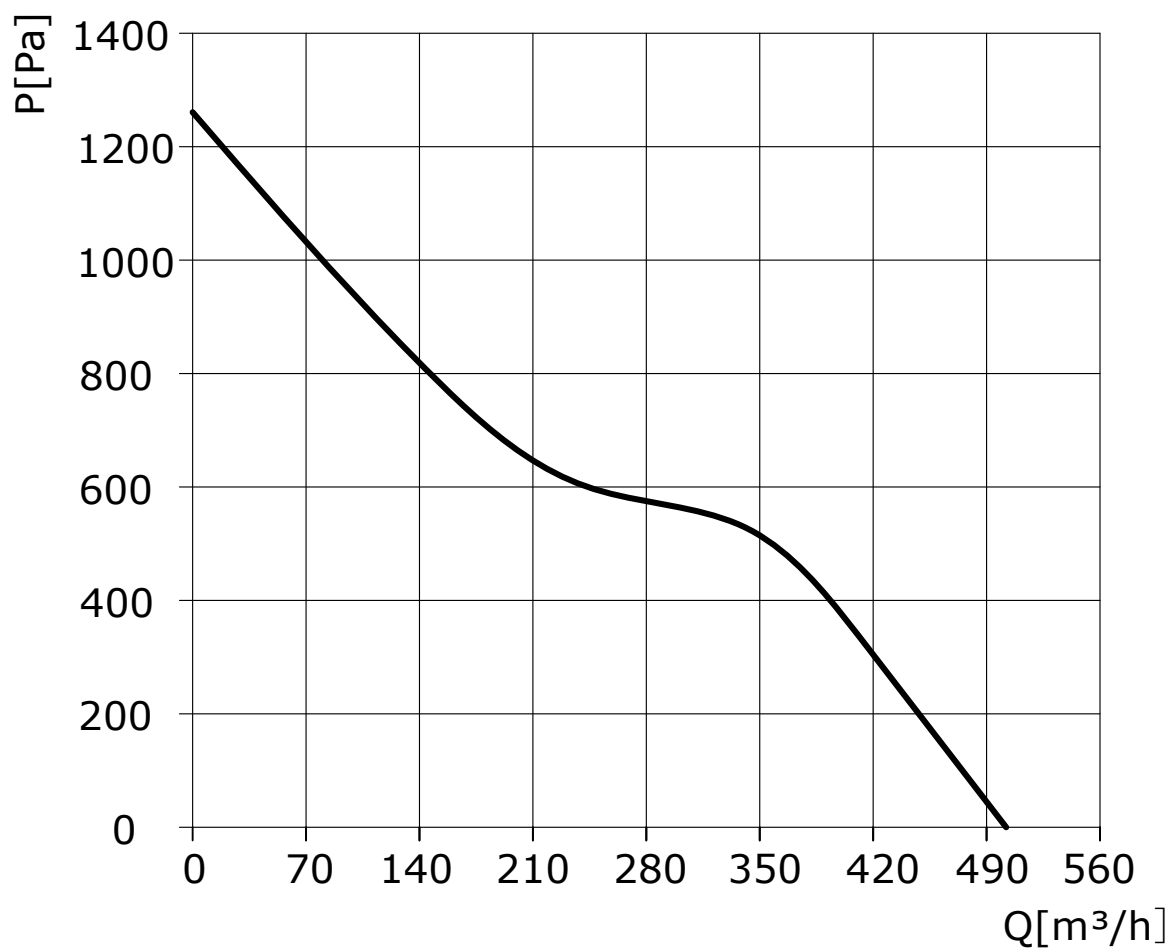
2-1	Dimension	120mm X 120mm X 38mm (see dimension drawing)
2-2	Material of Impeller	Plastic
2-3	Material of Frame	Plastic
2-4	Number of Blades	11
2-5	Mounting Position	Any
2-6	Bearing System	Ball bearing
2-7	Lead Wire	Red, Black L=300mm
2-8	Weight	460g
2-9	Package	standard

◆ 3. Characteristic Definition

3-1	Input Power	In clean air (with static pressure = 0), when the fan shaft is placed horizontally, and operated continuously at the rated voltage for 10 minutes, the result obtained is.
3-2	Input Current	In clean air (with static pressure = 0), when the fan shaft is placed horizontally, and operated continuously at the rated voltage for 10 minutes, the result obtained is.
3-3	Rated Speed	In clean air (with static pressure = 0), when the fan shaft is placed horizontally, and operated continuously at the rated voltage for 10 minutes, the result obtained is.
3-4	Starting Voltage	In clean air (static pressure = 0), when the fan shaft is placed horizontally, the minimum voltage required for the fan to start.
3-5	Air Flow and Static Pressure	The air flow and static pressure indicators shown in this specification are measured in accordance with the AMCA 210 standard or the GB/T 1236 specification. When the fan speed stabilizes at the rated speed, the relevant values are recorded.

Model: PA12038B48T**Motor: External rotor DC motor****◆ 4. Environmental Characters**

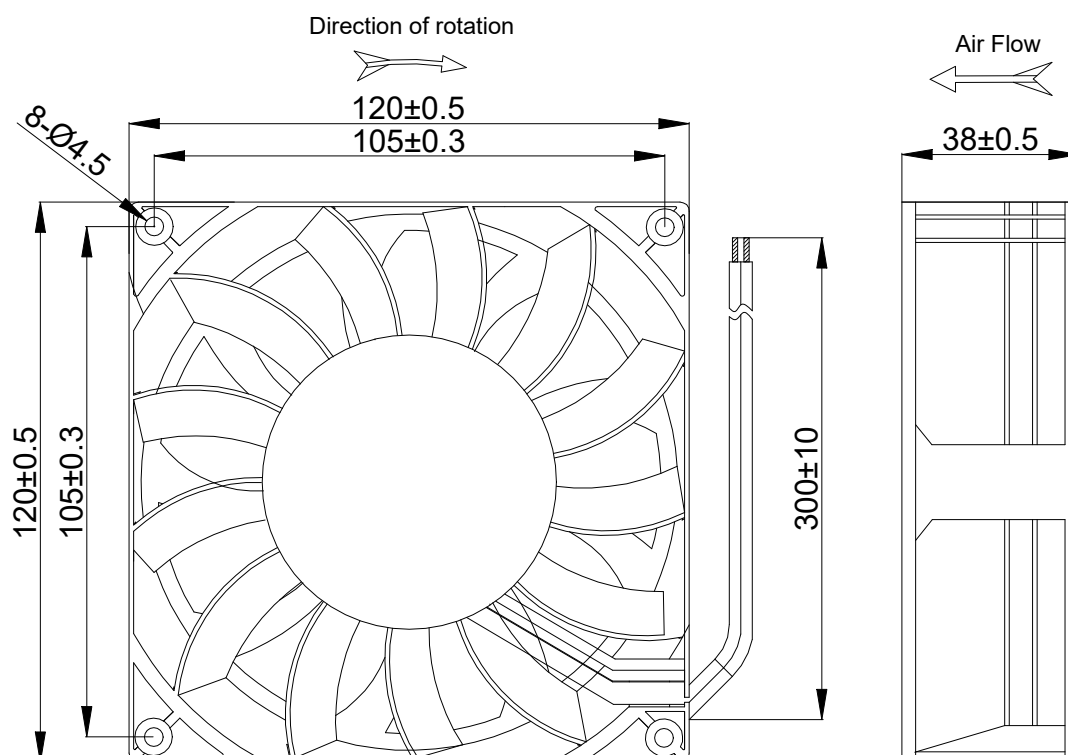
4-1	Operating Temperature	-10℃ to 60℃
4-2	Storage Temperature	-40℃ to 75℃
4-3	Operating Humidity	30% to 95% RH
4-4	Storage Humidity	30% to 95% RH
4-5	Drop Test	ISO 4180
4-6	Vibration Test	IEC 60068-2-64
4-7	Shock Test	IEC 60068-2-29
4-8	RoHS	All the material meets RoHS standard.

Model: PA12038B48T**Motor: External rotor DC motor****◆ 5. Performance Curve****Testing Condition**

Input Voltage----Operating voltage (48VDC)

Temperature-----Room temperature

Humidity-----65%RH

Model: PA12038B48T**Motor: External rotor DC motor****◆ 6. Outline Drawing****Note**

- 1.Connection line: Red, Black:
Red=+, Black=GND;
- 2.Connector: /

Model: PA12038B48T

Motor: External rotor DC motor

◆ 7. Safety Requirements

1. Do not exceed the limits specified in this specification during use. Otherwise, we do not guarantee the quality of this product.
2. Should any modification to the specifications in this document be required, a request must be submitted in advance.
3. Do not touch or press the fan blades, wind the power cord around the fan, or pull the power cord forcefully, as it may cause damage to the fan shaft core and the power cord.
4. No warranty is provided for reduced fan lifespan or malfunctions caused by the ingress of foreign matter such as dust and water droplets.
5. If there are any discrepancies between any materials or documents and this document, this document shall prevail.
6. Do not use in flammable gases or any hazardous environments; please contact us in advance if required.
7. The fan should be used within six months. Otherwise, factors such as temperature and humidity during storage may cause quality issues.
8. During fan operation, do not attempt to lock the fan; this may cause personal injury and fan malfunction.
9. When assembling the fan, pay attention to noise generated by resonance or vibration. Silicone or other vibration-damping materials can be added between the fan and equipment to reduce noise.
10. During handling or operation, ensure that the fan does not fall from a height, which may result in issues such as fan dynamic balance and bearing noise.