

# Noctua NF-S12A PWM

## Product Specification Sheet

*(Confidential)*

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Product Series: NF-S12A 120mm Axial Fans

Model Number: **NF-S12A PWM**

Version: 1.0

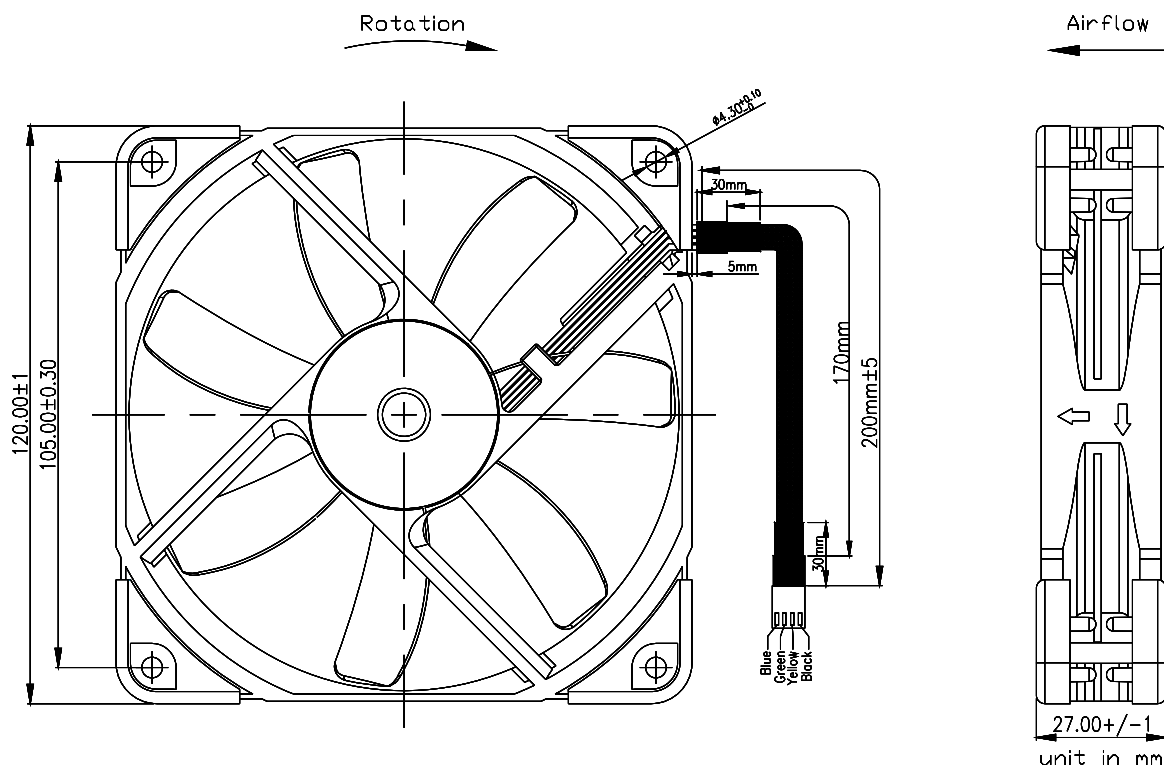
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# 1. General Specifications

## 1.1. Mechanical Specifications

Format (without silicone corners):	120x120x25mm (± 0.5mm)
Format (with silicone corners):	120x120x27mm (± 0.5mm)
Wire Length:	200mm (± 10mm)
Weight:	170g (± 5g)
Rotational Direction:	Counter-Clockwise



## 1.3. Parts & Materials

Plastic Type:	UL 94V-0 b. P.B.T. + 30% GF
Bearing:	SSO2 Bearing
Wire:	UL 1007 / 26 AWG, Mesh-Sleeving
Connector:	2510-4PIN (or equal)

## 1.4. Standards

Production Standards:	Produced according to ISO9001 & ISO14001
Safety Standards:	CE (EN 55022, EN 55024, EN 60950-1, EN 61000-6-3, EN 61000-6-1)
Environmental Standards:	RoHS according to EU directive 2011/65/EU

## 1.5. Labels



### Main Label:

- Model Number
- Rated Voltage
- Rated Power Consumption
- Rated Current
- Environmental & Safety Standards

071024DA  
1A2HKQ2

### Side Label (White Printing):

- Production Date
- Reference Numbers

## 1.6. Environmental Specifications

Operating Temperature:	-10°C to +70°C
Operating Humidity:	15% to 90%
Storage Temperature:	-20°C to +75°C
Storage Humidity:	15% to 90%

## 2. Electrical Specifications

### 2.1. Wire Specifications

Black:	GND
Yellow:	Voltage (VCC)
Green:	RPM Signal
Blue:	PWM

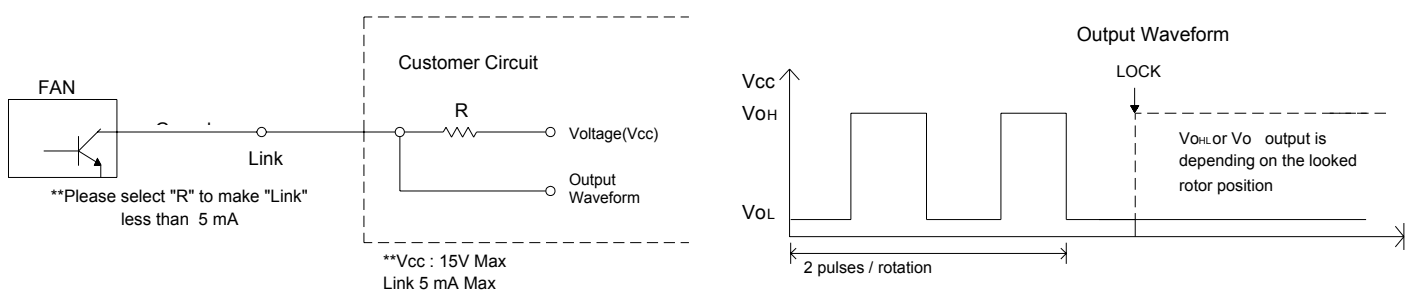
### 2.2. Motor Specifications

Number of Poles:	4
Rated Voltage:	DC 12V
Operating Voltage:	DC 7V ~ DC 13V
Starting Voltage:	DC 7V
Rated Current:	0.12A (± 10%)
Rated Power Consumption:	1.44W (± 10%)

### 2.3. Insulation

Insulation Resistance:	10 MΩ / between unshielded wire and frame at 500 VDC/min
Dielectric Strength:	5 mA Max. / measured between lead wire (+) and frame at 500 VAC/min

### 2.4. RPM Signal Specification

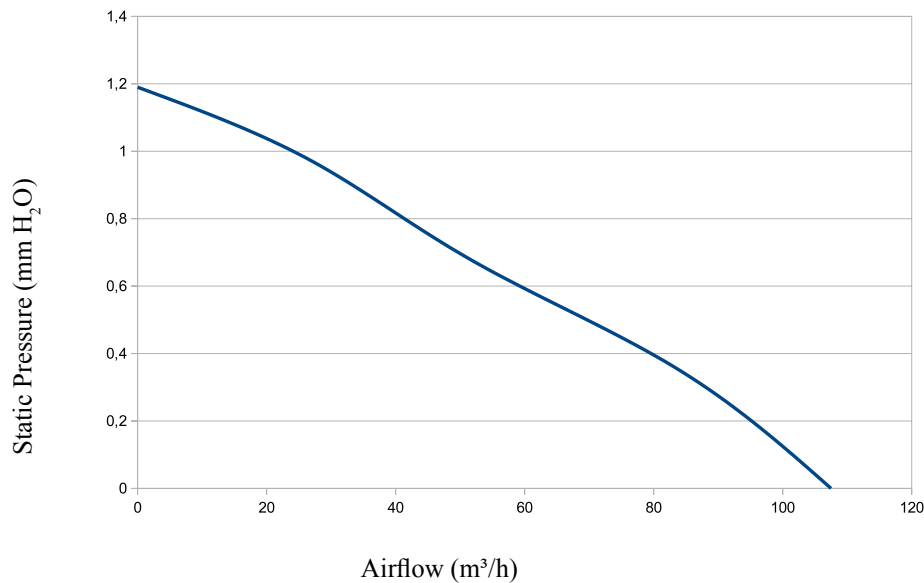


## 3. Performance Specifications

### 3.1. General Performance Specifications

Rotational Speed:	1200 rpm
Airflow:	107.5 m <sup>3</sup> /h
Acoustical Noise:	17.8 dB(A)
Static Pressure:	1.19 mm H <sub>2</sub> O
Tolerance:	10%
MTBF	> 150.000h

### 3.2. Performance Curve



	Airflow	Pressure
1	107.5	0.0
2	83.2	0.36
3	52.4	0.67
4	27.1	0.97
5	0.0	1.19

### 3. Remarks

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Noctua doesn't take any responsibility if the product is used outside the specified parameters.

Specifications are obtained after 5 minutes of operation at 25°C and 65% humidity. The fan was mounted vertically in free air conditions.

Please note that excessive humidity can be harmful to the product and it should therefore be stored in cool, dry environments only. If the product was stored at less than 5°C for more than several hours, it should be stored at more than 20°C for at least 24 hours before use.

Handle the fan with care. Applying pressure or force upon the impeller or dropping the fan can result in damage. Take the necessary precautions (fan grills, etc.) to prevent injuries. Do not touch the fan blades during operation.

Please ensure the correct polarity. As the fan doesn't have a protection against reverse polarity, reverse connection can lead to damage.

Please note that the ingress of moisture, dust or other particles into the motor hub can damage the product.

Please make sure that the fan is properly mounted. Noctua cannot be held responsible for vibrations or other noises caused by improper installation.

If multiple fans are used in parallel, use a capacitor of at least 4.7  $\mu$ F to avoid unstable power.