

FN20V-PG, YZR20-4A9-PG

Gree Air Conditioner Indoor Motor Instruction Manual

Models: FN20V-PG, YZR20-4A9-PG

1. PRODUCT OVERVIEW

This manual provides essential information for the installation, operation, and maintenance of the Gree Air Conditioner Indoor Motor, models FN20V-PG and YZR20-4A9-PG. This motor is a critical component designed for indoor air conditioning units, specifically functioning as a fan motor to circulate air.

Key Features:

- **Power Supply:** AC (Alternating Current)
- **Model Numbers:** FN20V-PG, YZR20-4A9-PG
- **Motor Type:** AC Motor
- **Design:** Plastic encapsulated for durability and safety.
- **Application:** Specifically designed for indoor air conditioner fan units.



Figure 1: Overview of the Gree Air Conditioner Indoor Motor (FN20V-PG / YZR20-4A9-PG). This image shows the compact, white plastic-encapsulated motor with its central shaft and attached wiring harnesses, ready for integration into an air conditioning unit.

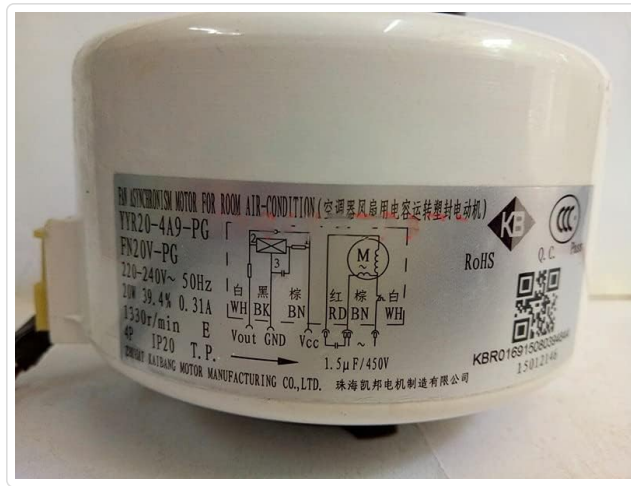


Figure 2: Close-up view of the product label on the Gree Air Conditioner Indoor Motor. The label displays key specifications such as model numbers (YYR20-4A9-PG, FN20V-PG), voltage (220-240V~ 50Hz), power (20W), current (0.31A), RPM (1330r/min), and wiring diagram, along with certification marks.

2. SPECIFICATIONS

Specification	Detail
Brand	Generic (Applicable to Gree systems)
Model Numbers	FN20V-PG, YYR20-4A9-PG
Motor Type	AC Motor
Power Supply	AC
Voltage	20 Volts (as per general specification, specific label shows 220-240V)
Material	Plastic (encapsulated)
Manufacturer	DAVITU
Origin	Mainland China
Certification	NONE (as per product description)

Note: Specific voltage and other electrical parameters should always be verified directly from the product label before installation.

3. INSTALLATION (SETUP)

Installation of this indoor motor requires technical knowledge and should ideally be performed by a qualified HVAC technician. Improper installation can lead to electrical hazards, damage to the air conditioning unit, or motor malfunction.

Safety Precautions:

- **Disconnect Power:** Always ensure the main power supply to the air conditioning unit is completely disconnected before beginning any installation or maintenance work.
- **Verify Voltage:** Confirm that the voltage of the new motor matches the specifications of the air conditioning unit. The motor is rated for AC power, typically 220-240V as indicated on the product label.
- **Proper Tools:** Use appropriate insulated tools for electrical connections.
- **Wiring Diagram:** Refer to the wiring diagram provided on the motor's label (Figure 2) and the air conditioner's

service manual for correct electrical connections.

Installation Steps (General Guidance):

1. **Access Unit:** Carefully open the indoor air conditioning unit to access the existing fan motor.
2. **Remove Old Motor:** Disconnect all wiring from the old motor, noting their positions. Unmount the old motor from its housing.
3. **Mount New Motor:** Securely mount the new FN20V-PG / YYR20-4A9-PG motor into the designated position within the air conditioning unit. Ensure it is firmly seated and aligned.
4. **Connect Wiring:** Reconnect the electrical wiring to the new motor according to the wiring diagram. Pay close attention to color codes and terminal markings (e.g., WH, BK, BN, RD, GND, Vcc).
5. **Test Connections:** Before closing the unit, visually inspect all connections to ensure they are secure and correctly wired.
6. **Reassemble Unit:** Carefully reassemble the air conditioning unit, ensuring all covers and panels are properly secured.
7. **Power On and Test:** Restore power to the air conditioning unit and perform a functional test to ensure the fan motor operates smoothly and quietly.

4. OPERATING PRINCIPLES

The FN20V-PG / YYR20-4A9-PG motor is an AC fan motor designed to drive the fan blade within the indoor unit of a Gree air conditioner. Its primary function is to circulate conditioned air throughout the room. Once installed and powered, the motor operates automatically as part of the air conditioner's cooling or heating cycle.

- **Air Circulation:** The motor spins the fan blade, drawing air from the room into the indoor unit, passing it over the evaporator (cooling) or condenser (heating) coils, and then expelling the conditioned air back into the room.
- **Continuous Operation:** The motor is designed for continuous operation during the air conditioner's active cycles.
- **Capacitor Start:** As an AC motor, it utilizes a capacitor (e.g., 1.5 μ F/450V as shown on the label) to assist in starting and maintaining efficient operation.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and efficient operation of the motor. Always disconnect power before performing any maintenance.

- **Dust Removal:** Periodically inspect the motor and fan blade for dust and debris accumulation. Use a soft brush or compressed air to gently clean the surfaces. Excessive dust can lead to overheating and reduced efficiency.
- **Check Connections:** Annually, or if issues arise, inspect all electrical connections to the motor to ensure they are tight and free from corrosion.
- **Listen for Unusual Noises:** During operation, listen for any unusual grinding, squealing, or rattling noises, which could indicate a bearing issue or obstruction.
- **Professional Inspection:** For comprehensive maintenance, consider having a qualified technician inspect the air conditioning unit and its components, including the motor, annually.

6. TROUBLESHOOTING

If the air conditioner fan is not operating correctly, consider the following troubleshooting steps. Always ensure power is disconnected before inspecting internal components.

Problem	Possible Cause	Solution
Motor not spinning / Fan not moving	No power, loose wiring, faulty capacitor, motor failure, obstructed fan blade.	Check power supply to AC unit. Inspect wiring connections. Check capacitor (requires specialized tools). Clear any obstructions around the fan blade. If motor is faulty, replacement is necessary.
Unusual noise from indoor unit	Loose fan blade, worn motor bearings, debris in fan housing.	Ensure fan blade is securely attached. Clean fan housing of debris. If bearings are worn, motor replacement may be required.
Motor overheating	Poor ventilation, excessive load, faulty capacitor, internal motor issue.	Ensure proper airflow around the motor. Check for fan blade obstructions. Verify capacitor function. If issue persists, motor may need replacement.

Warning: Troubleshooting electrical components can be dangerous. If you are not comfortable performing these checks, contact a qualified technician.

7. WARRANTY AND SUPPORT

Specific warranty terms for this motor are typically provided by the seller or manufacturer at the time of purchase. Please retain your proof of purchase for any warranty claims.

- **Warranty Information:** For details regarding warranty coverage, duration, and conditions, please refer to the documentation provided with your purchase or contact the seller directly.
- **Technical Support:** For technical assistance or further inquiries, please contact the seller or the manufacturer, DAVITU.

This manual is intended for informational purposes only and does not replace professional advice or service.