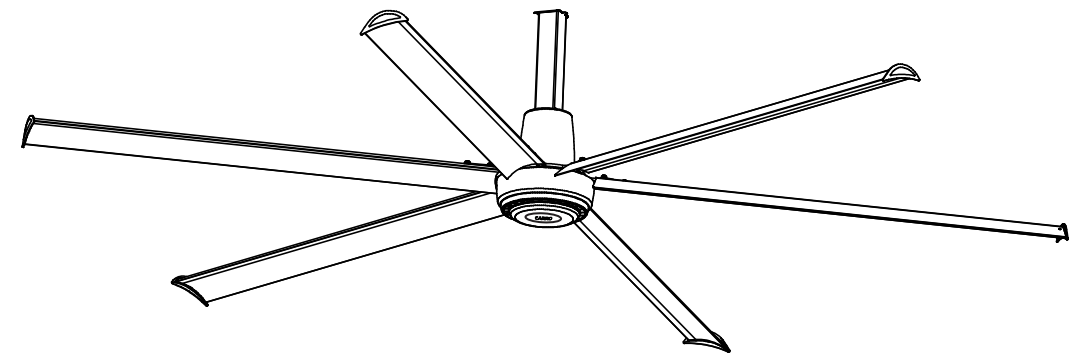




INSTALLATION INSTRUCTIONS

Read and Save These Instructions

CARRO



CARROHOME.COM

Please read and follow all the instructions carefully before using this product.

**The product image shown here is indicative only.
Actual product you receive may differ.**

Important: Please read and save these instructions before installation

Basic Product Specifications

Model	Diameter		Voltage	Frequency	Power	Rotation Speed
	m	ft				
CDC-086S-030	2.4	8	120	50/60	0.3	160
CDC-106S-030	3	10	120	50/60	0.3	105
CDC-126S-030	3.7	12	120	50/60	0.3	65

Model	Maximum Airflow		Noise Level	Number of Blades	Coverage Area	
	m³/min	CFM			m²	sqft
CDC-086S-030	2600	91780	38	6	140	1507
CDC-106S-030	3300	116490	38	6	210	2260
CDC-126S-030	4000	141200	38	6	330	3552

Questions

Have questions about our products? Contact us and talk to our helpful tech support team.

Technical Support

Business Hours:
Monday – Friday (Holidays observed).
9:00 am to 5:30 pm PST.
Tel: (888) 253-2374

The product images, technical data and installation dimensions shown in the manual are for reference purposes only. Actual product may differ.

This Carro Ceiling Fan has :



Natural wind



Energy saving comfort



Variable speed



Built with premium materials
for durability & power

SAFETY PRECAUTIONS

CARRO

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- **WARNING:** Before you begin installing the fan, shut the power off at the circuit breaker of the fuse box.
- **CAUTION:** Installation work and electrical wiring must be done by licensed qualified person(s) in accordance with all applicable codes and standards. Non-professionals are not allowed to repair, inspect or replace the parts. The installation and maintenance must be carried out by professionally trained and certified experienced personnel.
- **WARNING:** Do not carry out wiring work within 1 minute of switching on or off the power, otherwise there will be a risk of electric shock (the capacitor will still have power for a short time after switching off the power). When replacing or moving the power supply, please cut off the power and wait for all indicators to be off for 1 minute before operation.
- **WARNING:** Make sure the installation site you choose allows the fan blades to rotate without any obstructions.
- **CAUTION:** When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- **CAUTION:** Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- **WARNING:** Before servicing or cleaning unit, switch power off at the service panel and secure the panel to prevent power from being switched on accidentally. If the service panel cannot be secured, fasten a prominent warning device, such as a tag or sign, to the service panel.
- **CAUTION:** The installation of the fan must be in accordance with the requirements specified in this installation manual and with any additional requirements set forth by the National Electric Code (NEC), ANSI/NFPA 70, and all local codes. Code compliance is ultimately YOUR responsibility! Failure to comply with these codes could result in personal injury or property damage.
- **CAUTION:** Exercise caution and common sense when powering the fan. Do not connect the fan to a damaged or hazardous power source. Do not attempt to resolve electrical malfunctions or failures on your own. Contact the manufacturer or qualified person(s) if you have any questions regarding the electrical installation of this fan.
- **WARNING:** To reduce the risk of fire, electric shock, and injury to persons, the fan must be installed with the supplied fan controllers and blades. Other parts cannot be substituted. Use only the correct controller according to the product model. Do not use unmatched controllers, which may cause damage to the motor or controller.
- **CAUTION:** When service or replacement of a component in the fan requires the removal or disconnection of a safety device, the safety device must be reinstalled or remounted as previously installed.
- **WARNING:** Risk of fire, electric shock, or injury to persons during cleaning and user-maintenance! Disconnect the fan from the power supply before servicing.
- **CAUTION:** Do not bend the blades when installing, adjusting, or cleaning the fan. Do not insert foreign objects in between rotating blades.
- **WARNING:** Stay alert, watch what you are doing, and use common sense when installing fans. Do not install fans if tired or under the influence of drugs, alcohol, or medication. A moment of inattention while installing fans may result in serious personal injury.
- **CAUTION:** The installation of this fan requires the use of some power tools. Follow the safety procedures found in the owner's manual for each of these tools and do not use them for purposes other than those intended by the manufacturer.
- **CAUTION:** The product warranty will not cover equipment damage or failure caused by improper installation.
- **WARNING:** To reduce the risk of fire, electric shock, or personal injury, do not attempt to open or repair any parts or components of the fan.
- **WARNING:** To reduce the risk of fire, electric shock, or personal injury, do not operate the fan if any parts are damaged or appears to be damaged.
- **WARNING:** To reduce the risk of fire, electric shock, or personal injury, do not attempt to open or touch any of the electronics inside the control box, as many of the parts operate at live voltage.
- **WARNING:** To reduce the risk of fire, electric shock, or personal injury, the fan suspension system shall be inspected regularly.
- **WARNING:** To reduce the risk of fire, electric shock or personal injury, do not use replacement parts that have not been recommended by the manufacturer (e.g. parts made at home using a 3D printer).
- **WARNING:** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a responsible person. Children should be supervised to ensure that they do not play with the appliance. Leave this installation guide with the owner of the fan after installation is complete.
- **NOTE:** The important safeguards and instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and care are factors which cannot be built into this product. These factors must be supplied by the person(s) installing, caring for and operating the unit.
- **NOTE:** Before installing the fan, please check and inspect all of the fan components and make sure they have all been received in good condition. Contact the manufacturer if there are any missing, damaged, or broken parts.
- This product is only suitable for indoor use.

IMPORTANT: For safety reasons, it is crucial to have the ceiling fan installed by a qualified professional team. The manufacturer/distributor holds no responsibility for any accidents or issues arising from installations conducted by non-professionals.

All screws must be checked and re-tightened where necessary, before and after installation. Before and after you install the fan, make sure that all mounting components are secured to prevent the fan from falling.

Please confirm whether the power is connected according to the proper markings and whether there is any obstacle within the operating range of the product before operation. After operation, please check whether the rotation direction of the product is correct (clockwise as viewed from below).

This product shall not be operated in freezing, corrosive, explosive or severely dusty environments.

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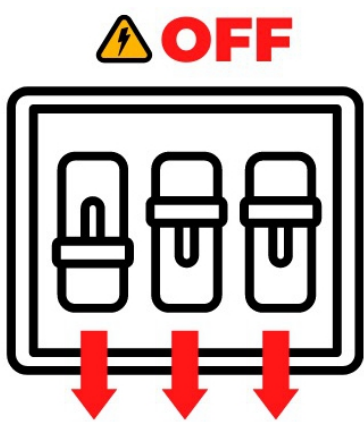
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WARNING: To avoid serious injury or death, turn off the power at the circuit breaker before installing the fan.

Tools you'll need

The main fan unit is heavy. A suitable means for lifting the weight of the fan, such as a scissor lift, at least two personnel, and the following tools will be required.

Note: Depending on your application, additional tools may be required.

Recommended Tools

- | | |
|-----------------------|---------------------------------|
| Adjustable wrench | Electrical test pen |
| Cross screwdriver | Clamp |
| Slotted screwdriver | Wire cutters |
| 5mm inner hex spanner | Tape measure |
| Hacksaw | Wire strippers |
| Level | Medium tongue and groove pliers |
| Drill | Multimeter |

Always use personal protective equipment.
You should always wear personal protective equipment, such as a hard hat, safety glasses, a fall harness, etc., when installing Industrial fans.

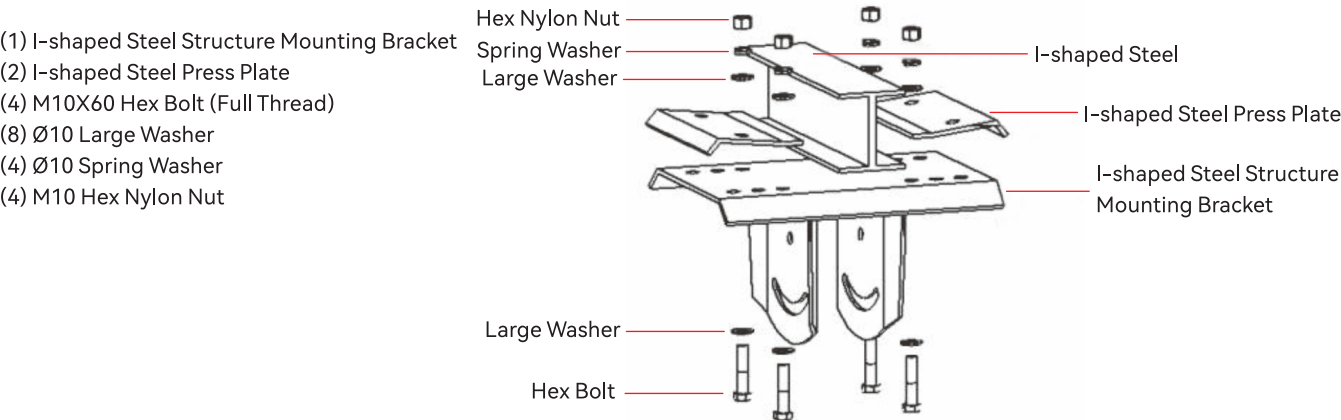
WARNING: Ensure there are no persons below the fan unit during installation! When mounting a fan in an area where materials could be elevated and contact the rotating fan blades, mark or paint the floor with a large crosshatched circle to alert personnel of the overhead fan locations.

1 Install the Mounting Bracket

WARNING: Before beginning, make sure to turn off the power from the breaker circuit!

1.1 I-shaped Steel Structure (Standard Installation)

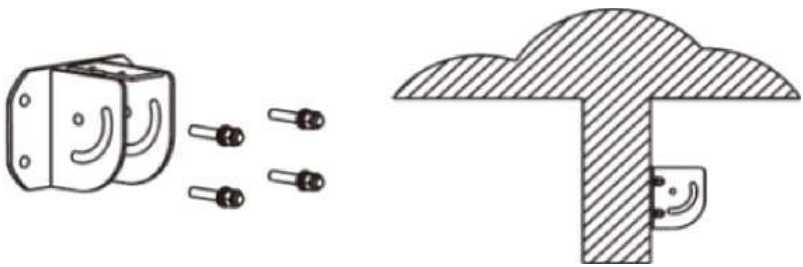
Installation diagram of I-shaped steel structure of ceiling fan as shown below. Please measure the verticality with a level ruler when installing the bracket.



1.2 Concrete Structure (Optional)

Determine the installation position of the fan, mark the holes using the mounting bracket as a template. Drill the mounting hole with a 12mm (0.5") drill bit (hole depth>60mm (2.4")), and then install the M10x80 expansion bolts to secure the mounting bracket.

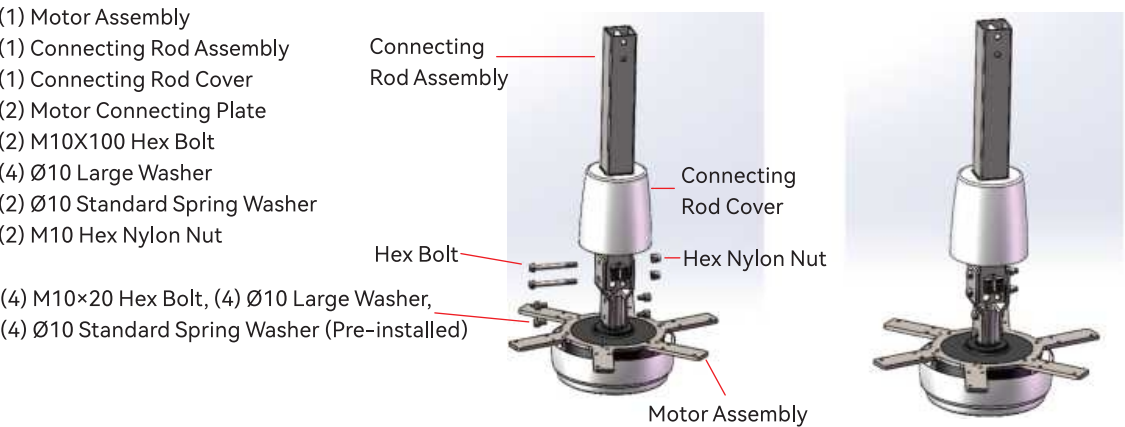
- (1) Concrete Structure Mounting Bracket
- (4) M10X80 Expansion Bolt



ATTENTION: Pay attention to safety during the work and install the bolts securely.

2 Install the Connecting Rod Assembly

Install the connecting rod assembly on the motor, screw it without tightening. The steel rope should be pulled out from the upper part of the connecting rod.



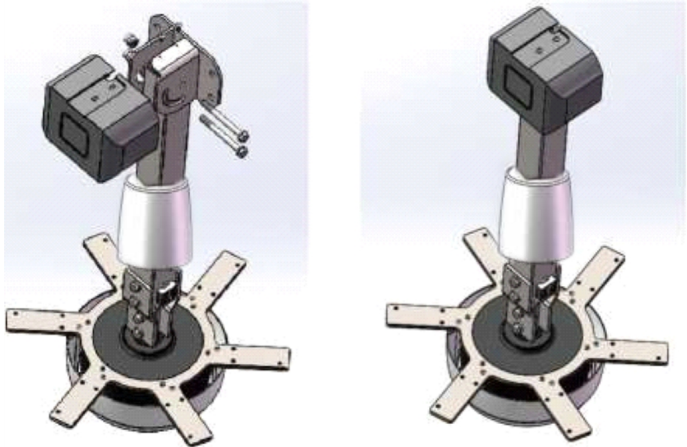
ATTENTION: Double check whether the blade bracket on the motor assembly to ensure it is installed in the correct direction.

3 Secure the Connecting Rod Assembly to the Mounting Bracket

Install the motor connecting rod assembly on the mounting bracket and screw it without tightening. Install the bracket cover (not included in the I-shaped Steel Structure, only for the Concrete Structure Installation), and tighten the screws.

- (1) Motor Connecting Rod Assembly
- (1) Connecting Rod Cover
- (2) M10X100 Hex Bolt
- (4) Ø10 Large Washer
- (2) Ø10 Standard Spring Washer
- (2) M10 Hex Nylon Nut
- (1) Bracket Cover (Optional)
- (2) Hand Tightening Screw (Optional)

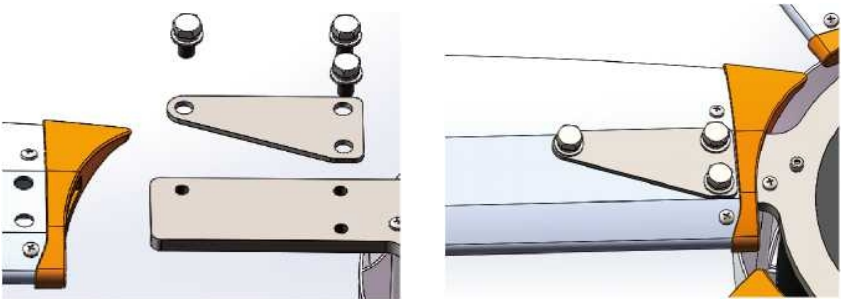
CAUTION: The main fan unit is heavy. Use caution when raising it.



4 Install the Fan Blades

Install the blade onto the motor, install the screws and pull the blade outward from the center of the motor. Install the blade screws without tightening.

- (18) M8x16 Hex Bolt (Full Thread)
- (18) Ø8 Standard Spring Washer
- (6) Blade Assembly
- (6) Blade Press Plate



ATTENTION: Double check the blade bracket on the motor assembly to ensure it is installed in the correct direction. Before tightening the fan blade screws, pull the blade outward from the center of the motor. Adjust the levelness of the motor and the verticality of the connecting rod before tightening the screws and check whether all the screws are tightened.

5 Secure the Steel Rope

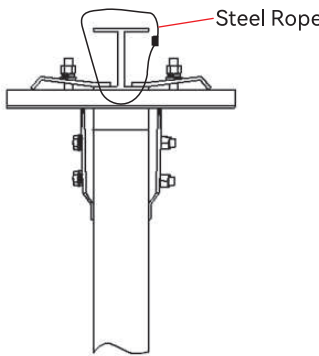
5.1 I-shaped Steel Structure (Standard Installation)

The other end of the steel rope can be tied to the I-beam with the steel rope clamp. Wrap the steel rope through the hanger and around the I-shaped steel, and tighten with the clamp. Adjust the tension of the steel rope until the steel rope is straight. (Expansion screw hook is not available in the I-shaped Steel Structure installation)

- (2) M3 Steel Rope Clamp

WARNING: The cable must be drawn tightly around the mounting structure, leaving as little slack as possible. To prevent serious injury or death, ALWAYS attach the steel rope to the fan motor and secure to the building structure on EVERY fan.

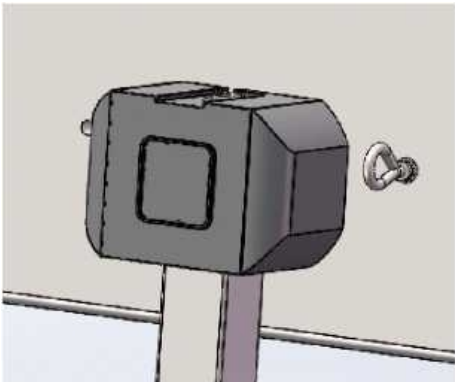
It is the sole responsibility of the building owner and installer to ensure the safety of the mounting system in conjunction with the steel rope, a safe building structure, and the installation complies with all federal, state, and local codes. Failure to install and to secure the steel rope will void your warranty. For safety reasons, it is crucial to have the ceiling fan installed by a qualified professional team. The manufacturer holds no responsibility for any accidents or issues arising from installations conducted by non-professionals.



5.2 Concrete Structure (Optional)

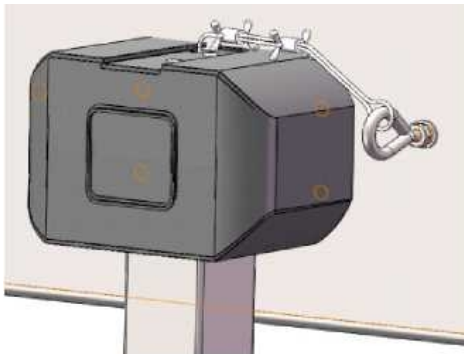
Determine the position of the expansion bolt hook, drill the mounting hole with a 12mm (0.5”) drill bit (hole depth > 60mm (2.4’’)), install the M10x80 expansion bolt hook with the opening upward and tighten the expansion screw hook.

(1) M10X80 Expansion Bolt Hook



Thread the steel rope through the expansion screw hook, straighten it after pulling back and then secure it with the steel rope clamp.

(2) M3 Steel Rope Clamp

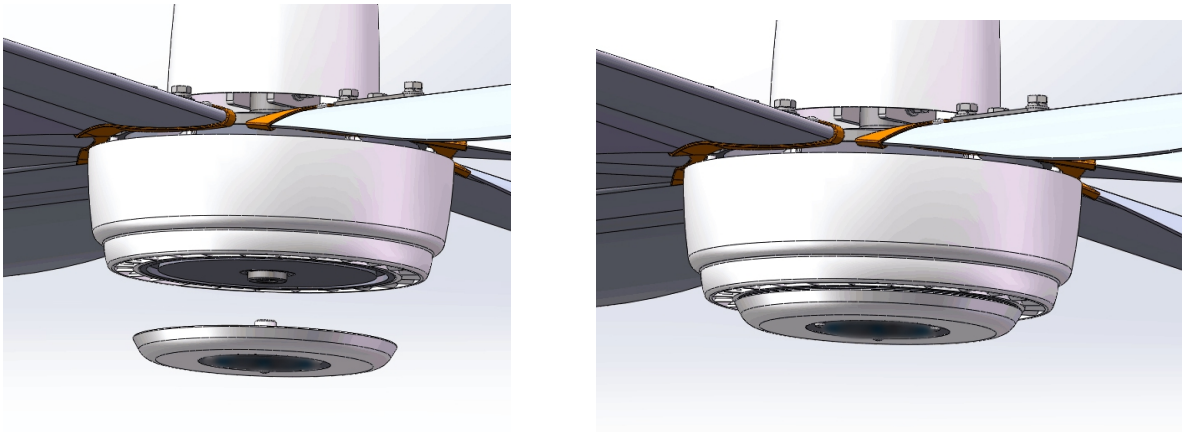


ATTENTION: Straighten the steel rope without overtightening. Before tightening the fan blade screws, pull the blade outward from the center of the motor. Adjust the levelness of the motor and the verticality of the connecting rod before tightening the screws and check whether all the screws are tightened.

6 Install the Motor Hub Cover

Align the slots of the motor hub cover with the slots in the motor, and then rotate it to securely lock it into place.

(1) Motor Hub Cover

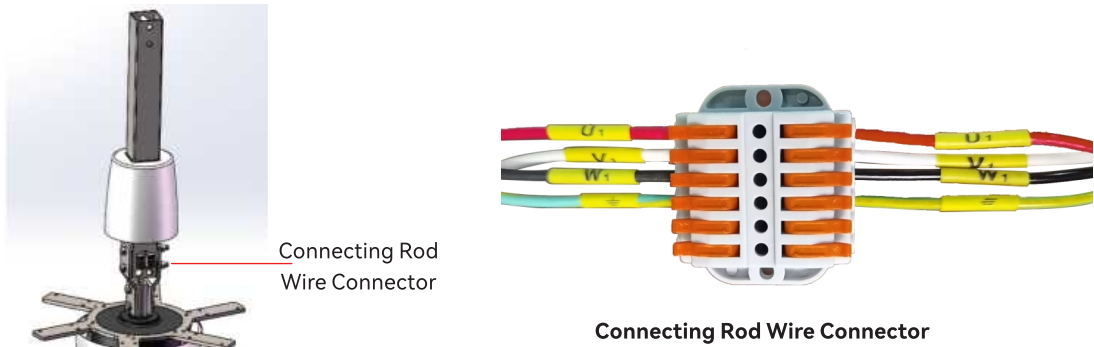


7 Connect the Wiring

WARNING: To reduce the risk of electric shock, wiring should only be performed by a qualified electrician! Incorrect assembly can cause electric shock or damage the motor and the controller! Hazard of electrical shock!

WARNING: The installation of the fan must be in accordance with the requirements specified in this installation manual and with any additional requirements set forth by the National Electric Code (NEC), ANSI/NFPA 70, and all local codes. Code compliance is ultimately the responsibility of the customer and/or end user!

Install the connecting rod wire connector. Insert the motor lead into the connecting rod wire connector.

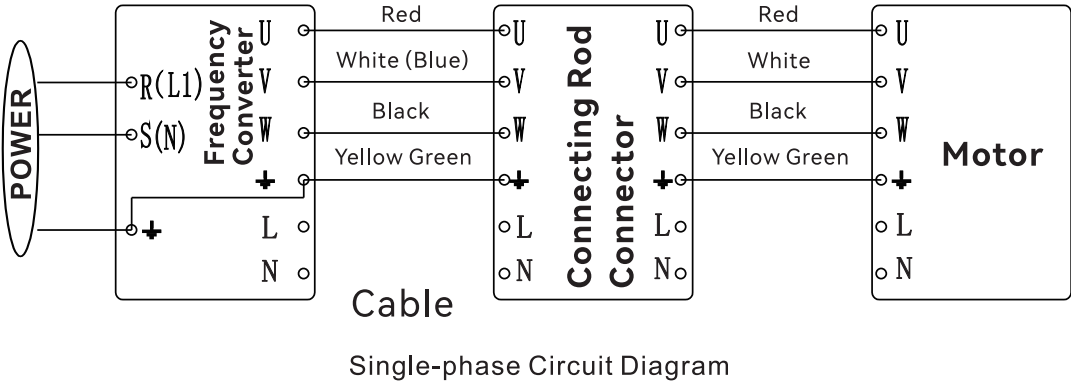


Select the location to install the controller, connect the motor and the main power to the controller as required. Check whether there are obstacles around the fan that affect its operation and operate the fan according to the operation manual of the controller.

- (1) Permanent Magnet Motor Controller
- (1) Rubber Sheathed Cable

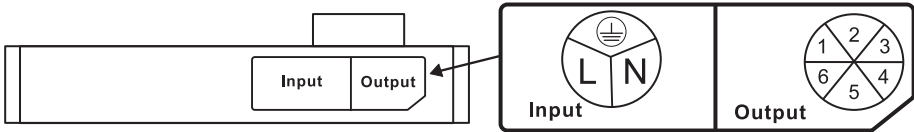


Aviation Plug

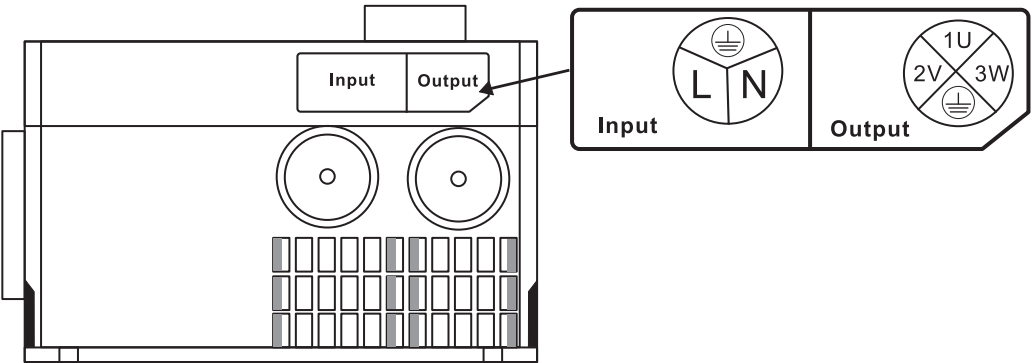


Main Circuit Wiring Diagram (Use with Wire Diameter<6mm)

Single-phase 120V Wiring				
Terminal Function	Terminal ID	Wiring Description	Function Description	Cable Color
Power input	L	L	Input live wire	Red
	N	N	Input neutral wire	Blue
	⊕	G	Input grounding wire	Yellow green
Power output	1	U	Motor phase U	Red
	2	V	Motor phase V	White
	3	W	Motor phase W	Black
	4	G	Motor grounding wire	Yellow green
	5	L		
	6	N		

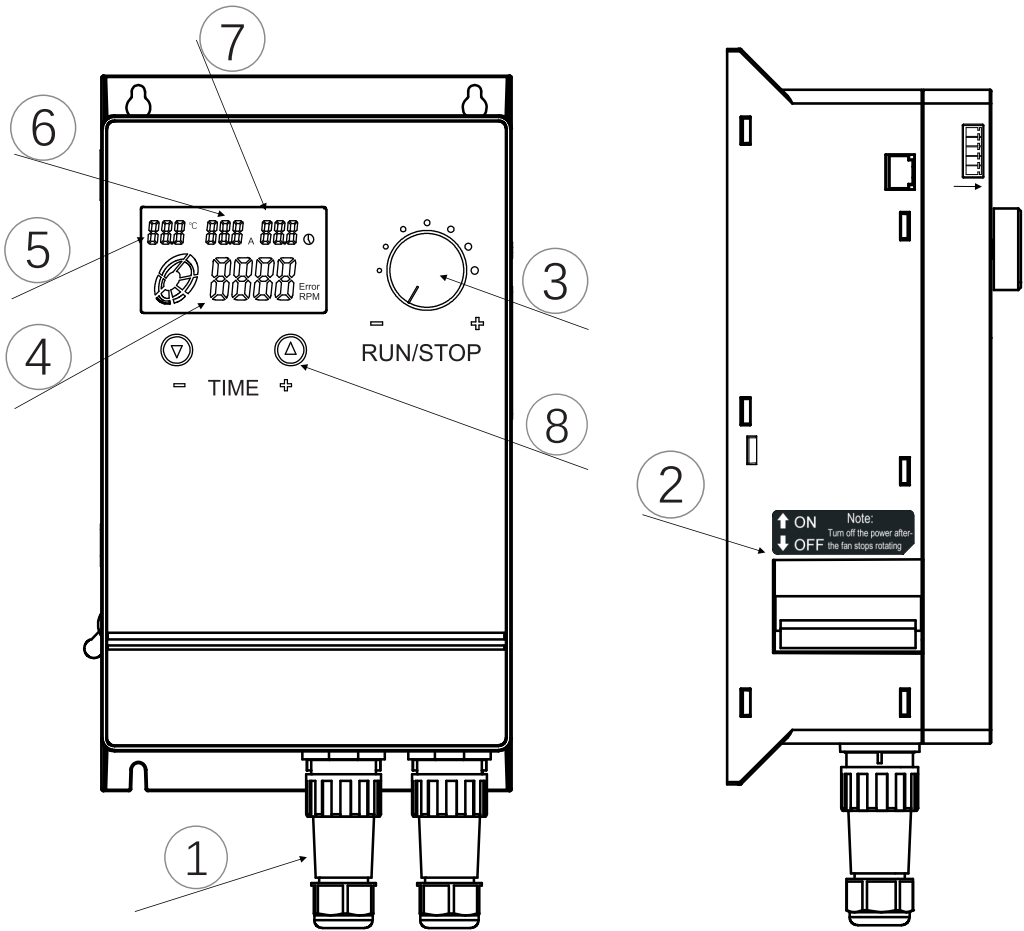


Single-phase 120V Wiring			
Terminal Function	Terminal ID	Wiring Description	Function Description
Power input	L	L	Input live wire
	N	N	Input neutral wire
	⊕	G	Input grounding wire
Power output	U	U	Motor phase U
	V	V	Motor phase V
	W	W	Motor phase W
	⊕	G	Motor grounding wire



Input/output plug wiring mode
1.Plug components include plug, anti-release latch, lock catch, sealing ring and buckle.
2.Connect the stripped cable to the plug.
3.Complete wiring according to the diagram provided.

ATTENTION: Double check the phase sequence of the motor wires connected to the controller to ensure it is correct.
WARNING: Do not connect the main power directly to the ceiling fan. Confirm whether the power voltage matches the controller voltage.



- ① Aviation plug: Connect to power wire and motor wire.
- ② Power Switch: On for power on, off for power off. Default setting is off.
- ③ Knob switch: Integrates the functions of start, stop and speed regulation. Turn clockwise to start and gradually increase the speed from 0 to the set speed. Turn counter clock wise to slow down until 0 to stop the fan.
- ④ Speed display: Displays the actual speed.
- ⑤ Temperature display: The external temperature probe can be connected to display the external temperature, and the display is fixed at 25° when not connected.
- ⑥ Current display: Display the running output current.
- ⑦ Timing time: Display the time after setting (minimum unit 0.5H).
- ⑧ Timing adjustment button: Press the +/- button to set the timing. 0 indicates that the timing function is disabled.

For more operation details please check the manual of the controller.

WARNING: Before servicing or cleaning unit, switch power off at the service panel and secure the panel to prevent power from being switched on accidentally. If the service panel cannot be secured, fasten a prominent warning device, such as a tag or sign, to the service panel.

WARNING: When service or replacement of a component in the fan requires the removal or disconnection of a safety device, the safety device must be reinstalled or remounted as previously installed.

WARNING: Do not operate a fan with missing or damaged components. Do not remove the covers while power is on.

Please take a few moments each year to perform the following preventive maintenance inspection on your fan to ensure its safe and efficient operation. Before contacting Customer Service, try resolving the issue using the procedures in the Troubleshooting section. If you have any questions, contact Customer Service.

- ★ If your fan uses a safety rope, check that the steel rope is properly installed and examine the steel rope and hardware. Every 12 months, check that the steel rope is properly attached to the building structure and fan. Inspect the visible portions of the steel rope for damage, including fraying. The steel rope is an important part of the safety system and protects users in the unlikely event of a catastrophic situation. It is critical for fan owners to ensure that it is intact and properly secured.
- ★ Make sure the mounting hardware and the screws securing the blades to the fan hub are securely fastened. Ensure blades are secured to one another by blade retainers. Ensure all blade tip hardware is secure.
- ★ Make sure the wire connectors are secure and the ground wires are securely connected.
- ★ Dust blades and motor. If desired, use a gentle cleaner or degreasing agent to polish the blades. Do not use solvents, gasoline, or any other chemical cleaners! These may cause surface distortion and damage to the fan. Do not use chlorine or any chemicals containing chlorine, or the blades may be damaged. This could result in the release of toxic/fatal fumes. Do not use cleansers on the electronics enclosure.
- ★ Check that the steel rope and upper mounting system are secure.
- ★ Observe the motion of the fan during operation. The fan should not wobble or sway. If any wobble is noticed, ensure the mounting structure is rigid enough to support the fan.

Fault Code	Faults	Causes	Solutions
01	Output short circuit	① The cable from the controller to the motor is short-circuited to the ground (leakage).	① Replace the cable.
		② Motor is short-circuited to ground.	② Replace the motor.
02 03 04	Acceleration overcurrent Deceleration overcurrent Constant speed overcurrent	① Acceleration time is too short. ② Short circuit at output side. ③ Motor is locked. ④ Motor is overloaded. ⑤ Inaccurate identification of motor parameters.	① Delay acceleration time. ② Check whether the motor wire is damaged. ③ Check whether the motor is overloaded. ④ Reduce V/F compensation value. ⑤ Motor parameter self-learning.
05	Acceleration overvoltage	① Power voltage is too high.	① Check whether the input voltage is correct. ② Increase acceleration/deceleration time. ③ Motor parameter self-learning.
06	Deceleration overvoltage		
07	Constant speed overvoltage		
09	Undervoltage protection	① Input voltage is too low.	① Check whether the power input is normal.
10	Frequency converter overloaded	① Converter power is insufficient.	① Replace with high-power converter.
12	Input phase loss	① Phase loss of input power.	① Check whether the power input is normal.
13	Motor phase loss	① Motor wire is disconnected.	① Check the connecting wire of motor controller.
		② Motor is damaged.	② Replace the motor.
		③ Frequency converter has fault.	③ Contact the manufacturer.
14	Controller overheat protection	① Ambient temperature is too high.	① Improve the installation environment.
		② The fin is too dirty.	② Clean the air inlet/outlet and fin.
		③ The installation position is not ventilated.	③ Increase the ventilation.
		④ The cooling fan is damaged.	④ Replace the damaged cooling fan.
23	Short circuit to ground	① Cable is short-circuited to ground (leakage).	① Replace the cable.
		② Motor is short-circuited to ground.	② Replace the motor.
		③ The controller is damaged.	③ Contact the manufacturer.

- ATTENTION:**
- The installation and wiring work must be carried out by professionals according to the Operation Manual in order to prevent electric shock.
 - Check whether the surrounding room of the ceiling fan meets the requirements before operation. When the product is used for the first time, please confirm whether the power supply meets the requirements and whether the wiring is correct and secure. The power can only be turned on when it is confirmed to be safe.
 - The system has overvoltage, undervoltage, voltage loss regulation, phase loss, overload, collision, overheating and lightning protection functions.
 - If the ceiling fan is not used for a long time, please run it for 10min every other month in order to prolong the service life of the product.

Thank you for your purchase! We offer lifetime technical support and limited warranty!

CARRO Limited Warranty

CARRO grants this limited warranty to the original purchaser of this CARRO ceiling fan for the original installation location.

How Can Warranty Service Be Obtained?

Proof of purchase is required when requesting warranty service. The original purchaser must present a sales receipt or other document that establishes proof of purchase. CARRO, at its sole discretion, may accept a gift receipt. To obtain service, please contact CARRO online or by phone.

What Does This Warranty Cover?

Motor: Three-Year Warranty

If any part of your ceiling fan motor fails within the first year due to a manufacturing defect as determined solely by CARRO, we will provide you with replacement parts free of cost. After the first year of purchase, we will provide you with two-year motor warranty service.

Other: One-Year Warranty

Except as otherwise indicated throughout this warranty, if any part of your CARRO ceiling fan fails at any time within one year of the date of purchase due to a manufacturing defect, as determined solely by CARRO, we will provide a free replacement part.

What Does This Warranty NOT Cover?

Labor Excluded: This warranty does not cover any costs or fees associated with labor (including electrician's fees) required to install, remove, or replace a fan or any fan parts.

The warranty does not cover remote control batteries. Fans installed outside the United States or owned by someone other than the original purchaser are excluded from warranty coverage. The warranty will be invalid if the customer fails to establish proof of purchase or if the fan was purchased from an unauthorized dealer.

The warranty does not cover normal wear and tear or cosmetic damages. If the fan is damaged due to improper installation, misuse, improper care, modifications to the fan, improper or incorrectly performed maintenance or repair, improper voltage supply or power surge, use of improper parts or accessories, failure to provide maintenance to the fan, or natural disasters (e.g. flood), the warranty will not cover it. The warranty also does not cover any accidental damages.

The warranty only applies to the original purchase and starts from the original purchase date. Any replacements will be considered as a part of the original purchase.

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