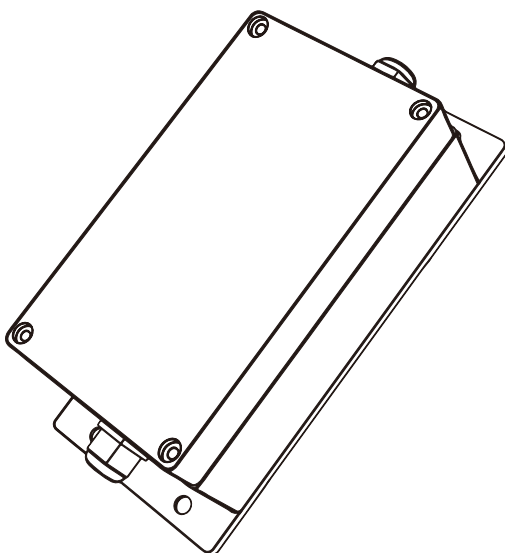


TURBRO

RVAC SOFT STARTER USER MANUAL

Model: S15 Plus



Please read the manual carefully before use and keep it for future reference




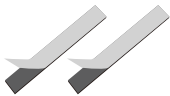


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Safety Precautions

1. **DO NOT use this appliance until you have read the safety warnings and operating instructions.** Risk of fire, malfunction, property damage, electric shock, serious injury, or even death may result if warnings and instructions are not adhered to.
2. The manufacturer declines all responsibility for personal injury or damage to animals or objects caused by inappropriate use of the appliance according to the warnings for installation, use, and maintenance described in this instruction manual.
3. This appliance is not to be used or have maintenance performed by persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge unless they have been given strict supervision or instruction concerning the use of the appliance by a person responsible for their safety.
4. A licensed HVAC professional must perform all installation, repair, maintenance, and relocation of this unit.
5. **DO NOT** use this appliance for any purpose other than that for which it was designed.
6. Power to the RV air conditioner **MUST** be disconnected before removing any components from its circuit.
7. Before connecting the soft starter, disconnect the RV air conditioner power and wait 2 minutes for the run capacitor to discharge.
8. Do not swap the Run & Start Windings.
9. Poor crimping can lead to heating & subsequent damage to the soft starter.
10. The device does not provide current limiting control or equivalent.
11. The device is **NOT** an overcurrent protection device and must **NOT** be used as a replacement for any primary circuit overcurrent protection.
12. If the product is damaged or is not functioning properly, stop using it and contact Customer Support immediately.

Parts List

Parts	Parts Name	Quantity
	Soft-starter	1
	Crimp Connections	6
	Mounting Screws (M4 x 20 mm)	4
	3M Foam Tape	2
	Electrical Tape	1
	Nylon Cable Tie	4

LED Flash Codes

LED	Color and Status
TEST	When powered on, the soft starter enters self-test mode, checking R/C/S wire communication. The TEST indicator flashes red once, followed by the RUN indicator flashing red and then green. Note: If R/C/S communication fails, the RUN indicator stays red, signaling a fault.
START	The START indicator flashes red, and the compressor starts.
RUN	A solid green light indicates normal operation; solid red indicates a fault.

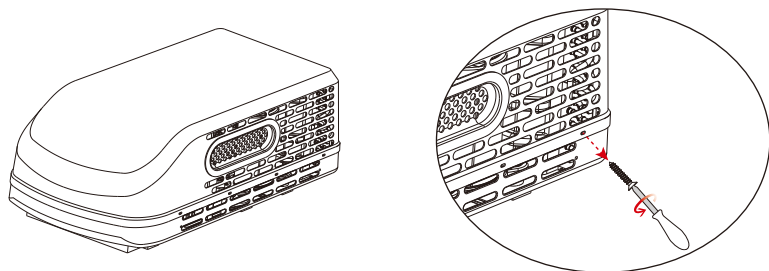
Note: Each time the device is started, it will automatically go through three steps: TEST - START - RUN.

Field Wiring Terminals (Applicable if wire harness is not provided)

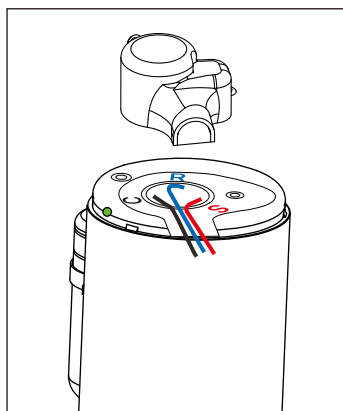
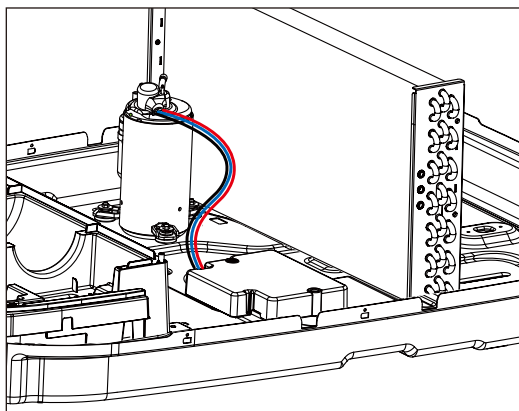
- **Wire Range:** 14 AWG Cu, stranded, for all terminals [Run Winding (R) and Active(T2)]
- **Tightening Torque:** 4.4 lbs-in [0.5 Nm] terminals.
- Field wiring conductors shall be rated 167°F [75°C]
- Suitable for use on a circuit capable of delivering no more than 5000rms symmetrical amperes, 120 volts maximum, when protected by a non-time delay RK5 fuse or circuit breaker rated 80A, or a time delay fuse rated 70A. The device does not provide current limiting control or equivalent.
- Suitable for use on a circuit capable of delivering no more than 5000rms symmetrical amperes, 240 volts maximum, when protected by a non-time delay RK5 fuse or circuit breaker rated 40A, or a time delay fuse rated 35A. The device does not provide current limiting control or equivalent.
- This soft starter is NOT an overcurrent protection device and must NOT be used as a replacement for any primary circuit overcurrent protection.

Installation Instructions

1. This product should be installed by a qualified technician.
2. Before installation turn off the HVAC system and ensure all electrical connections are off.
3. Verify from the manufacturer's wiring if there are any start-assist devices such as start capacitors, start relays, or PTCRs that may be present. If present, these need to be removed. Follow the Start winding connection from the compressor into the control box. This should terminate onto a run capacitor (HERM terminal, in case of a dual capacitor). If the same terminal has other wires terminated, these must be disconnected and electrically isolated.
4. Acquire the manufacturer's wiring diagram for the RV air-conditioning unit.
5. Open the top hood of the RV air-conditioning unit. If necessary, gain access to the compressor's wiring by removing any additional foam covers.

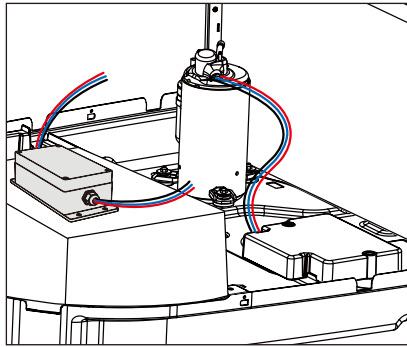


6. Identify the three wires (Run, Start, and Common) routed to the compressor. Most often, these are routed through a sleeve cover.

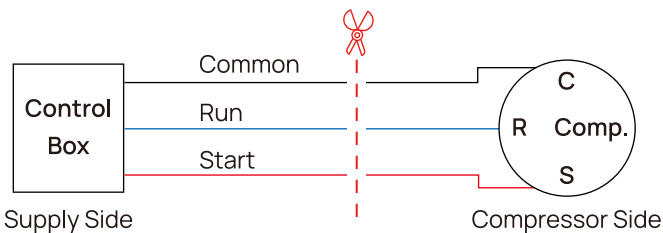
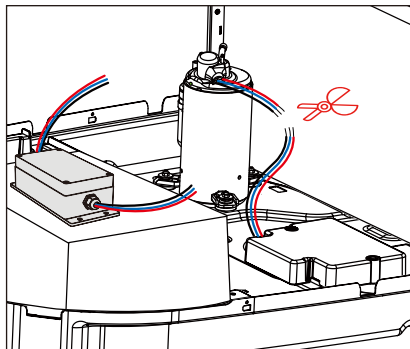


7. Identify a suitable location to place the soft starter. Use the 3M foam tape or mounting screws to attach it. Please avoid placing the soft starter and its wiring in the following areas.

- In the direct path of an air vent.
- In proximity (less than 2 inches) to copper pipes (inlet or discharge).
- Near rotating mechanical parts.
- Near heat sources
- A place that interferes with closing the top hood.

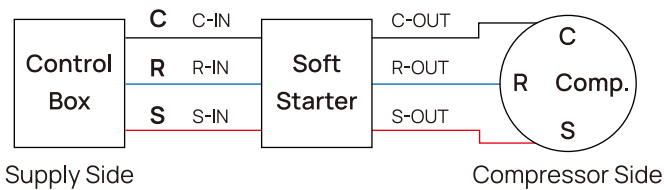
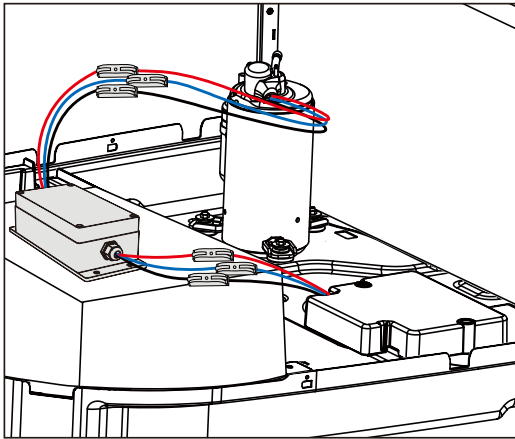


8. Cut the compressor's three wires at a location within range of the soft starter's wire harnesses. Clearly identify the supply and compressor sides of the connections.



9. Clearly identify the supply and compressor sides of the connections.

- On the supply side, carefully match the run, start, and common wires of the A/C unit with the run, start, and common wires on the SUPPLY side of the soft starter. Strip each wire by ½" and terminate all 3 connections using closed-end splice connectors. See diagram below.
- On the compressor side, carefully match the run, start, and common wires coming from the compressor with the run, start, and common wires on the COMPRESSOR side of the soft starter. Strip each wire by ½" and terminate all 3 connections using closed-end splice connectors.
- Ensure that all 6 crimp connections are firm and secure.



10. Clean the chosen mounting surface for the soft starter. Then use the zip ties to ensure that the wire harness on both sides is securely routed inside the unit.

11. Securely replace any foam covers and the top hood. Turn on the power and verify the operation.

Troubleshooting

Status	Cause	Solution
All the indicators are off.	Abnormal power supply.	Check whether the soft starter is correctly connected to the compressor.
		Check the power supply.
The RUN indicator is always red.	The compressor fails to start and enters the protected state.	Verify from the manufacturer's wiring if there are any start-assist devices such as start capacitors, start relays, or PTCRs that may be present. If present, these need to be removed.

Warranty Information

This 1-year limited warranty is extended to the original purchaser of this product and warrants against any defect in materials and workmanship under normal use and conditions, for a period of one year from the date of the original purchase, subject to the conditions and limitations outlined below.

This warranty is non-transferable to any subsequent owner of the product regardless of whether the product is transferred during the specified term of the warranty.

THIS LIMITED WARRANTY IS GIVEN TO THE PURCHASER IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE.

What is covered?

- TURBRO's warranty extends only to products purchased from authorized sellers that are subject to TURBRO's quality controls and have agreed to follow its quality controls.
- This warranty is limited to the repair or replacement of part(s) proved to be defective in material or workmanship after said defect is confirmed by the manufacturer's inspection.
- The manufacturer may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of the defective part(s).

UPON THE EXPIRATION OF THIS WARRANTY, ALL SUCH LIABILITY WILL TERMINATE. NO OTHER WARRANTIES ARE EXPRESSED OR IMPLIED ANYMORE.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

What is not covered?

- Damage or losses caused by any alterations or unauthorized repair made to the product by the owner.
- Damage or losses caused by accident, neglectful operation, misuse, abuse, or use contrary to the user manual and safety guidelines.
- Damage or losses occurring during commercial use, rental use, or any use for which the product is not intended.
- Damage or losses caused by improper or inadequate maintenance.

- Failure to perform general maintenance (including cleaning).
- Use of non-standard parts or accessories.
- Natural depreciation and normal wear and tear.

TURBRO SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW.

Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

How to request warranty services?

To obtain the benefit of this warranty please leave a message online (www.turbro.com/contact), or send an email to support@turbro.com.

To express our gratitude to you for choosing us, we are giving you a 1-year warranty extension to the original 1-year manufacturer's limited warranty, extending the coverage period to two years in total.

- Complete the registration of your new product at <https://www.turbro.com/warranty> within 90 days from the date of package delivery (inclusive of the 90th day).
- Any registration beyond this stipulated period will be deemed invalid.
- The ultimate interpretation of the terms and conditions related to the extended warranty service rests solely with TURBRO.

If you discover that your product is defective within the specified warranty period, please contact our Customer Support via support@turbro.com.

- Order ID and invoice, or bill of sale should be provided. Such payment records must be kept to verify the purchase date and establish a warranty period.
- Model and issue description should be provided in detail, preferably with pictures and videos.
- DO NOT dispose of your product before contacting us.
- DO NOT return the product unless instructed by our customer service.
- The original carton should be kept in case of warranty return of the unit.

What will TURBRO do?

- Replace certain parts.
- Replace the item.
- Refund the item under certain circumstances.

In no event shall liability exceed the purchase price paid by the original purchaser of the product.

Any instructions or warranty included in this manual may be subject to change without notice. For the most up-to-date instructions and warranty information, please contact us via support@turbro.com.

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