WANGNING

INSTALLATION INSTRUCTIONS

FOR

SOFT START CONTROL KIT

TABLE OF CONTENTS		
I.	Warnings	2
II.	General information and Requirements	2
III.	Package Contents	2
IV.	Tools Needed	2
V.	Installation of Soft Start Control Kit	2
VI.	Wire Diagram	4
VII.	Soft Start LED Operation	6

I. WARNINGS

WARNING!

Improper installation may damage equipment, can create a hazard,and will void the warranty. The use of components not tested incombination with these units will void the warranty, may make the equipment in violation of state codes, may create a hazard,and may ruin the equipment.

IMPORTANT NOTICE

These instructions are for the use of qualified individuals specially trained and experienced in installation of this type of equipment and related system components.
Installation and service personnel are required by some states to be licensed. Persons not qualified shall not service this equipment.

WARNING! – SHOCK HAZARD

To prevent the possibility of severe personal injury or equipment damage due to electrical shock, always be sure the electrical power to the appliance is disconnected during installation.

NOTE: The words " Shall" or " Must" indicate a requirement which is essential to satisfactory and safe product performance. The words " Should" or May" indicate a recommendation which is not essential and not required, but which
may be useful or helpful.

CAREFULLY FOLLOW ALL INSTRUCTIONS AND WARNINGS IN THIS BOOKLET TO AVOID DAMAGE TO THE EQUIPMENT, PERSONAL INJURY OR FIRE.

Please note that the installation of this soft start kit requires accessing the air conditioner/heat pumpunit which is usually mounted on the vehicleroof. Installation, also,includes working with the high voltage wiring. Only qualified service person must install the soft start kit to ensure proper installation.

II. GENERAL INFORMATION AND REQUIREMENTS

The soft start kit is designed to reduce the starting current of the compressor.
It increases the efficiency and the longevity of the unit by reducing the in-rush current needed for compressors to start by 65 -70% thus minimizing potential damage to compressors from mechanical shock hard-starting current surges.

Additionally, it may reduce the required size of a generator needed to start the system.
It will also allow the unit to operate on a generator, inverter, or limited utility power when it would otherwise not have functioned.

III. PACKAGE CONTENTS

This package contains:
1) Soft Start Box 2) User manual 3) Install screws

IV. TOOLS NEEDED

Phillips head driver
3/8" Hex Nut Driver
Needle-nose Pliers
Wire Cutters
Wire Strippers

V. INSTALLATION OF SOFT START CONTROL KIT

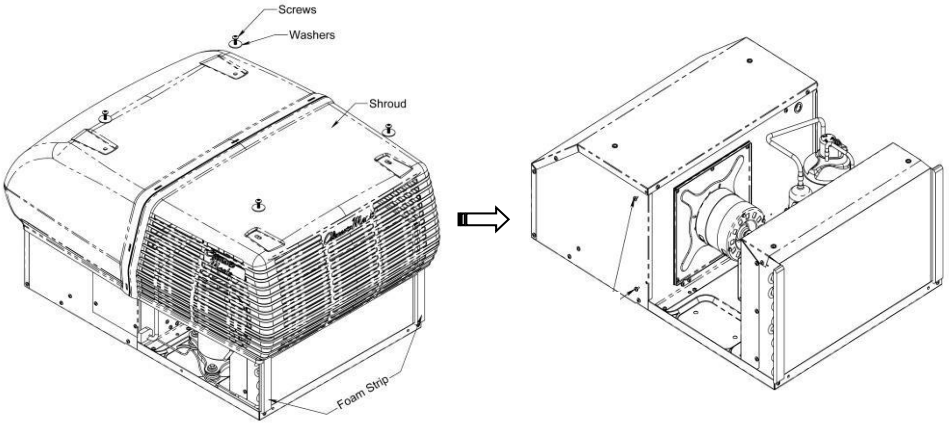
IMPORTANT

BEFORE BEGINNING THE INSTALLATION, THE AIR CONDITIONER MUST BE IN OFF MODE AND THE POWER BREAKER OF THE AIR CONDITIONER MUST BE SWITCHED OFF.

Ensure that the power to the unit has been turned off at the breaker. To verify that the power is off to the rooftop unit, turn the Control Knob on the Ceiling Assembly to HIGH FAN to see if the rooftop unit blower produces air. When power has been determined to be off, return the setting on the Control Knob to OFF.

1. Remove the upper cover of air conditioner.

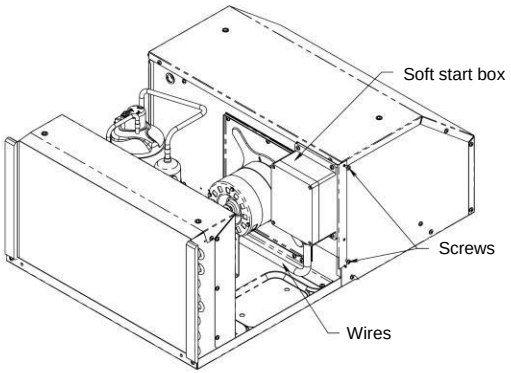
   Fox example, below picture.



Unless otherwise directed, retain all screws and washers for later re-use.

2. Find the suitable locations to install the soft start kit.

   As shown in illustration below.



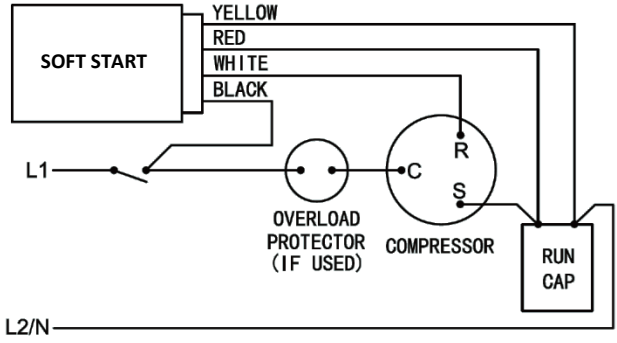
3. Connect with the wire according the diagram of different air conditioner type.

   See the VI section

4. After check the connection carefully, power on and test.

5. If the soft start runs correctly and the air conditioner runs normally, please install the cover of air conditioner. Congratulations on completing the installation.

VI. WIRING DIAGRAM



The Basic Wire Diagram

Installation guide and instructions: It is recommended to install at a professional RV repair point, under the guidance of an electrician with wiring experience.

1.Turn off all power before installation.

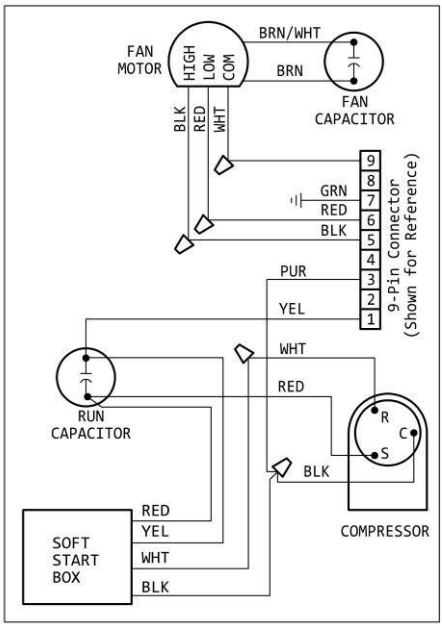
2.Locate the R port of the compressor, disconnect the connection between the compressor and the operating capacitor's R port, and connect the white wire of the soft starter to the R port.

3.Locate the C port of the compressor, connect the black wire of the soft starter to the C port of the compressor. If there is an overload protection device, connect the black wire to the overload protection device before connecting it to the C port of the compressor.

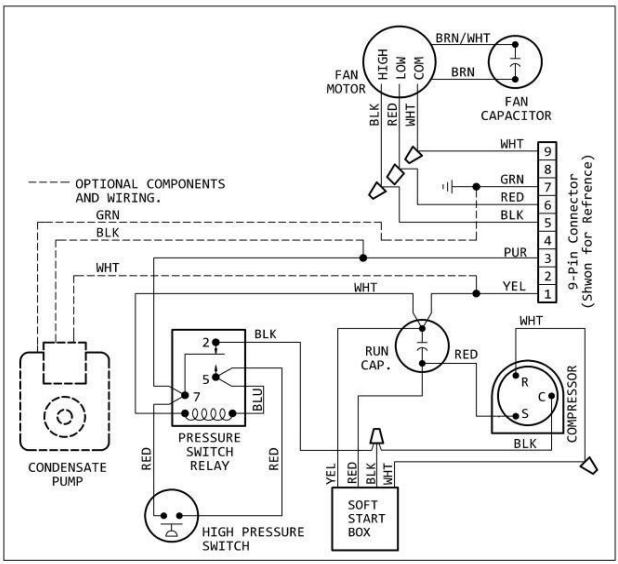
4.Locate the S port of the compressor and the C port interface of the operating capacitor, connect the S port and C port of the operating capacitor; connect the red wire of the soft starter to the C port interface of the operating capacitor.

5.Locate the "HERM" port of the operating capacitor, connect 2 interfaces to the yellow wire of the soft starter and input neutral wire (L wire) respectively.

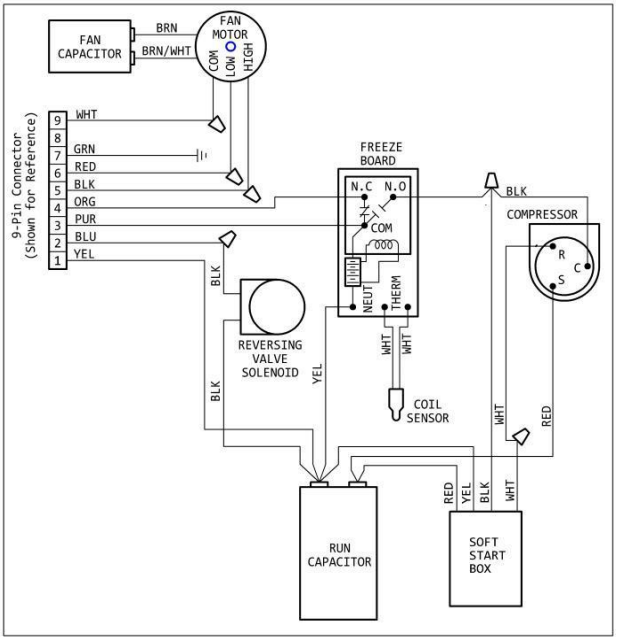
6.Use electrical tape to secure all wires. After installation, it is recommended to start the compressor with mains power 3-5 times first. The soft starter will learn and optimize startup parameters until the green light on work indicator is on, then use generator power.



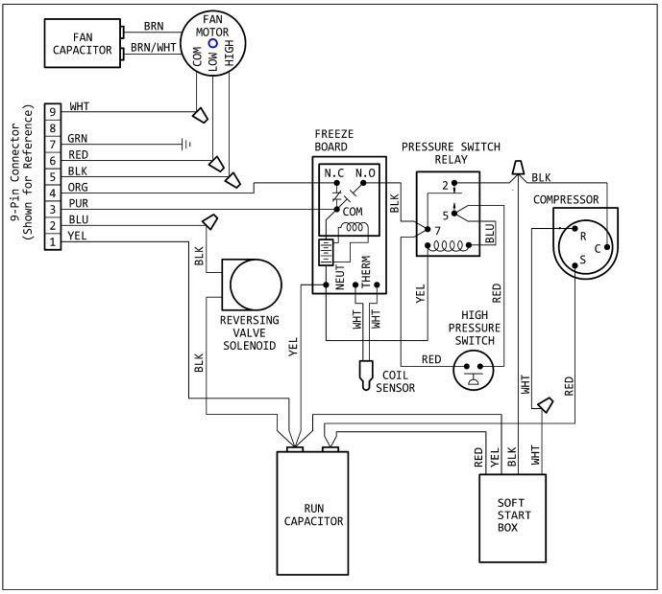
Air Conditioning Without
High Pressure Switch/Relay



Air Conditioning With
High Pressure Switch/Relay

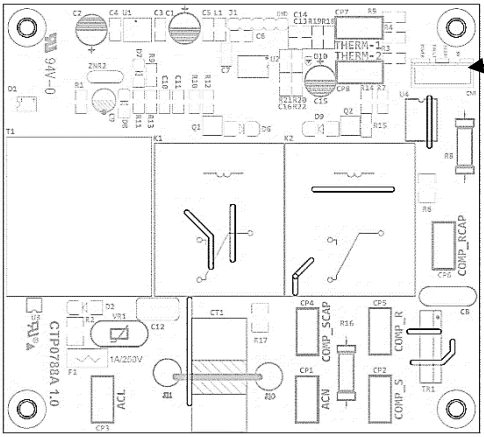


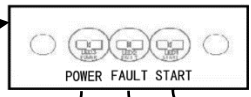
Heat Pump with Freeze Board
(NO Pressure Switch/Relay)



Heat Pump with Pressure Switch/Relay

VII. SOFT START LED OPERATION





When there is a call for the Compressor , the power LED light should be on (SOLID GREEN)

If the Compressor current is higher than 23 Amps , there will be 3 flashes per second (FAULT LED) and compressor will stop.

In order to equalize the pressure, there is a time delay in the soft start board (-5 minutes). During the time delay, the starting LED will be yellow.