

# INSTALLATION INSTRUCTIONS

## Winter Start Control

### NASA00201WS

**These instructions must be read and understood completely before attempting installation.**

#### Safety Considerations:

Installing and servicing of air conditioning equipment can be hazardous due to system pressure and electrical components. Only trained personnel should install or service air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils or cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on air conditioning equipment observe precautions in the literature and on tags and labels attached to the unit.

Follow all safety codes. Wear safety glasses and work gloves. Use a quenching cloth for brazing operations. Have a fire extinguisher available.

### Safety Labeling and Signal Words

#### DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

**DANGER** – Immediate hazards which **will** result in severe personal injury or death.

**WARNING** – Hazards or unsafe practices which **could** result in severe personal injury or death.

**CAUTION** – Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

**NOTE** – Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

#### Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:




#### Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

### INTRODUCTION

This instruction covers the installation of Winter Start Control Part No. NASA00201WS on split system single and two stage communicating capable air conditioners using standard thermostats and permanent split capacitor (PSC) outdoor fan motors.



**ELECTRICAL SHOCK HAZARD**

Failure to turn off electric power could result in personal injury or death.

Before installing or servicing system, turn off main power to the system. There may be more than one disconnect switch, including accessory heater(s).



**EXPLOSION HAZARD**

Failure to follow this warning could result in death, serious personal injury, and/or property damage.

Never use air or gases containing oxygen for leak testing or operating refrigerant compressors. Pressurized mixtures of air or gases containing oxygen can lead to an explosion.

## DESCRIPTION AND USAGE

Winter start control must be used where low evaporator temperatures, or nuisance tripping of low-pressure switch may be encountered. The Winter Start Control bypasses the low-pressure switch for the first 3 minutes of operation during each cycle.

Included in the kit are:

QTY	PART DESCRIPTION
1	Time – Delay Relay ( TDR ) CES0130062-00
1	Installation Instructions
1	13" ( 330 mm ) Blue ( tap ) Wire
1	13" ( 330 mm ) Yellow Wire
1	13" ( 330 mm ) Brown Wire
1	Insulated Tap Connector (HY89TC014)
3	Screws

## INSTALLATION

**For single and two stage outdoor units with communicating capable control boards.**

1. Mount the winter start control in outdoor control box using provided screws. If necessary mark and drill 1/8" diameter pilot holes.
2. Connect the following wires to the TDR: 1
  - 13" (330 mm) Yellow wire to T1 (24 VAC input)
  - 13" (330 mm) Brown wire to T3 (24 VAC common)
  - 13" (330 mm) Blue-tap wire to T2 (N.O.relay contact)
3. Secure the open end of Blue Tap wire to the insulated tap connector (see Fig. 2). To do this, simply butt the tap-wire against the wires top. Fold the top cover half over to meet the base. Squeeze on the top cover and base with ordinary pliers until the latch locks. DO NOT place pliers on top of the raised plastic flange.

4. Identify the LPS (low pressure switch) connector at the ODU circuit board, and identify the 24 vac LPS run-wire (or main lead) for the pressure switch. The LPS run-wire is different between circuit boards (see Fig. 3 and Fig. 4).

- Single stage communicating capable AC LPS run-wire is connected to pin #1 (see Fig. 3)
- Two stage communicating capable AC LPS run-wire is connected to pin #2 (middle pin) (see Fig. 4).

Secure the LPS run-wire by inserting the run-wire into the remaining open section of connector. (see Fig. 2). Fold the base over to meet the run-wire section. Squeeze on the base and run-wire section with ordinary pliers until the latch locks. DO NOT place pliers on top of the raised plastic flange.

5. Connect the open strip end of 13" (330 mm) Brown wire to (C) 24vac common side of the ODU and the thermostat field connections.
6. Connect the open strip end of 13" (330 mm) Yellow wire to (Y) single stage and (Y1) two stage 24vac side of the ODU and thermostat field connections

### Additional Instructions for Two Stage Communicating Capable AC Units

When the TDR in the circuit and allowing the low pressure switch to be bypassed but is closed, the outdoor transformer may be out of phase with the indoor transformer causing the ID or OD fuse to blow. To eliminate this possibility the outdoor transformer needs to be removed from the circuit. First remove the red and black wires from the transformer secondary that are attached to sec 1 and sec 2 on the control board. Then remove the black wire connected to the primary side of the transformer and the other side from 11 of the contactor. Since the transformer powers the outdoor control board and compressor solenoid a low voltage control wire will need to be connected from Ron the indoor to the UTIL terminal on the control board.

**NOTE:** The Winter Start Control time-delay logic is now wired in parallel with the out door unit low-pressure switch. When indoor thermostat calls, the TDR logic will energize (closing T1, T2) for approximately 3 minutes, the TDR logic will de-energize (opening T1, T2) and the LPS circuit is restored (see Fig. 1).

**Troubleshooting Upon Start-up** If the TDR does not energize, make sure LPS run and tap wires are not reversed (double check figures below). You can also apply 24 vac direct to T1 and T3 to verify that the TDR relay will energize.

