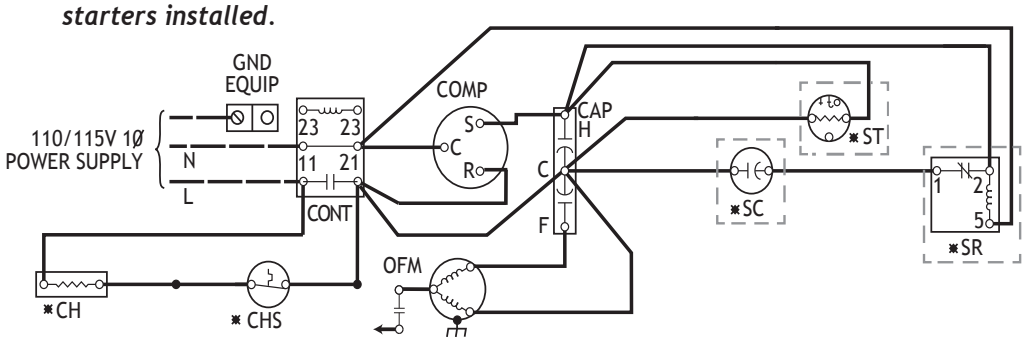
DISCONNECT ALL SUPPLY VOLTAGES BEFORE WORKING ON ANY EQUIPMENT.

Fig. 1
Conventional HVAC unit with other soft starters installed.

Sample Wiring Schematic



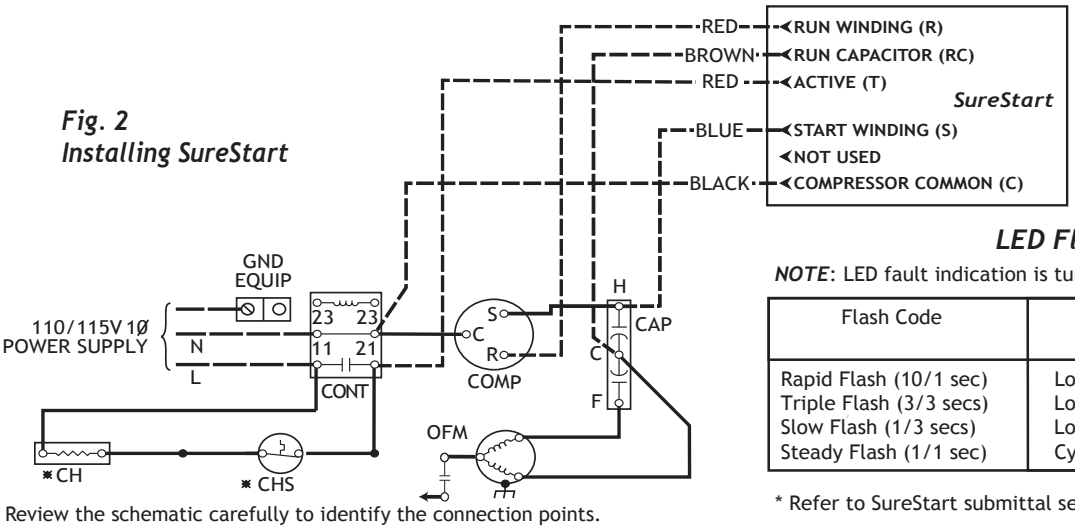
- LEGEND -

———	Factory Power Wiring
- - -	Field Power Wiring
———	Factory Control Wiring
------	Field Control Wiring
═══	Conductor On Circuit Board
○	Component Connection
▬	¼ in. Quick Connect Terminals
——○——	Junction
CAP	Capacitor (Dual Run)
*CH	Crankcase Heater
*CHS	Crankcase Heater Switch
COMP	Compressor
CTD	Compressor Time Delay
CONT	Contactor
CB	Circuit Board
OFM	Outdoor Fan Motor
* ST	Start Thermistor
* SR	Start Relay
* SC	Start Capacitor

NOTE: If installed, remove all of the above devices

* May be factory or field installed

Fig. 2
Installing SureStart



Review the schematic carefully to identify the connection points.

LED Flash Codes *

NOTE: LED fault indication is turned off in normal running mode.

Flash Code	Definition	Time to re-start attempt
Rapid Flash (10/1 sec)	Low Voltage	3 min
Triple Flash (3/3 secs)	Lockout on 3 failed starts	50 min
Slow Flash (1/3 secs)	Lockout on overcurrent	10 min
Steady Flash (1/1 sec)	Cycle delay / Faults	3 min

* Refer to SureStart submittal set for detailed flash code descriptions.

CAUTION: The Run Winding is not connected to the Run Capacitor. The Run Capacitor is usually 20 to 60 µF.

WARNING: 1) All voltage to equipment ***MUST*** be disconnected before removing any devices.
2) Allow 2 minutes to discharge run capacitor before disconnecting.
3) Prior to installation, be sure all start capacitors & start relays, along with hard-starters and/or any other related devices, are removed.
4) Do not swap the Run & Start Windings.
5) The start capacitor is built into the soft starter.
6) In accordance with UL508 standard, use the below tightening torques. Loose terminals can lead to heating & subsequent damage to the soft starter.
7) ***OPENING OF THE SOFT STARTER UNIT WILL VOID THE WARRANTY!***

FIELD WIRING TERMINALS:
Wire Range: 8 to 12 AWG Cu, stranded, for terminals (Run Winding (R) and Active(T))
12 to 16 AWG Cu, stranded, for terminals (Run Capacitor (RC), Start Winding (S), and Compressor/Motor Common (C), these are supplied)
Tightening Torque: 11.5 lbs-in large terminals, 4.5lbs-in small terminals.

Field wiring conductors shall be rated 167˚F [75˚C]
Minimum end use enclosure size: 10” x 8” x 6”
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 80A, or a time delay fuse rated 70A. The device does not provide current limiting control or equivalent.
SureStart is **NOT** an overcurrent protection device and must **NOT** be used as a replacement for any primary circuit overcurrent protection.

Hyper ENGINEERING
SureStart...Grid Not Required

Parts List

1 - SureStart Soft Starter
1 - Red Lead
1 - Blue Wire
1 - Black Wire
1 - Brown Wire
1 - Mounting Block
1 - Green Terminal

INSTRUCTION GUIDE

SureStart 110/115V HVAC Installation
For SureStart SS0x Series

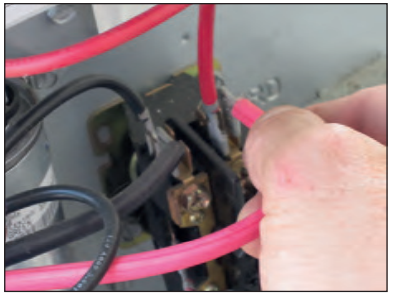
(Refer to the sample wiring schematic for all other applications)

IG5601EH 03/14

Typical HVAC Application

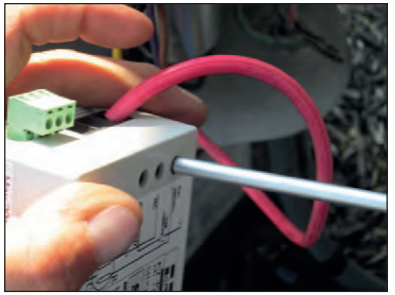
1) Disconnect all voltage to the HVAC equipment.

2) Secure the base for the SureStart inside control box.



3) Remove the compressor ***RUN WIRE*** from the contactor or ***RUN CAPACITOR TERMINAL***, as applicable.

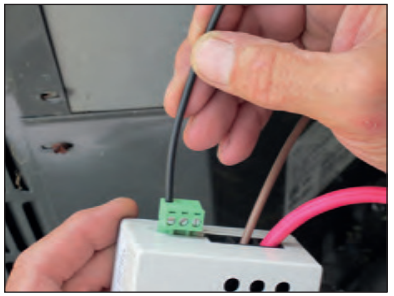
4) Strip the compressor ***RUN WIRE*** at least 1/2 in.



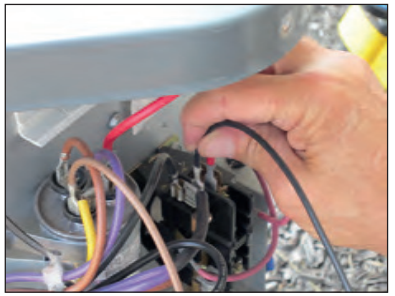
5) Attach the compressor ***RUN WIRE*** to the SureStart ***RUN WINDING*** terminal.

6) Attach the ***BROWN WIRE*** supplied with the SureStart to the ***RUN CAPACITOR TERMINAL*** on the Sure-Start.

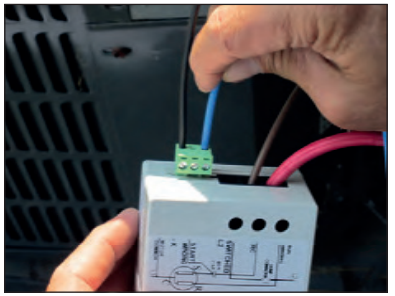
7) Identify the cable connecting the contactor and the ***RUN CAP***. Remove the connection to the ***RUN CAP***. Attach the flagged end of the ***BROWN WIRE*** the same terminal of the ***RUN CAP***. **



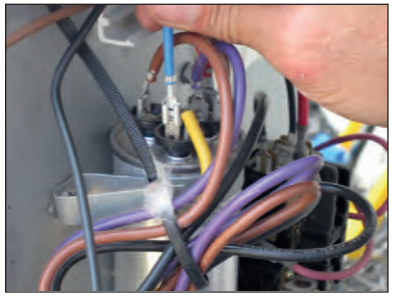
8) Attach the ***BLACK WIRE*** (supplied) to ***COMPRESSOR COMMON*** on the SureStart ***GREEN TERMINAL CONNECTOR***.



9) Attach the flagged end of the ***BLACK WIRE*** to the ***COMPRESSOR COMMON*** on the ***"T"*** side of the contactor.

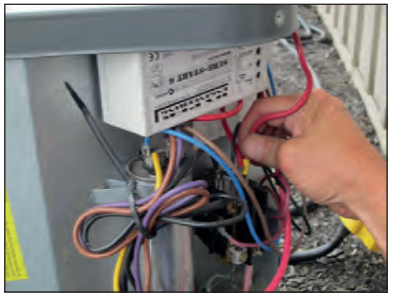


10) Attach the ***BLUE WIRE*** (supplied) to the ***START WINDING*** on the SureStart ***GREEN TERMINAL CONNECTOR***.



11) Attach the flagged end of the ***BLUE WIRE*** to the other terminal of the ***RUN CAPACITOR***. Ensure that this terminal on the capacitor also joins to the ***START WINDING*** of the compressor. (This is the Herm (H) terminal for Dual Compressor/Fan Capacitors.)

12) Attach the ***RED WIRE*** (supplied) to the ***ACTIVE TERMINAL*** on the SureStart.



13) Remove the loose wire (from step 7) from the ***ACTIVE*** input of the contactor and attach the stripped end of the ***ACTIVE WIRE*** in its place.

14) Apply power to the equipment and cycle to ensure proper operation.

In accordance with UL508 standard, use the following torque settings:
11.5lbs-in large terminals
4.5lbs-in small terminals

**(This is the Common (C) terminal for Dual Compressor/Fan Capacitors.)

NOTE: The SureStart device could take up to six (6) starts to optimize performance.