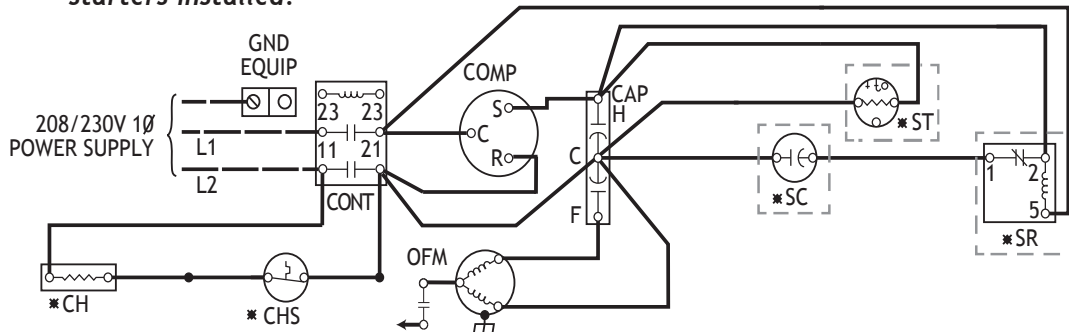


DISCONNECT ALL SUPPLY VOLTAGES BEFORE WORKING ON ANY EQUIPMENT.

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



Sample Wiring Schematic

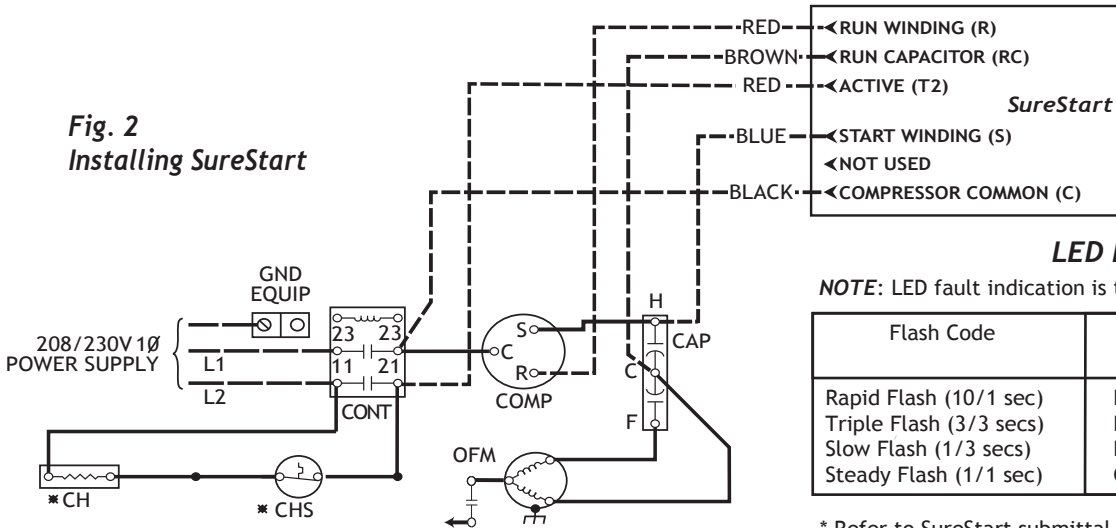
- LEGEND -

- Factory Power Wiring
- - - Field Power Wiring
- Factory Control Wiring
- - - Field Control Wiring
- Conductor On Circuit Board
- Component Connection
- 1/4 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



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.

Review the schematic carefully to identify the connection points.

CAUTION: The Run Winding is not connected to the Run Capacitor. The Run Capacitor is usually 40 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(T2))

12 to 16 AWG Cu, stranded, for terminals (Run Capacitor (RC), Start Winding (S), and Compressor/Motor Common (C), these are supplied)

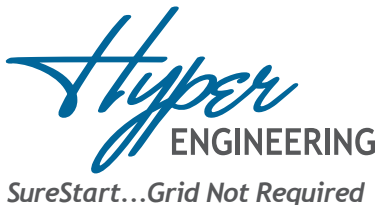
Tightening Torque: 11.5 lbs-in large terminals, 4.5lbs-in small terminals.

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.



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 208/230V HVAC Installation
For SureStart SS1x Series

IG5601EH 03/14

Typical HVAC Application



1) Disconnect all voltage to the HVAC equipment.



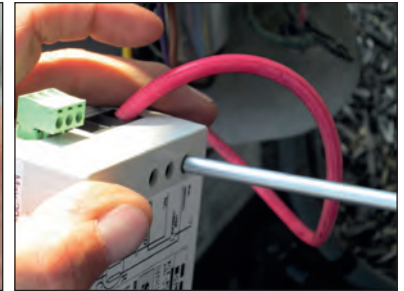
2) Secure the base for the SureStart inside control box.



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.



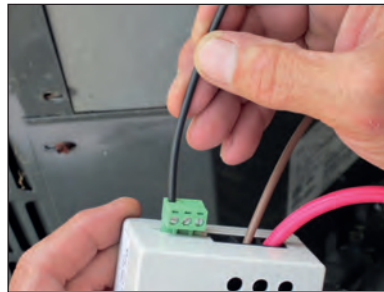
5) Attach the compressor **RUN WIRE** to the SureStart **RUN WINDING** terminal.



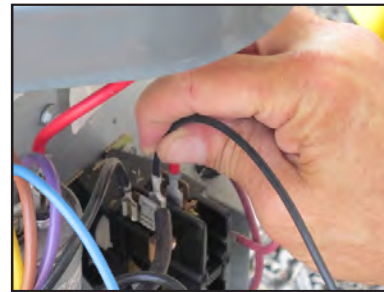
6) Attach the **BROWN WIRE** supplied with the SureStart to the **RUN CAPACITOR TERMINAL** on the SureStart.



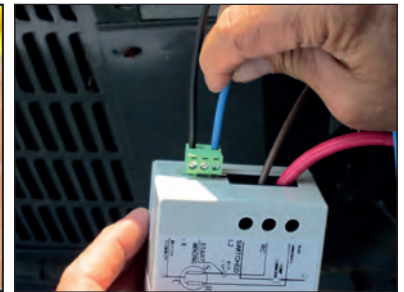
7) Identify the cable connecting the contactor and the **RUN CAP**. Remove the connection to the **RUN CAP**. Attach the flagged end of the **BROWN WIRE** the same terminal of the **RUN CAP**. **



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**.



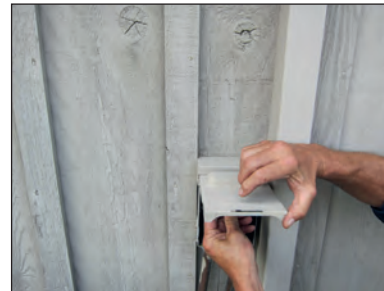
11) Attach the flagged end of the **BLUE WIRE** to the other terminal of the **RUN CAPACITOR**. Ensure that this terminal on the capacitor also joins to the **START WINDING** of the compressor. (This is the Herm (H) terminal for Dual Compressor/Fan Capacitors.)



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.