STC7D-W

Digital Time Clock for TRC500 & TRC800
Installation, Operation, and Maintenance Manual

READ AND SAVE THESE INSTRUCTIONS

The purpose of this manual is to aid in the proper installation and operation of fans manufactured by S&P. These instructions are intended to supplement good general practices and are not intended to cover detailed instruction procedures, because of the wide variety and types of fans manufactured by S&P.

Installation Instructions
STC7D-W

1. WARNINGS

READ AND SAVE THESE INSTRUCTIONS. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
2. Before installing, servicing or troubleshooting the transformer/relay package, switch power off at service panel and lock service panel to prevent power from being switched onaccidentally. CAUTION: more than one disconnect switch may be required to de-energize the equipment for servicing.
3. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. NEVER place a switch where it can be reached from a tub or shower.
6. Intended for use with 24VAC Class 2 power supplies only.
7. Do not connect loads that exceed the timer's switch rating.
8. Confirm sufficient 24VAC power is available to operate the timer and the connected loads.

2. SPECIFICATIONS

Operating Voltage	24VAC 50/60Hz
Switching	Single Pole, Single Throw [SPST] *(can be field-modified to Single Pole, Double Throw [SPDT])*
Power Consumption	3.5VA
Switch Rating	10 Amps at 131°F
Operating Temperature Range	14°F – 131°F
Connections (STC7D-W)	(3) 16 GA pigtails (wire nuts not provided)
Backup Power	Lithium battery with minimum 5-year reserve, 10-year projected life, not field-replaceable
Setting Options	• 8 pairs of on-off time of day cycles can be programmed. • Each on-off cycle can be assigned to any one day of the week, or to the following groups of days: • Monday – Friday; Monday – Saturday; Monday – Sunday; Saturday and Sunday. • Manual Over-ride provided by "On/Auto/Off" switch. • Program Reset button clears all settings.
Enclosure (STC7D-W)	Requires a 4" x 4" electrical box by others. Box must accommodate (4) mounting screws (see drawing). Minimum box depth 1.5". White wall plate and mounting screws provided.

Soler&Palau
Ventilation Group

Installation Instructions
STC7D-W

1. WARNINGS

READ AND SAVE THESE INSTRUCTIONS. FAILURE TO COMPLY WITH
INSTRUCTIONS COULD RESULT IN PERSONAL INJURY
AND/OR PROPERTY DAMAGE!

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
2. Before installing, servicing or troubleshooting the transformer/relay package, switch power off at service panel and lock service panel to prevent power from being switched on accidentally. CAUTION: more than one disconnect switch may be required to de-energize the equipment for servicing.
3. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. NEVER place a switch where it can be reached from a tub or shower.
6. Intended for use with 24VAC Class 2 power supplies only.
7. Do not connect loads that exceed the timer's switch rating.
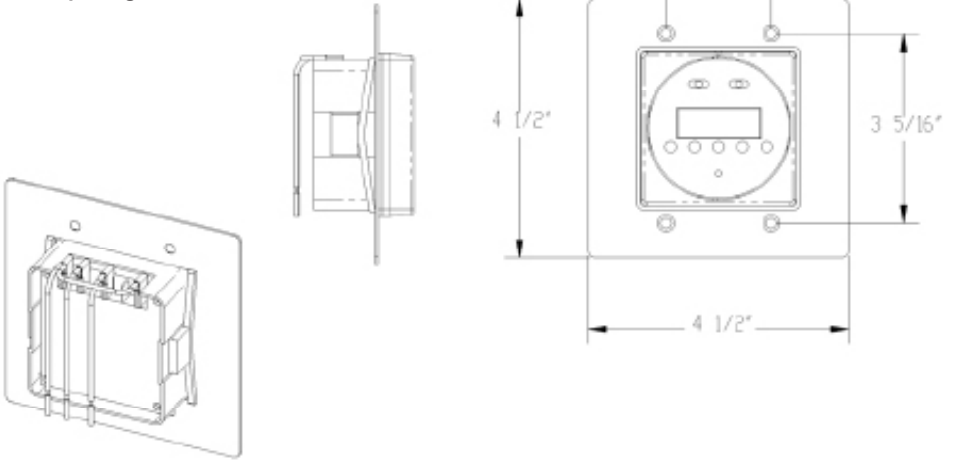8. Confirm sufficient 24VAC power is available to operate the timer and the connected loads.

2. SPECIFICATIONS

Operating Voltage	24VAC 50/60Hz
Switching	Single Pole, Single Throw [SPST] *(can be field-modified to Single Pole, Double Throw [SPDT])*
Power Consumption	3.5VA
Switch Rating	16 Amps at 131°F
Operating Temperature Range	32°F – 140°F
Connections (STC7D-W)	(3) 16 GA pigtails (wire nuts not provided)
Backup Power	Lithium battery with minimum 5-year reserve, 10-year projected life, not field-replaceable
Setting Options	• 16 pairs of on-off time of day cycles can be programmed. • Each on-off cycle can be assigned to any one day of the week, or to the following groups of days: • Monday – Friday; Monday – Saturday; Monday – Sunday; Saturday and Sunday. Monday-Wednesday; Thursday-Saturday; Monday/Wednesday/Friday; Tuesday/ Thursday/Saturday. • Manual Over-ride provided by "On/Auto/Off" switch. • Program Reset button clears all settings. First, using a small pointed object push the reset button to clear all settings. The reset button is just above the "MIN" dark gray button.
Enclosure (STC7D-W)	Requires a 4" x 4" electrical box by others. Box must accommodate (4) mounting screws (see drawing). Minimum box depth 1.5". White wall plate and mounting screws provided.

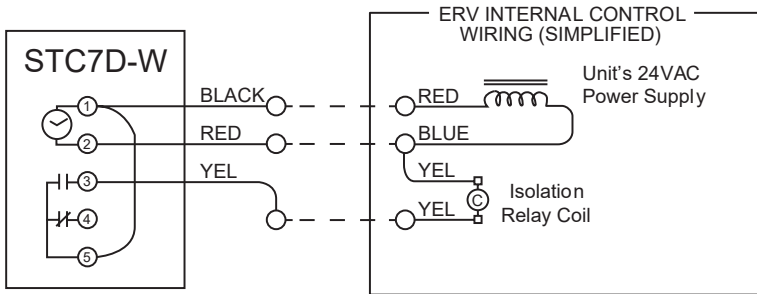Soler&Palau
Ventilation Group

3. DIMENSION DRAWINGS

Applicable to TRC500 and TRC800 models

STC7D-W showing plate dimensions and screw spacings.

CONNECTION DIAGRAM
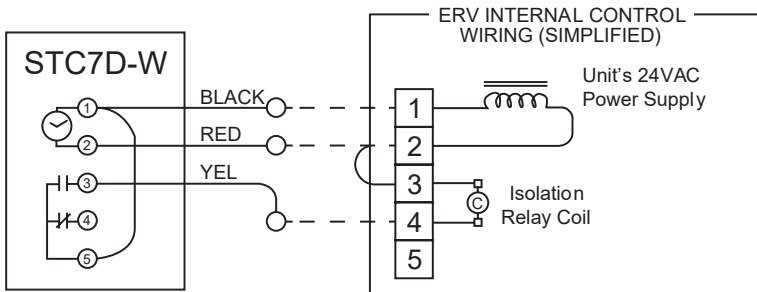
Applicable to TRC500 and TRC800 models

ERV INTERNAL CONTROL WIRING (SIMPLIFIED)

STC7D-W

BLACK
RED
YEL

RED
BLUE
YEL
YEL

Unit's 24VAC Power Supply

Isolation Relay Coil

The Normally Closed contacts of one or more additional Low Voltage Controls may be connected to ERV unit in parallel with the STC&D-W.

ERV INTERNAL CONTROL WIRING (SIMPLIFIED)

STC7D-W

BLACK
RED
YEL

Unit's 24VAC Power Supply

Isolation Relay Coil

The Normally Closed contacts of one or more additional Low Voltage Controls may be connected to ERV unit Terminals 1 & 4. Do not apply power to these terminals.

3

|	
Set Time and Day	Slide Set switch to ☉ press **1…7** button until arrow points to the correct day *(1=Monday)*. Press **h** then **m** buttons to set correct time. **PM** indicator shows noon to 11:59 PM. Slide **Set** switch to **Run**. Clock colon will blink.
Set Switch "On" Cycle	Slide **Set** switch to ⓟ. A **"1"** indicates the first switch cycle and a **"Bulb"** indicates a switch-on (circuit closes). Press **1…7** button until arrows point to selected day(s) for this cycle. Press **h** and **m** buttons to show switch-on time, noting **PM** indicator.
Set Switch "Off" Cycle	With **Set** switch at ⓟ, press ⓟ button, note switch cycle number changes to **"2"** and **Bulb** blinks, indicating switch-off (circuit opens). Press **1…7** button to match day(s) set for switch cycle **"1"**. Press **h** and **m** buttons to select switch-off time.
Autorun	Slide **Set** switch to **Run** and **Mode** switch to **Auto**, switching begins with next switch-on set time.
Override "On"	Slide **Mode** switch to **"I"**. Switch remains on indefinitely *(circuit closed).*
Override "Off"	Slide **Mode** switch to **"O"**. Switch remains on indefinitely *(circuit open).*
Skip Cycle	In automatic run mode, press **"x→"** button. The next calendar day is skipped.
Setting ERROR	If **EEE** appears, a setting error exists. The switch cycle number in error is shown. Slide set switch to ⓟ, press ⓟ button until **cycle** is shown, review this and the following setting to correct error, slide set switch to **Run.**
Clear any setting	Setting slide set switch to ⓟ, press ⓟ button to show switch cycle to clear. Press the ⓟ button and the skip **(x)** button simultaneously, hold for several seconds.
Clear All	To erase all settings, Press **"R"**.

3.   DIMENSION DRAWINGS
Applicable to TRC500 and TRC800 models

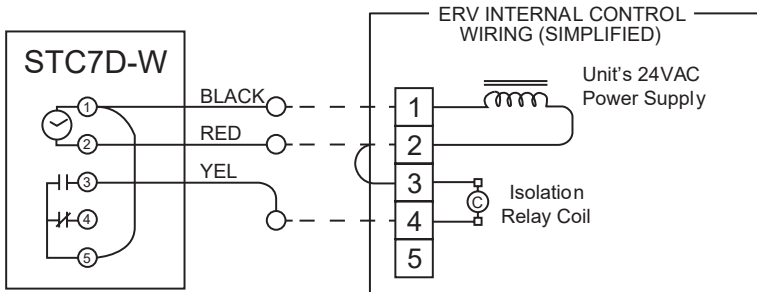**STC7D-W showing plate dimensions and screw spacings.**
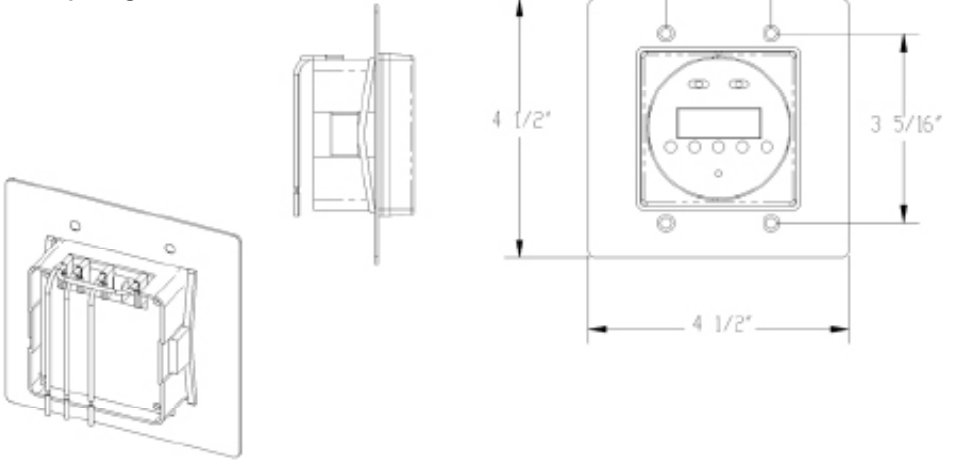
3.   CONNECTION DIAGRAM
Applicable to TRC500 and TRC800 models
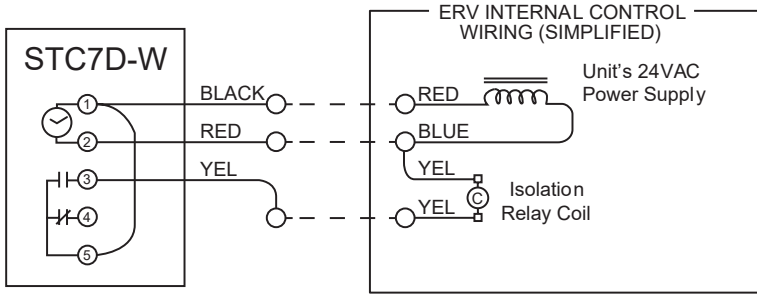
The Normally Closed contacts of one or more additional Low Voltage Controls may be connected to ERV unit in parallel with the STC&D-W.

The Normally Closed contacts of one or more additional Low Voltage Controls may be connected to ERV unit Terminals 1 & 4. Do not apply power to these terminals.

4. SETTING INSTRUCTIONS

Set Time and Day	Slide Set switch to ☉ press **1…7** button until arrow points to the correct day *(1=Monday)*. Press **h** then **m** buttons to set correct time. **PM** indicator shows noon to 11:59 PM. Slide **Set** switch to **Run**. Clock colon will blink.
Set Switch "On" Cycle	Slide **Set** switch to Ⓟ. A **"1"** indicates the first switch cycle and a **"Bulb"** indicates a switch-on (circuit closes). Press **1…7** button until arrows point to selected day(s) for this cycle. Press **h** and **m** buttons to show switch-on time, noting **PM** indicator.
Set Switch "Off" Cycle	With **Set** switch at Ⓟ, press Ⓟ button, note switch cycle number changes to **"2"** and **Bulb** blinks, indicating switch-off (circuit opens). Press **1…7** button to match day(s) set for switch cycle **"1"**. Press **h** and **m** buttons to select switch-off time.
Autorun	Slide **Set** switch to **Run** and **Mode** switch to **Auto**, switching begins with next switch-on set time.
Override "On"	Slide **Mode** switch to **"I"**. Switch remains on indefinitely *(circuit closed).*
Override "Off"	Slide **Mode** switch to **"O"**. Switch remains on indefinitely *(circuit open).*
Skip Cycle	In automatic run mode, press **"x→"** button. The next calendar day is skipped.
Setting ERROR	If **EEE** appears, a setting error exists. The switch cycle number in error is shown. Slide set switch to Ⓟ, press Ⓟ button until **cycle** is shown, review this and the following setting to correct error, slide set switch to **Run.**
Clear any setting	Setting slide set switch to Ⓟ, press Ⓟ button to show switch cycle to clear. Press the Ⓟ button and the skip **(x)** button simultaneously, hold for several seconds.
Clear All	To erase all settings, Press **"R"**.

2.0 SETTINGS

2.1 SETTING INSTRUCTIONS

SETTING THE CLOCK:

- Press and hold the CL OCK button.
- Press the DAY key until the correct day is displayed.
- Do the same with the HOUR and MIN. Now the clock is set!

SETTING THE TIMER:

Press the "DAY" key to scroll through these settings.

	MON	TUE	WED	THU	FRI	SAT	SUN
1.	X	X	X	X	X	X	X
2.	X						
3.		X					
4.			X				
5.				X			
6.					X		
7.						X	
8.							X
9.	X	X	X	X	X		
10.						X	X
11.	X	X	X	X	X	X	
12.	X	X	X				
13.				X	X	X	
14.	X		X		X		
15.		X		X		X	

These can be used to simplify programming. All times must be the same for the days chosen! Let us say you want to run a device Monday through Friday at the same time. Scroll down to #9 and you will have the days set!

Press the "TIMER" key and the display will show "1°N--:--___ " set the time you want the unit to turn on by pressing the "HOUR" and "MIN" buttons respectively. To set the turn off time, press the "TIMER" key again and "1OFF --:--___ " will show in the display. Again, set the "HOUR" and "MIN" time. If you want more than 1 on/off per day, press the "TIMER" key again and set "2°N--:--___ ," "2°FF --:--___ " until you reach the maximum of 8 on/off's per day.

The timer is now set, but you need to push the "MANUAL" button until the line is under "AUTO." If you only want 1 on/off per day or if you have more on/off's per day, when you are done programming them in, press the "CLOCK" key again and you are almost done.

Reset the setting: If you wish to change any or all on/off times, you must reset the timer. You cannot change just one setting.

Clear all: To erase all settings, Press the® button.

Soler&Palau
Ventilation Group

Operation Modes:

There are three operation modes: "ON," "AUTO," and "OFF"; selected through the "MANUAL" key.

When the "MANUAL" key is pressed, observe that the indicator (line) on the screen moves upon the words.

- MODE ON: When the indicator is on "ON," the output turns on immediately and keeps this status while in "ON" mode.

- MODE OFF: When the indicator is on "OFF," the output turns off immediately and keeps this status while in "OFF" mode.

- MODE AUTO: When the indicator is on "AUTO," the output turn on and turn off based on the programs.

When the timer is not powered, it turns off the output permanently.
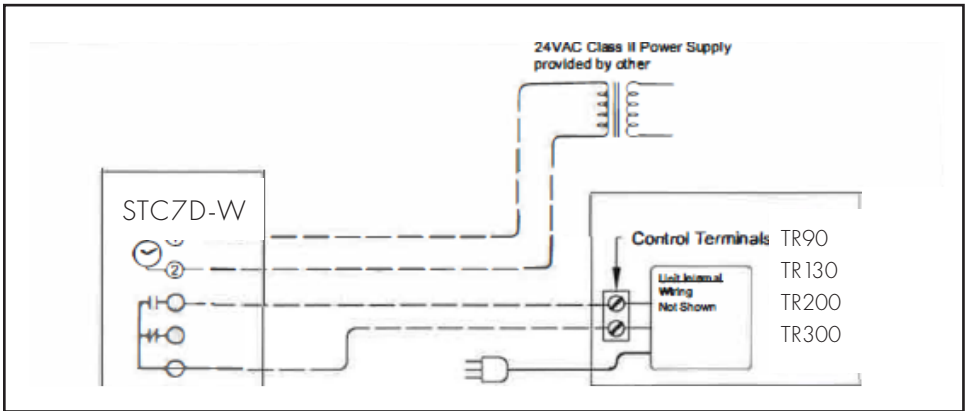
3.0 ELECTRICAL
3.1 ELECTRICAL SCHEMATICS

FIGURE 3.1.0 TR90, TR130, TR200 AND TR300 STANDARD WIRING SCHEMATIC

3. DIMENSION DRAWINGS
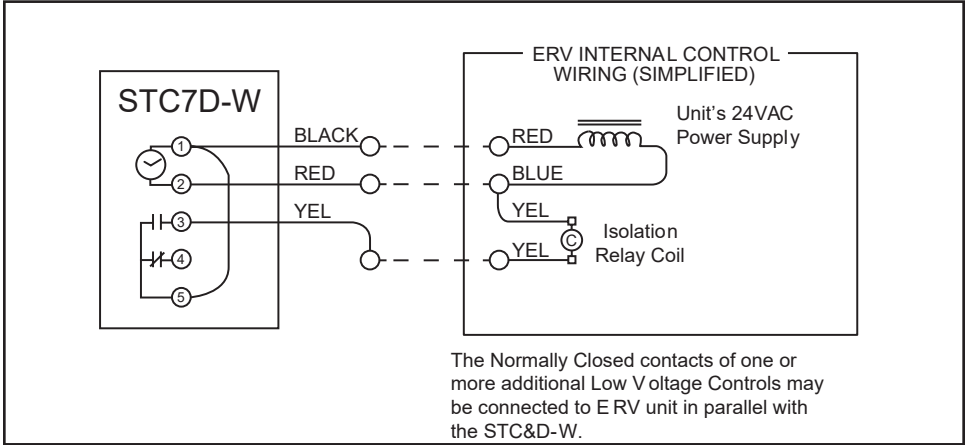
Applicable to TRC500 and TRC800 models

ERV INTERNAL CONTROL WIRING (SIMPLIFIED)

STC7D-W

BLACK — RED — Unit's 24VAC Power Supply
RED — BLUE
YEL — YEL — Isolation Relay Coil
YEL

The Normally Closed contacts of one or more additional Low Voltage Controls may be connected to ERV unit in parallel with the STC&D-W.

FIGURE 3.1.1 TRC500, TRC800, AND TRC1200 STANDARD WIRING SCHEMATIC

ERV INTERNAL CONTROL WIRING (SIMPLIFIED)

STC7D-W

BLACK — 1 — Unit's 24VAC Power Supply
RED — 2
YEL — 3 — Isolation Relay Coil or Damper Actuator Coil
4
5

The Normally Closed (N.C) contacts of one or more additional Low Voltage Controls may be connected to ERV unit's Terminals 1 & 4. Do not apply power to these terminals.
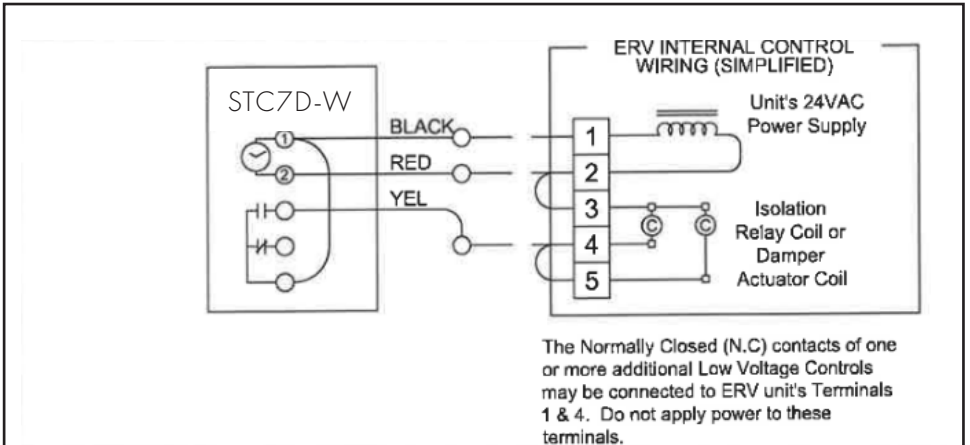
FIGURE 3.1.2 TRCe800AND TRCe1200 WITH TERMINAL BLOCK SCHEMATIC

Soler&Palau
Ventilation Group

Operation Modes:

There are three operation modes: "ON," "AUTO," and "OFF"; selected through the "MANUAL" key.

When the "MANUAL" key is pressed, observe that the indicator (line) on the screen moves upon the words.

- MODE ON: When the indicator is on "ON," the output turns on immediately and keeps this status while in "ON" mode.

- MODE OFF: When the indicator is on "OFF," the output turns off immediately and keeps this status while in "OFF" mode.

- MODE AUTO: When the indicator is on "AUTO," the output turn on and turn off based on the programs.

When the timer is not powered, it turns off the output permanently.
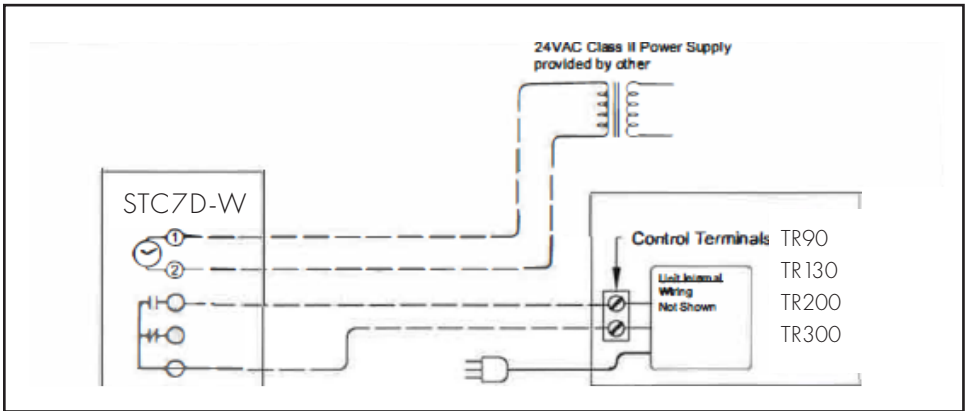
3.0 ELECTRICAL
3.1 ELECTRICAL SCHEMATICS

FIGURE 3.1.3 TR90, TR130, TR200 AND TR300 STANDARD WIRING SCHEMATIC