

INSTALLATION INSTRUCTIONS

SC90-Z REMOTE DIGITAL DISPLAY

APPLICATION

The SC90-Z Remote Digital Display is designed to operate in conjunction with SC90-C and SC90-D ON/OFF differential temperature controllers. The SC90-Z provides continuous "real time" indication of up to seven (7) different temperatures. The LCD display indicates temperatures from 0°F to 212°F. Temperatures lower than 0°F will be displayed as 000 and temperatures higher than 212°F will be displayed as 888. (Centigrade models are also available.)

OPERATION

Temperature indications are obtained by depressing the appropriate button on the display. The SC90-Z will continuously monitor and display the temperatures corresponding to the locations selected by the depressed buttons.

Standard SC90-Z displays are available in four input models with the following push button positions:

COLLECTOR

STORAGE

AUXILIARY 1

AUXILIARY 2

Directly beneath the display window is a yellow light which illuminates whenever the output relay of the SC90 controller is energized. During daylight hours, illumination of this light indicates the solar system collecting solar heat. During night time hours or cloudy and cold days, illumination of the light indicates the solar system is providing "recirculation freeze protection". Only recirculation type systems will cause illumination of the yellow light during non-solar collecting periods.

DISPLAY MOUNTING

The SC90-Z must be installed by a trained and experienced service technician and installed in accordance with NEC and local codes.

The SC90-Z is designed for wall mounting. As shown in figure 1, the SC90-Z has a combination mounting subbase and terminal wiring base which mounts directly to a wall via three mounting screws. Select a wall location that easily permits the running of power supply and sensor wires through inner wall spaces. The subbase of the SC90-Z is provided with a wire insertion hole which permits insertion of wiring from the back side of the subbase.

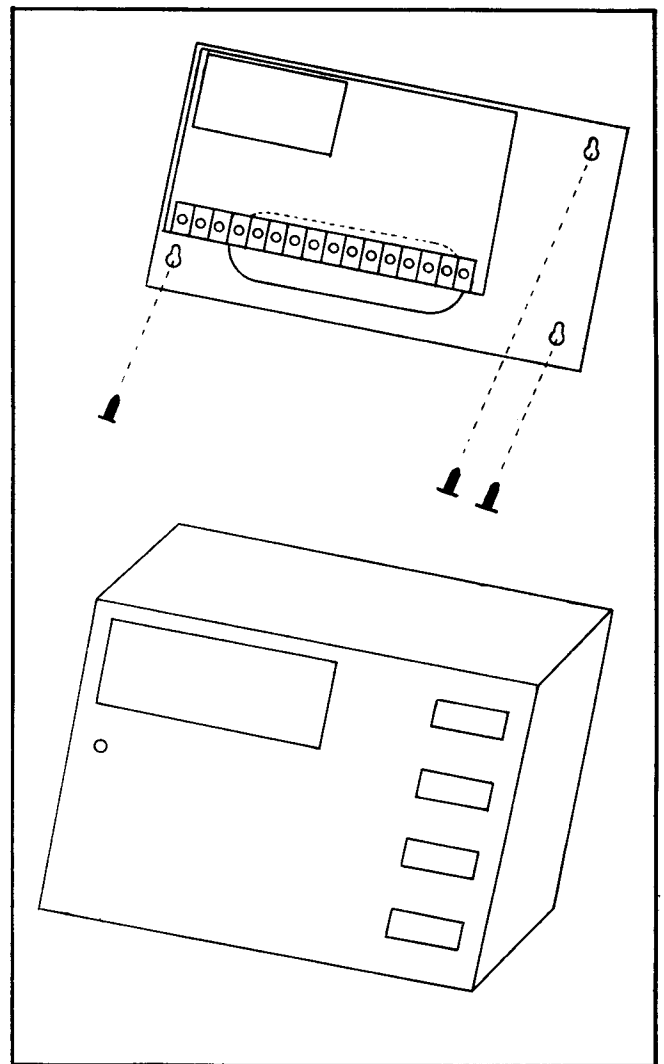


Fig. 1 SC90-Z Mounting Diagram

DISPLAY WIRING

Insure all power to the SC90-C or SC90-D controller is disconnected before making wiring connections to the SC90-Z remote display.

IMPORTANT

Insure the orange-striped plug-in resistor bank found in the lower left portion of the SC90 controller circuit board is removed from its socket and discarded before making wiring connections to the display. Failure to remove this resistor bank will result in improper operation of the solar system.

When making wiring connections to the SC90-Z remote display, insure the following guidelines are followed:

1. Wiring connections between the display and controller must follow the terminal to terminal polarity shown below i.e. (+) wired to (+) and (-) wired to (-).
2. 22 Ga. or larger twisted pair wire is recommended for sensor inputs to the display.
3. Insure both the SC90-Z display and SC90 controller use the same sensor type. (See IMPORTANT note below.)

IMPORTANT

Both SC90-Z display and SC90-C and SC90-D controllers are available in 3K and 10K sensor input models. The second set of numerals in the controller and display model number identify the type of sensor required.

EXAMPLE:

SC90-Z 0304

Indicates a display requiring 3K type sensors.

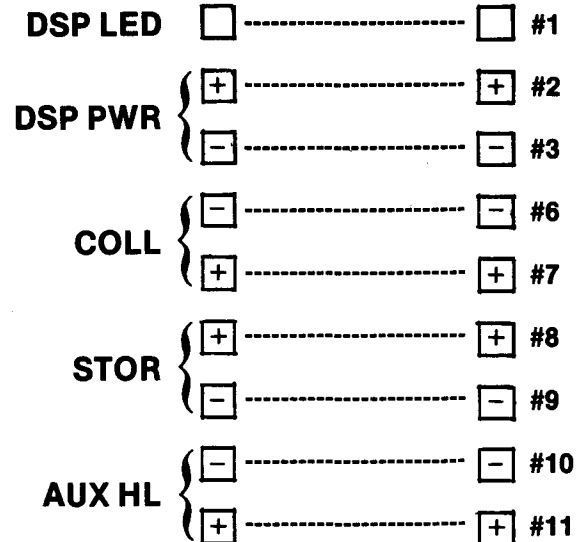
SC90-Z 1004

Indicates a display requiring 10K type sensors.

The SC90-Z remote display obtains power and three temperature inputs directly from the SC90 controller. Wiring connections between the remote display and controller must be completed as shown.

NOTE: Numbering of display terminals is not complete. Terminal numbering is left to right, I-17.

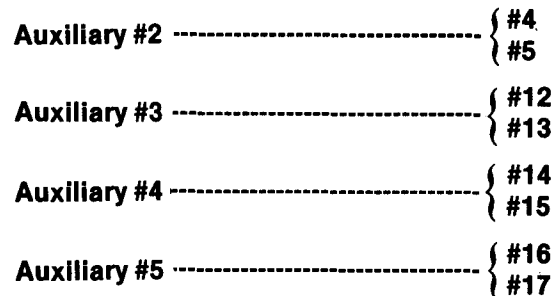
CONTROLLER TERMINALS DISPLAY TERMINALS



SC90-Z displays are available in 4 to 7 temperature display models. The following display terminals are not connected to the SC90 controller. The wiring connections shown below are made between the display and up to four (4) separate auxiliary sensors.

SENSORS

DISPLAY TERMINALS



TROUBLE SHOOTING AND SERVICE

The SC90-Z remote display is not field serviceable. The circuit board and switch assembly are field replaceable without removing the mounting subbase from the wall. The switch assembly is detached from the subbase by removing two mounting screws found on the upper and lower portion of the switch mounting bracket. The circuit board is detached from the subbase by squeezing together three plastic holding brackets found on the right hand side and lower left corner of the circuit board. The plastic holding brackets should be squeezed together from the top side of the circuit board and the board lifted off.



DYNATECH ENERGY CONTROLS

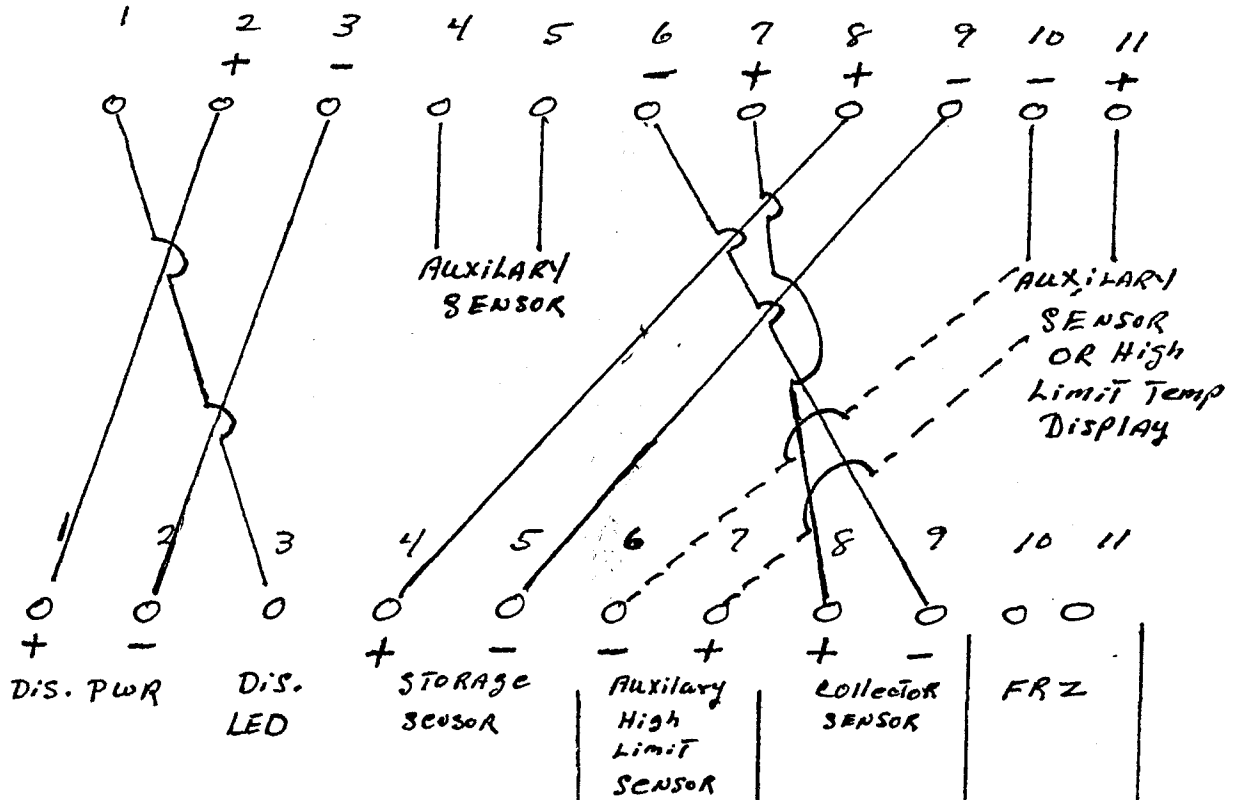
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FORM #100263 112

REMOTE
READOUT

CONTROL



DYNATECH WIRING GUIDELINES

CAN BE
USED IF
UNIT IS
EQUIPPED
WITH
3 PIN
SELECTOR
SHL
AHL

CAN BE
USED IF
UNIT IS
EQUIPPED
WITH #
RY2
RELAY

MAY BE
CONNECTED
TO REMOTE
READOUT
IF WIRED
AS
INDICATED