

### 3K SOLAR CONTROLS

The Model QC-1 has provisions for testing solar controls that use 3K ohm sensors. To test these controls, the serviceman connects the control sensor leads (Storage and Collector) to the terminals located on the side of the QC-1. It is not necessary to observe polarity of the sensor leads. Connect the control storage sensor pair to the QC-1 "Storage" terminals and the collector leads to the QC-1 "Collector" terminals.

**IMPORTANT:** The QC-1 test cable/fanning strip is not used for any of the following tests. Be sure to dress the fanning strip terminals away from live exposed control terminals.

#### DIFFERENTIAL TEST

**QC-1 SETUP:** Connect QC1 as described above.  
"TEST" switch-----"DIFFERENTIAL"  
"MODEL" switch -----"C30/C35"

**CONTROL SETUP:** If the control has a mode switch, place the switch in the "AUTO" position. Turn on primary AC power to the control.

Verify that the control power indicator is illuminated (if applicable).

**ADJUST THE QC-1:** "DIFFERENTIAL" knob.

Verify that the control output turns on and off when the on/off differential thresholds are reached. Be sure to use the BLUE scale markings (for 3K controls). A major deviation in the specified differential thresholds indicates a control problem.

#### HIGH LIMIT TEST

If the control has a built in storage high temperature limit (ie the control output turns off when the "Storage" sensor temperature is above the high limit threshold) use the following test to check its operation.

**QC-1 SETUP:** Connect QC1 as for differential test above.  
"TEST" switch-----"HIGH LIMIT" (select blue scale)  
"MODEL" switch -----"C30/C35"

**CONTROL SETUP:** If the control has a mode switch, place the switch in the "AUTO" position. Turn on primary AC power to the control.

Adjust the QC-1 "High Limit" knob and verify that the control output turns off when the control high limit setpoint is reached. The QC-1 scale should approximate the control high limit setpoint. A major deviation in the turn off point indicates a control problem.