A. CALIBRATION PROCEDURES

1. SET UP

a) MAIN POWER ON-OFF SWITCH: ON (AMBER INDICATOR ON)
b) MODULE POWER ON-OFF SWITCH: OFF
c) INSERT SMP OR CMP CONTROLLER TO BE CALIBRATED INTO THE LEFTHAND TEST SLOT.
d) MODULE VOLTAGE SELECTOR SWITCH: SET TO INDICATED MODULE LINE OPERATING VOLTAGE.
e) GFI SWITCH: NORMAL
f) OPEN TC SWITCH: NORMAL
g) REV TC SWITCH: NORMAL
h) TC SIMULATION TEMP SET SELECTOR: F 32°C/C 0°C
i) ZONE SELECT: 00

SMP/CMP CONTROLLER SETTINGS (SEE DIAGRAM 7)

a) NORMAL/STEPSTART SWITCH: NORMAL (LEFTHAND) POSITION
b) AUTO/MANUAL SWITCH: AUTOMATIC (PUSHED IN) POSITION
c) SETPOINT DIGITAL SWITCH: 000
d) AC ON/OFF POWER SWITCH: OFF
2. PROCEDURES

a) MODULE POWER ON/OFF SWITCH: ON (RED INDICATOR ON)

SMP/CMP (SEE DIAGRAM 7)

a) AC POWER ON/OFF SWITCH: ON

b) LED INDICATIONS:
   "MANUAL CONTROL ON" LED: OFF
   "BROKEN THERMOCOUPL e WARNING" LED: OFF
   "GROUND FAULT WARNING" LED: OFF
   "REMOTE CONTROL ON" LED (CMP ONLY): OFF
   "AC POWER" LED: ON

IGNORE ANY BLINKING LED INDICATORS AT THIS TIME.

3. METER ZERO ADJUSTMENT

a) CAREFULLY PLACE A TEMPORARY WIRE JUMPER FROM POINT 5 TO POINT 6 ON THE TOP SIDE OF THE SMP/CMP MODULE (SEE DIAGRAM 8)

b) SLOWLY ADJUST POTentiOMETER R72 ON THE SMP/CMP CIRCUIT BOARD (SEE DIAGRAM 9) TO CENTER THE POINT ON THE DEVIATION METER.

c) CAREFULLY REMOVE THE JUMPER.

DIAGRAM 8
SMP/CMP JUMPER LOCATIONS
4. THERMOCOUPLE AMPLIFIER CALIBRATION

INITIAL SETTINGS:
a) CENTER POTENTIOMETER R19 AND R24 (SEE DIAGRAM 9) WITHIN THEIR ROTATIONAL RANGE.

LOW TEMPERATURE CALIBRATION
a) SET SMP/CMP SETPOINT DIGITAL SWITCH TO 200°F (100°C FOR CELSIUS UNITS).
b) TC SIMULATION TEMPERATURE SET TO 200°F (100°C FOR CELSIUS UNITS).
c) ADJUST POTENTIOMETER R19 (SEE DIAGRAM 9) TO CENTER THE POINTER ON THE SMP/CMP DEVIATION METER.

HIGH TEMPERATURE CALIBRATION
a) SET SMP/CMP SETPOINT DIGITAL SWITCH TO 800°F (425°C FOR CELSIUS UNITS).
b) SET TC SIMULATION TEMPERATURE SET TO 800°F (425°C FOR CELSIUS UNITS).
c) ADJUST POTENTIOMETER R24 (SEE DIAGRAM 9) TO CENTER THE POINTER ON THE SMP/CMP DEVIATION METER.

REPEAT STEPS a) - c) in the LOW TEMPERATURE and HIGH TEMPERATURE CALIBRATION areas above until no further adjustments are necessary.

5. METER DEAD BAND TEST
   a) SET SMP/CMP SETPOINT DIGITAL SWITCH TO 400°F (200°C FOR CELSIUS UNITS).
   b) SET TC SIMULATION TEMPERATURE SET TO 400°F (200°C FOR CELSIUS UNITS).
   c) INCREASE SMP/CMP SETPOINT DIGITAL SWITCH BY 100°F AND RETURN TO THE PREVIOUS SETTING. THE DEVIATION METER SHOULD INDICATE WITHIN 2°F (1°C FOR CELSIUS UNITS) OFF-CENTER.
   d) DECREASE SMP/CMP SETPOINT DIGITAL SWITCH BY 100°F AND RETURN TO THE PREVIOUS SETTING. THE DEVIATION METER SHOULD INDICATE WITHIN 2°F (1°C FOR CELSIUS UNITS) OFF-CENTER.