1. GENERAL INFORMATION

1.1 DESCRIPTION

The Transmation Model 1064P Thermocouple Calibrator is a dual-function, hand-held digital temperature indicator and calibrator designed to simulate and/or measure four thermocouple types: J, K, T and E.

The measured or simulated temperature is indicated directly in °C or °F on the liquid crystal display. Thermocouple type, temperature scale and mode of operation are selected by means of front-panel switches.

The Model 1064P is calibrated directly in °C or °F with a millivolt-to-temperature conformance of 1°. A single pair of input terminals with a built-in thermal sensor serves all input types, eliminating thermocouple materials from within the instrument and making precise factory calibration to established thermocouple tables possible. Input signals are automatically linearized per NBS Monograph 125.

For thermocouple signal simulation, the Model 1064P generates a cold-junction compensated millivolt output that is the equivalent of the indicated temperature.

Power is provided by a 9V alkaline battery. Sealed switches and a gasketed housing insure reliability in harsh industrial environments.

1.2 SPECIFICATIONS

Unless otherwise indicated, all specifications are referred to an ambient temperature of 25°C ± 1°C (77°F ± 2°F).

1.2.1 INPUT:

TYPES	RANGES	
J	-200°C to 1200°C	-350°F to 2190°F
K	-200°C to 1370°C	-350°F to 2500°F
T	-200°C to 400°C	-350°F to 750°F
E	-200°C to 1000°C	-350°F to 1830°F

1.2.2 CALIBRATED ACCURACY: ±1° C or F, ±1 Least Significant Digit

1.2.3 RESOLUTION: ±1° C or F

1.2.4 REPEATABILITY: ±1 Least Significant Digit

1.2.5 INPUT IMPEDANCE: 10 megohms minimum

1.2.6 NORMAL MODE REJECTION: 50 dB minimum @ 50/60 Hz

1.2.7 INPUT BIAS CURRENT: 5 nA maximum

1.2.8 MAXIMUM NORMAL MODE VOLTAGE: 125V RMS

1.2.9 MAXIMUM COMMON MODE VOLTAGE: 500V RMS

1.2.10 OUTPUT: Linearized, cold-junction compensated mV equivalent of input temperature ranges

1.2.11 OUTPUT IMPEDANCE:
T/C Type J, K, T: 80 ohms maximum
T/C Type E: 90 ohms maximum

1.2.12 UPDATE RATE: 3 readings per second

1.2.13 RECOMMENDED AMBIENT TEMPERATURE: 4°C to 50°C (40°F to 122°F)

1.2.14 STORAGE TEMPERATURE: -40°C to 50°C (-40°F to 122°F)

1.2.15 TEMPERATURE EFFECT:
Cold Junction: ±0.025°/degree
Zero Drift: ±1 uV/°C
Reading Error: ±0.01%/°C

1.2.16 WARM-UP TIME TO RATED ACCURACY: 15 seconds maximum

1.2.17 POWER REQUIREMENTS: 9V alkaline transistor battery (NEDA Type 1604)

1.2.18 BATTERY VOLTAGE EFFECT: Negligible until "LOW BAT" indicated on display

1.2.19 BATTERY LIFE: 1 month typical (48 hours continuous operation)

1.2.20 DIMENSIONS (HWD): 21 cm x 11.4 cm x 7 cm (8.25" x 4.5" x 2.75")

1.2.21 WEIGHT: 1.13 kg (2.5 lbs.)

1.3 UNPACKING

It is recommended that all packing materials be retained in the event the instrument must be returned to the factory. The Model 1064P is shipped in its leather carrying case and is equipped with a 9V alkaline battery.

1.4 RECOMMENDED SPARE PARTS LIST

PART NO.	DESCRIPTION
100780-052	Binding Post Assembly
759550-006	Battery, 9V Alkaline (NEDA Type 1604)
100001-018	Function Switch Knob
100001-019	Output Adjust Knob
100740-207	Liquid Crystal Display
759007-034	I/O and Class-of-Service Select Switch
759007-050	Temperature Units Select Switch
759995-010	Carrying Case
100787-900	Instruction Manual

NOTE:

When ordering spare or replacement parts for an instrument, please specify the model and serial number.