TP04310A

Mobile Temperature System for testing components, hybrids, parts, modules, subassemblies and printed circuit boards at precise temperature

**TEMPERATURE PERFORMANCE AND AIRFLOW CAPACITY**

**Temperature Range:**
- -80° to +225°C (60 Hz System)
- -75° to +225°C (50 Hz System)

**Typical Temperature Transition Rate (air):**
- -55° to +125°C: approximately 10 seconds or less
- +125° to -55°C: approximately 10 seconds or less

**System air flow output:**
2.4 to 9 liters/second (5 to 18 scfm) CONTINUOUS

**Temperature accuracy:**
1.0°C (when calibrated against NIST transfer standard)

**Temperature set, display and resolution:** ± 0.1°C

**Temperature Control:**
- **DUT Sensor Ports:** Type T and Type K Thermocouple ports standard
- **DUT Control:** Control to within ± 0.1°C; SELF-TUNING available in DUT Control

**Remote interface ports:**
IEEE-488, RS232C Serial, and Start Test/End of Test/Stop on First Fail (ST/ET/SFF)

1. Note: Ultimate low temperature and system performance may vary under operating conditions less than or greater than nominal.
2. Note: Transition performed under nominal operating conditions.
3. Note: Low temperature extremes can be achieved at reduced airflow rates.

**USER FEATURES**

**Modes of Operation:**
Two: Manual and Program Modes

**Test set-up configurations:**
12 Manual Mode test programs and 12 Program Mode test programs may be created

**Test set-up storage:**
11 Manual Mode test programs, 11 Program Mode test programs and 11 affiliated “Define Parameters” test set-ups can be stored for later recall.

**Ramp/soak/cycle configurations:**
In Program Mode, up to 12 sequences per test set-up; table is displayed on-screen

**DUT temperature control:**
Patented Dual Loop Temperature Control

**Status indicators:**
Real-time status displayed on-screen and via remote interface

**Purge flow tester interface protection:**
Dry air purge protects tester electronics from condensation

**Purge flow capacity:**
0.25 to 1.5 liters per second (0.5 to 3 scfm) airflow

**Calibration:**
Automated, simplified and accurate for all airflows and DUT types

**Thermal head raising and lowering:**
Pneumatic control on thermal head, operated manually or via remote interface

**Head positioner movement:**
Manual locking (4 locks), 360° head rotation; head can be manually pivoted, turned, tilted and vertically swung for ease of interface at tester site.

**Manipulator (arm) movement:**
Motorized raising and lowering of arm; 330° positioning range around the base unit

*Note: US Patent no. 4,734,872*
Model TP04310A
ThermoStream®
System Specifications

ENVIRONMENTAL AND SAFETY FEATURES

Over-Temperature Protection +235°C (factory-set) (Also uses user-settable high and low air temperature limit)

Mobility 4 swivel caster wheels with locks (10.16 cm (4 inch) diameter, static dissipative); rear handle for ease of transport

Refrigerants HCFC-free and CFC-free, non-toxic, non-flammable

Noise level <65 dBA approximately

Serviceability Field-replacement modules and printed circuit boards

Weights and Dimensions
Base: Width: 61.0 cm (24 in.) Depth: 71.1 cm (28 in.); Height: 108 cm (42.5 in.);
System weight: 236 kg (520 lbs); Packed: 365 kg (805 lbs)

Maximum operating height 130.3 cm (51.25 in.) approximately

Minimum operating height 69.9 cm (27.5 in.) approximately

(An additional 20.3 cm (8 in.) rear clearance is required for supply connections and cabinet ventilation.)

FACILITY REQUIREMENTS

Power Requirements
200-250 VAC (230V nominal),
50 Hz, 30 amp, 1 phase
200-250 VAC (230V nominal),
60 Hz, 30 amp, 1 phase

Compressed Air Requirements
Clean, Dry Air Filtered to 5 micron particulate contamination
Oil content: <0.01 ppm by weight filtered to .01 micron oil contaminant
Dewpoint: <10°C @ 6.2 BAR (90PSI)

Supply Pressure 6.2 to 7.6 BAR (90 to 110 PSIG)
Supply flow at minimum supply pressure 7.2 l/s to 14.3 l/s (15 to 30 scfm) (Nominal 25 scfm)
Air supply temperature +20° to +25°C (+22°C nominal)
Operating Temperature +20° to +28°C (+23°C nominal)
Humidity 0 to 60% (45% nominal)

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