Computerized Heat Pipe Demonstrator (Product Code: HMTC15)



Features

- Extensive range of Experiments
- Comprehensive teaching manual
- Three-year warranty
- Esthetically designed and finished Rig.
- High Quality instrumentation
- To conduct test on heat pipe.

Product Description

The apparatus is designed to reveal clearly the conducting material. It consists of three identical cylindrical pipes, one end of the pipes is heated electrically and the other end is cooled by water. Thermocouples are embedded along the lengths to measure the temperature distribution. Heat input is measured by digital voltmeter and ammeter. The temperatures at various points are measured by thermocouples and indicated in a digital temperature indicator.

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Product / Component Specification

Pipes	32mm Dia x 350mm Long, Copper – 1 No's 32mm Dia x 350mm Long, Stainless Steel – 2 No's
Condenser Tank	150 x 100 x 50mm(approx.)-3 No's
Working Fluid	Distilled Water
Heater	Nichrome Wire Band heater 250watts(3-Nos)
Heat Control	Variac
Digital voltmeter	0-300 volts AC
Digital ammeter	0-5 Amps AC
Digital temperature	0-300 Deg (K Type)
Thermocouple	K type
Stop watch	Digital
Protection	MCB
Number of Temperature Measurement Points	12

Data Acquisition card

Analog Input	
Differential Channels	12
Resolution	12 bits
Sample Rate	200 Ks/s
Max Voltage	5 V
Number of Ranges	4
Simultaneous Sampling	Yes
On-Board Memory	5120 samples
Analog Output	
Channels	2
Digital I/O	
Input-Only Channels	30
Output-Only Channels	12
Timing	Software
Logic Levels	TTL
Maximum Input Range	0 V - 5V
Maximum Output Range	0 V - 3.3 V
Counter/Timers	
Counters	2
Max Source Frequency	84 MHz
Resolution	12 bits
Logic Levels	TTL
Total DC output Current on all I/O lines	130mA

Measurement of Temperatures at different points

Type Range Signal conditioning/transmitter Location Qty	"K" 0-300°C Standalone 1st Stainless Steel Pipe 4 no's
Type Range Signal conditioning/transmitter Location Qty	"K" 0-300°C Standalone 2nd stainless Steel pipe 4 no's
Type Range Signal conditioning/transmitter Location Qty	"K" 0-300°C Standalone 3rd Stainless Steel pipe 4 no's

Measurement of Voltage & Current

Type Range Signal conditioning/transmitter	Voltage Transducer 0-300V Standalone
Type Range Signal conditioning/transmitter	Current Transducer 0-10Amps Standalone

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