Computerized Thermal Conductivity of Metal Bar (Product Code: HMTC13)



Features

- Extensive range of Experiments
- Comprehensive teaching manual
- Three-year warranty
- Esthetically designed and finished Rig.
- High Quality instrumentation
- To determine Thermal Conductivity of Metal Bar

Product Description

The apparatus consists of a metal bar; one end of the metal bar is heated by an electric heating coil while the other end projects inside the cooling water jacket. The middle portion of the rod is surrounded by an insulating material like asbestos to minimize lateral heat transfer from the rod and thus ensure a more nearly constant temperature gradient throughout the length of the rod. The temperature of the bar is measured at five different locations while the radial temperature distribution is measured separate thermocouples at two different sections in the insulating shell. The heater is provided with a dimmer stat for controlling the heat input, water can be circulated through the jacket and its flow rate and temperature rise can be noted down.

Plot No: 34/G, 4TH Main 3RD Phase Peenya Industrial Area, Bangalore - 560 056.
Ph.: +91 9740987814
Email: info@legionbrothers.com, sales@legionbrothers.com. www.legionbrothers.com

Computerized Thermal Conductivity of Metal Bar (Product Code: HMTC13)

Product / Component Specification

Metal bar	20mm Dia x 460mm long (Brass)
Cylindrical shell	150mm Dia x 300mm long M.S pipe
Heater	250 watts
Digital ammeter	0-5 Amps AC
Digital temperature	0-300 Deg (K Type)
Thermocouple	K type
Stop watch	Digital
Protection	MCB
Digital Voltmeter	0-300 Volts AC

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	"K"
Range	0-300°C
Signal conditioning/transmitter	Standalone
Location	Specimen Temperature
Type	"K"
Range	0-300°C
Signal conditioning/transmitter	Standalone
Location	Specimen Temperature
Type	"K"
Range	0-300°C
Signal conditioning/transmitter	Standalone
Location	Specimen Temperature
Type	"K"
Range	0-300°C
Signal conditioning/transmitter	Standalone
Location	Specimen Temperature
Type	"K"
Range	0-300°C
Signal conditioning/transmitter	Standalone
Location	Specimen Temperature

Measurement of Voltage & Current

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

Plot No: 34/G, 4TH Main 3RD Phase Peenya Industrial Area, Bangalore - 560 056.
Ph.: +91 9740987814
Email: info@legionbrothers.com, sales@legionbrothers.com. www.legionbrothers.com