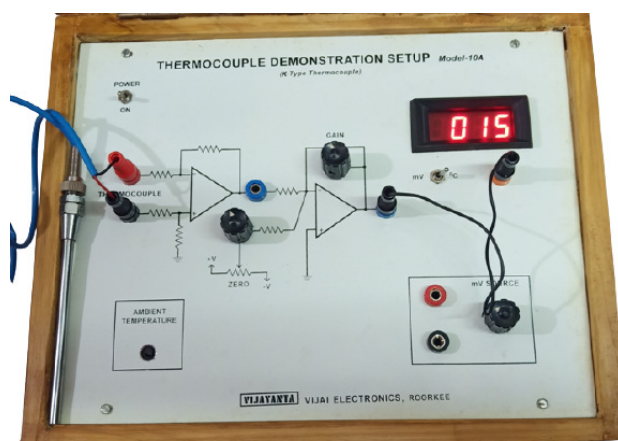


THERMOCOUPLE DEMONSTRATION SET – UP,

MODEL : T – 10 A.



DESCRIPTION :

Thermocouple are most commonly used in temperature measurement. The sensing is based on the principle that a current flow in a close circuit made up of two dissimilar metals, if the junction of these two metals is kept at different temperatures. The junction of these two metal is called thermocouple. The heat at the junction is produced by the electrical current flowing in the heater element while the thermocouple produces an emf at its output terminals which can be measured with help of a PMMC. The emf produced is proportional to the temp. and hence to the R.M.S, value of the current. The thermocouple type of instruments can be used for both D.C. and A.C. application. The most attractive feature of thermocouple is that they can be used for measurements of current and voltage even at very high frequencies.

ADVANTAGE :

- (i) Thermocouples are cheaper than the resistance thermometers.
 - (ii) Thermocouples follow the temp. changes with a small time lag and as such are suitable for recording comparatively rapid changes in temperature.
- Thermocouples are very convenient for measuring the temperature at one particular point in a piece of apparatus.

THE SET – UP CONSISTS OF :

- (a) Thermocouple::Type K- Iron-chromium
SS Sheathed
Heat proof mounting of screw terminals.
- (b) D.C. Instrumentation Amplifier :
 - ** For amplification of millivolt signal of thermocouple output.
 - ** Gain and null adjustment facility on Panel.
 - ** Input / Output termination of Panel.

VIJAYANTA TECHNOLOGIES PVT. LTD.

(Formerly Vijai Electronics)

Dr. Baldev Singh Marg 28/147 Civil Lines, Roorkee-247667 Distt. Haridwar, Uttarakhand

Phone No.: 01332 – 272509, 7579200827

E-Mail : vijayantatechologies@gmail.com, vijaielectronics1965@gmail.com

- (c) 3 ½ Digit Digital Panel Meter for measuring the temperature / millivolts.
- (d) Power Supply :
 - ** Builtin over load and short circuit protected ± 15 Volt and ± 5 Volt D.C. Supply for D.C. amplifier and DPM.
 - ** Input : 230 Volt, 50 Hz mains supply.

EXPERIMENTS CAN BE PERFORMED :

- (i) Characteristics of Thermocouple between :
 - ** Temperature V/s. millivolt.
 - ** Time V/s. temperature.

Weight : 2Kg. Approximately

Dimension : 195mm $\times$ 315mm $\times$ 75mm

Note: There may be any change in specification due to continuous R & D without notice.

VIJAYANTA TECHNOLOGIES PVT. LTD.

(Formerly Vijai Electronics)

Dr. Baldev Singh Marg 28/147 Civil Lines, Roorkee-247667 Distt. Haridwar, Uttarakhand

Phone No.: 01332 – 272509, 7579200827

E-Mail : vijayantatechologies@gmail.com, vijaielectronics1965@gmail.com