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STUDY OF P.I.D. CONTROLLER TRAINER,

MODEL – CPID – 101.

DESCRIPTION :

Today in the fast track of development. Proportional–Integral–Derivative (PID) Control action is the most widely used in industrial process like sugar, paper, chemical, food and any other manufacturing industries. These manufacturing process systems are usually slow, complex and are characterized by relatively incomplete or uncertain mathematical description. Therefore, PID Controller is used in such situations, because of the parameters the PID Controller may be adjusted experimentally.

The complete unit is housed inside a metallic cabinet having the simulated building blocks like error detector, delay, integrator, time constants, amplifier, etc. on the front panel. All the necessary switches. potentiometers and test points are provided on the front panel. Fig. 1 show the diagrams of the system.

F E A T U R E S :

** This unit is inside a metallic cabinet with front panel block diagram.
** All the necessary switches, potentiometer and test points are on the front panel.
** All the waveforms can be measured on a C.R.O.
** Simulated blocks for integrator, time constants, error detector, delay and gain.
** PID Controller, Configurable as P, PI, PD or PID.
** Proportional Band : 5% to 50% (Gain 2 – 20)
** Integral Time : 10 – 100 Milli second.
** Derivative Time : 2 – 20 Milli second.
** Builtin Signal Source, 1 Vp-p (min) at 40 Hz (typical),
Triangular Wave : 1 Vp-p (Min.) at 40 Hz (typical).
** Builtin 3 ½ Digit Digital Voltmeter for DC Measurement.
** Builtin Regulated Power Supply : 230 Volt, ± 10%, 50 Hz mains operated.
** Detailed literature and patch cords.

OBJECT :

(i) To study the open loop response of various process configuration.
(ii) To study the closed loop response of various process configuration.
(iii) To study the performance characteristics of an analog PID Controller using simulated blocks.

Accessories Required :

1. A general purpose Dual Trace, Oscilloscope.