

OVERVIEW OF PID CONTROLLER OMEGA TYPE ICT-915

OMEGA TYPE ICT-915 is designed to study the continuous Controller modes of PID controller To have a basic idea and practical hands on Controllers PID ICT-915 has been designed to be used by students to investigate the principles of PID by applying different signals.

With ICT-915 Overview of PID Controller Students can study two-position mode as ON/OFF Controller and continuous Controller modes as P-control mode, I-control mode, D-control mode, PI-control mode, PD-control mode and PID control mode. These modes of Controller can be performed individually and also with different combinations in open loop and close loop system. Users can easily understand the difference between the different modes of Controllers used. Square wave, triangular wave generator variable DC supply as set point and disturbance generator are provided on board. Effect of PID can be seen on first order system and second order system in open loop and close loop system.

OBJECT

- 01 Study of 'On/Off' Controller
- 02 Study of open loop system
- 03 Study of close loop system
- 04 Study of close loop system with disturbance
- 05 Study of steady state error
- 06 Study of proportional Controller
- 07 Study of Integrator Controller
- 08 Study of Derivative Controller
- 09 Study of proportional + integrator (PI) Controller
- 10 Study of proportional + derivative (PD) Controller
- 11 Study of proportional + integrator + derivative (PID) Controller
- 12 Study of proportional + integrator + derivative (PID) in close Loop
- 13 Study of proportional + integrator + derivative (PID) with first order system
- 14 Study of proportional + integrator + derivative (PID) with Second order system
- 15 Study of Dead Zone Controller with Proportional band

FEATURES

- 01 Proportional, Integral and Derivative functions can be checked on same board (configurable as P.I, D. PI, PD, PID)
- 02 ON/OFF controller
- 03 Square and triangular wave with variable frequency for testing PID
- 04 Variable DC for set point



- 05 Error detector
- 06 1st order system & 2nd order system
- 07 In built power supply
- 08 Dead zone and disturbances generator
- 09 Built-in 3½ DVM for DC measurement
- 10 Signals can be observed and measured at various blocks
- 11 Manual describing working of trainer along with detailed Experiment descriptions
- 12 Open loop and Closed loop System

TECHNICAL SPECIFICATION

- 01 Proportional Band: 5% to 55%.
- 02 Integrator : 10 msec to 110 msec 03 Derivative : 1 msec to 11 msec 04 ON/OFF controller : ON = 12 V, OFF = -12 V
- 05 On board
 - Generator : Square wave & triangular

wave Generator of 0 -156 Hz. Two Variable DC +10 V

06 Interconnections : 2 mm socket

07 Test Points : 5 nos

08 Power Supply : 230 V ±10 %, 50 Hz 09 Learning Material : Theory, procedure, reference results etc

10 Operating

Conditions : 0-40 C, 85% RH

11 Power

Consumption : 1.6 VA (approx.)
12 Dimensions (mm) : W340 × H125 x D210
13 Weight : 1.35 Kg (approx.)

LIST OF ACCESSORIES

01	Patch cord 2mm length 50cm	20.
02	Mains cord	01

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OMEGA ELECTRONICS