



- 2-phase A.C. Servomotor
- Servo Potentiometer for position sensing
- Transient response capture/display
- In-built rms voltmeter on panel

Introduction

2-phase ac servomotors have been traditionally used for position/ speed control applications especially in light weight, precision instrumentation area in airborne systems. The present unit is designed around a 12V ac servomotor and exposes the basic characteristics and dynamics of a position control system. A block diagram of the system is shown in figure below. Besides introducing the basic features like balanced modulation of the error signal, phase reversal around the set point and phase difference between the reference and control phases of the motor, the experiment involves study of the step response of the closed loop system.

Being a mechanical system the response is too slow for a comfortable viewing on a CRO, except on an expensive storage oscilloscope. A microprocessor based waveform capture/ display card in the unit stores the step response in real time and displays the same once steady state is reached.

Experiments

- Error detector characteristics, phase reversal
- Amplifier gain measurement
- Phase difference between control and reference windings
- Step response study

Features and Specifications

- 2-phase servomotor 12V/ phase, 50Hz, 10W
- Power amplifier for driving
- Servo potentiometer type error detector
- In-built 10.00V (rms) panel meter
- Step response capture/ display card
- Detailed literature with typical results included
- Complete unit except a measuring CRO

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in