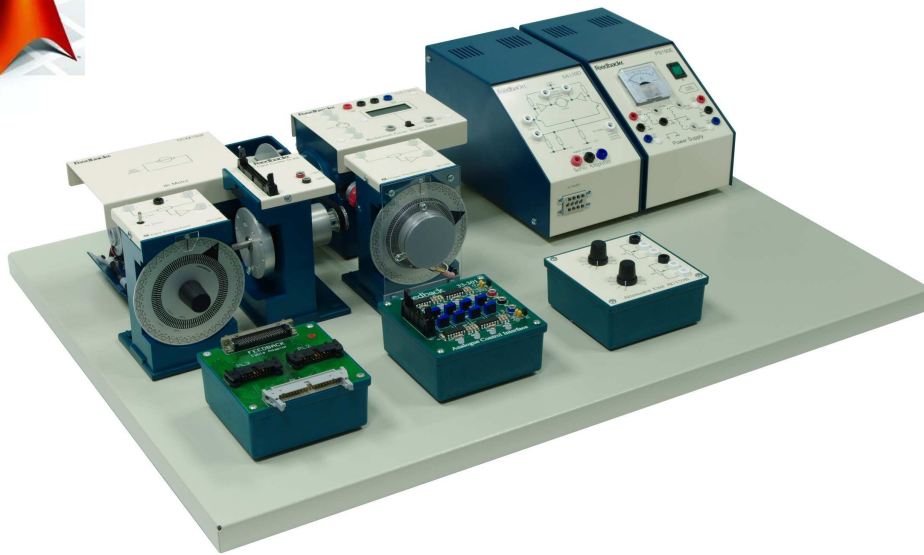
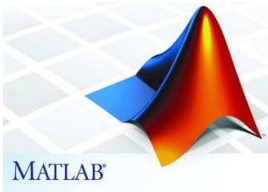


Precision Modular Servo Control Workshop 33-008-PCI



Description

The Precision Modular Servo Workshop has been designed to give a rapid and direct path from control system design to hardware implementation. The resolution and accuracy of the system, and the consistency of its performance, makes the Precision Modular Servo Workshop ideal for serious study of digital linear servo control systems.

As well as allowing study of digital control the Precision Modular Servo Workshop also provides a complete introduction to servos, from fundamental studies of analogue servos through to full, real-time digital control using MATLAB™, SIMULINK™, Real-time Workshop and Real-time Windows Target. It is fully supported with laboratory assignments which have been designed to give students a full understanding of the control paths within the equipment.

Using MATLAB™ together with the detailed training manuals supplied by Feedback and an Advantech PCI card (which creates an impressive digital control system development environment) the user is guided through the design process using the following tools:

- Phenomenological process models
- Dynamics analysis
- Discrete models identification
- Controller design
- Controller tests on the model
- Controller implementation in real-time applications
- Implementation of various control strategies
- Data visualisation

The Phenomenological process models are designed in SIMULINK™ to provide initial models for the user to test. Model linearization is then discussed and the use of simple dynamics analysis - like bode diagrams poles and zeros maps are introduced.

To obtain accurate models, identification procedures incorporating MATLAB™ functions are described. The user can go step-by-step through the discrete models identification. One of the 'obtained models' is used for the controllers design and PID control is explained. A guide is given for PID controller design, testing, tuning and implementation on the model.

The root locus technique is used to illustrate the changes that PID controller tuning inflicts on the control system performance. The designed controllers are prepared in SIMULINK™.

Specification

Power requirements

Line voltage: 200/250 V or 100/125 V, 50 or 60 Hz.
Consumption: 100 VA. Fuse: 4 A (110V), 2 A (230 V).

Dimensions & Weight

Length: 720 mm
Height: 50 mm
Depth: 520 mm
Weight: 21 kg.



Tender Specification

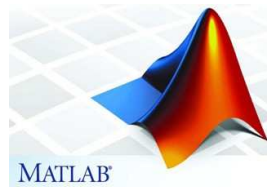
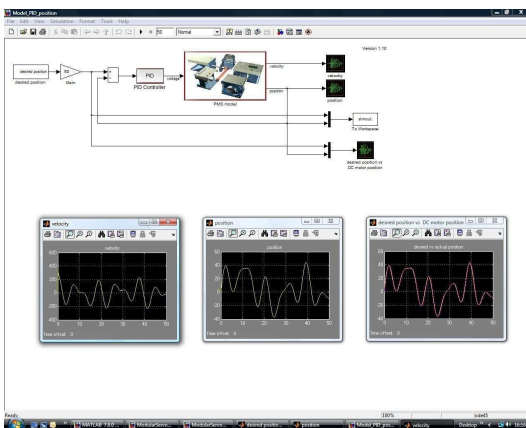
A MATLAB™ controlled modular servomechanism enabling the study of control system dynamics. Design and implementation of controllers.

Ordering information

Precision Modular Servo 33-008-PCI - System with MATLAB™ interface card and cable
Precision Modular Servo 33-008I - System without MATLAB™ interface card and cable

PC Requirements

The minimum requirement is a Windows PC running Windows XP or above. Not supplied.



MATLAB™ screen showing schematic of control system and analysis of pitch and yaw.

Feedback Instruments

5 & 6 Warren Court
Park Road, Crowborough
East Sussex
TN6 2QX
United Kingdom
Tel: +44 1892 653322
Sales: sales@feedback-instruments.com
Website: www.feedback-instruments.com

For further information on Feedback equipment please contact ...

Feedback reserves the right to change these specifications without notice.