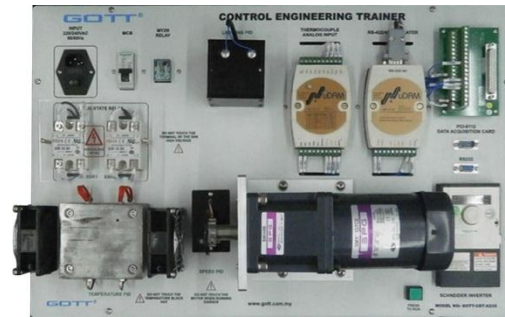# CONTROL ENGINEERING TRAINER

Model Number : GOTT-CET-X232

DESCRIPTION

This Control Engineering Trainer is designed to meet the future automation training program. In this era of automation, control engineering is a vital prerequisite for modern mechanisms for such system required a detailed knowledge of how a controlled systems work.

FEATURES

- PC Based Control
- Can link to any PCs for simple drive control system
- Easily and Portable
- Control commands and motion commands
- User friendly programming language
- Learn programming environment and debugging functions.

ACCESSORIES

- Industry-best textbooks
- Workbooks and hands-on exercises
- Comprehensive Assessments Tool
- A set of Computer
- PID Software

GENERAL SPECIFICATION

- Inverter
- Switching mode power supply
- AC Motor
- LED Lighting (Brightness Controller)
- Temperature Module
- Lab View Software
- Aluminium Casing
- Power Cord
- Software Installation Disc
- Instruction Manual

16-CH 12-BIT ADVANCED MULTI-FUNCTION DAS CARD

Features

- 32-bit PCI Bus with Bus-mastering DMA
- 12-bit analog input resolution
- 16 single-ended or 8 differential analog input
- On-board A/D FIFO memory
- Auto-scanning channel selection
- Up to 110 KHz A/D sampling rates
- Programmable gain of x0.5, x1, x2, x4, x8
- Bipolar or unipolar input signals
- Three A/D trigger modes: software trigger, programmable pacer trigger, and external pulse trigger
- 16-bit digital input and 16-bit digital output
- Two 12-bit monolithic multiplying analog output channels
- 3 independent programmable 16-bit down counters
- Compact, half-size PCB
- 37-pin D-type connector

POWERED BY : **ADLINK** TECHNOLOGY INC.
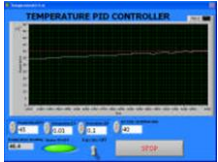

ATV312H075M2 AC DRIVE

Features

- Motor Power Rating : 0.75kW
- Input Voltage : 208/230VAC
- Marketing Trade Name : Altivar 312
- Output Voltage : Maximum Output Voltage Equal To Input Voltage
- Input Phase : 1-Phase
- Frame Size : Size 3
- Horsepower Rating : 1HP
- Type : ATV312
- Output Phase : 3-Phase
- Conformal Coating : No
- Degree Of Protection : IP20
- Ampere Rating : 1.5A
- Embedded Communication : Modbus And CANopen
- Integrated EMC Filter : Class A
- Enclose Rating : Open
- Application : Constant Torque

Schneider Electric

CONTROL ENGINEERING TRAINER

Model Number : GOTT-CET-X232

SOFTWARE EXPERIMENT

Open Loop Control	Closed Loop Control	Lighting PID	Speed PID
• Speed setting for motor • Graph reading for speed and time • Voltage driver input • Average slot found function	• Value setting for proportional (P), integration (I) and derivation (D) • Voltage driver input • Intensity reading and setting	• Value setting for proportional (P), integration (I) and derivation (D) • Voltage driver input • Intensity reading and setting	• Speed setting for motor • Graph reading for speed and time • Voltage driver input • Average slot found function • Manually configured value for motor

Manual Mode

The manual mode of PID controller consists of :
- Fan button
- SSR1 and SSR2 button
- Analogue Output (Motor Speed) button
- Analogue Output (Light Intensity) button
- Counter Input
- Temperature Value
- Stop button

Temperature PID

The below screen shows the temperature mode of PID controller :
- Type of input sensor (thermocouple, RTD) and temperature range
- Type of output required (electromechanical relay, SSR, analog output)
- Control algorithm needed (on/off, proportional, PID)
- Number and type of outputs (heat, cool, alarm, limit)

Fuzzy Logic

The Controller Design Interface is a stand-alone with a user interface you can use to completely define all controller and expert system components and save all of the parameters of the defined controller to one controller data file

EXPERIMENT TOPICS :

- Open Loop Control
- Closed Loop Control
- Manual Mode
- Temperature PID
  - Sample of Setting the Temperature (Default Value)
  - Changing Value P
  - Changing Value I
  - Changing Value D
- Lighting PID
  - Sample of Setting the Temperature (Default Value)
  - Changing Value P
  - Changing Value I
  - Changing Value D
- Speed PID
  - Sample of Setting the Speed (Default Value)
  - Changing Value P
  - Changing Value I
  - Changing Value D
- Fuzzy Logic

Manuals :
(1) All manuals are written in English
(2) Model Answer
(3) Teaching Manuals

General Terms :
(1) Accessories will be provided where applicable.
(2) Manual & Training will be provided where applicable.
(3) Design & specifications are subject to change without notice.
(4) We reserve the right to discontinue the manufacturing of any product.

Warranty :
2 Years

ORDERING INFORMATION :

ITEM	MODEL NUMBER	CODE
CONTROL ENGINEERING TRAINER	GOTT-CET-X232	232-288

* Proposed design only, subject to changes without any notice.