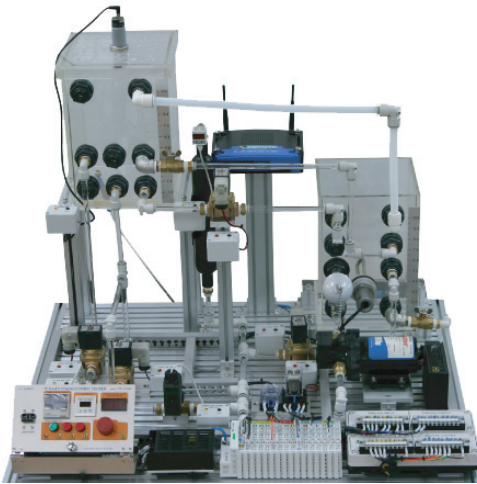


CPE-AT3620

PC-based Analog Control Trainer

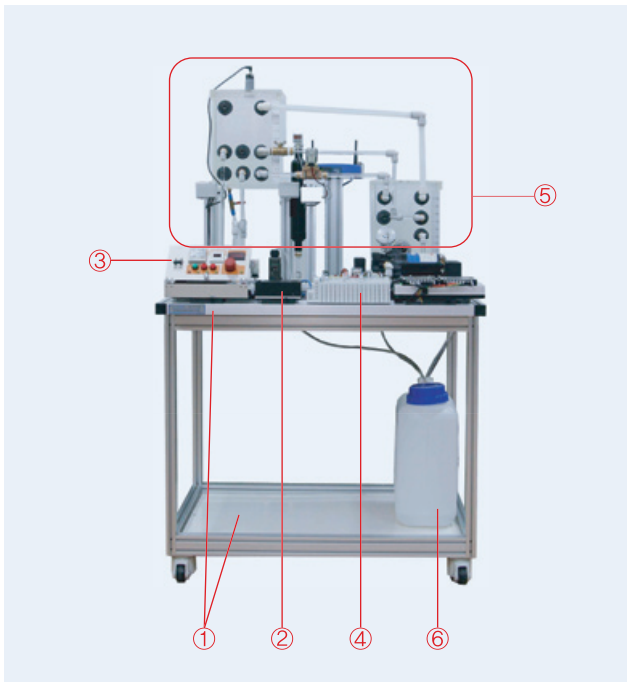


FEATURES

- Simulates various types of analog control for hands-on practices
- PID Control System in use of the analog control method
- Designed to teach the principles of flow, pressure, temperature, sensor and electrical control
- Supports real-time control through a programmable logic controller

EXPERIMENTAL CONTENTS

- Basic understanding of control mechanism and technologies
- Principles of fluid control, electric control, motor control and sensor control
- Principles of fluid process control
- Digital control and application practices
- Analog input and analog output
- PID control system by the analog control
- PLC programming practices



SPECIFICATIONS

Worktable and Experimental Panel

- Worktable
 - Material: Aluminum profile (30 × 30mm)
 - Lockable caster: 4ea
 - Dimension: 900(W) × 609(D) × 834(H) mm
- Experiment panel
 - Material: Aluminum profile (150 × 30mm)
 - Slot interval: 25mm × 24ea
 - Dimension: 900(W) × 609(D) × 30(H) mm

Power Supply

- Main power unit (DC24V 2.1A): 1 ea
- Clamp device with three gears: 1 ea

Main Control Panel

- Material: Aluminum 2T
- Control bracket: AC Inlet x 1 ea, Terminal 20P x 1 ea
- Fixing bolt: Aluminum 6061 x 1 ea
- Fixed block: Black acetyl x 1 ea
- 2-pole circuit protector: 3A x 1 ea
- Push button: 1C, Ø16 (Red x 2ea, Green x 1 ea)
- EMG Switch: 1a1b, Ø22 (Red x 1 ea)
- 4mm I/O banana jack: 5ea (Green x 4ea, Black x 1 ea)
- Proportional valve control meter: 3 1/2 digit digital (F.S. DC10V)
- Temperature control meter
- Flow meter

PRODUCT COMPOSITION

- 1) Worktable and Experiment panel
- 2) Power supply
- 3) Main Control panel
- 4) PLC Control Unit (LS XGB Series)
- 5) Analogue control system
- 6) Fluid container

SPECIFICATIONS

PLC Control Unit (LS XGB Series)

1) CPU (XEC-DN(P)32H)

- Number of command
 - Operator: 18ea
 - Basic function: 136 types + floating-point computation function
 - Basic function block: 43ea
 - Special function block
- Computing speed (basic command): 83ns/step
- Program memory: 200KB
- Maximum I/O point: 352 points
- Data Memory
 - Automatic variable (A): 32KB
 - Input variable (I): 2KB
 - Output variable (Q): 2KB
- Flash area: 20KB (2 blocks)
 - Timer: Unlimited point (Time range: 0.001 sec. ~ 4,294,967,295 sec.)
 - Counter: Unlimited point (coefficient range: 64 bit)
 - Operation mode: RUN / STOP / DEBUG
 - Restart mode: Cold / Warm
- Self-diagnosis function: Operation delay, memory error and I/O error
- Internal consumption current: 260mA

2) Analog Input Module (XBF-AD04A-4CH)

- Analogue input range: Voltage DC 0 ~ 10V (input resistance: 1M Ω min.)
- Digital output
- Maximum resolution: 2.5mV (1/4000)
- Precision: $\pm 0.5\%$
- Maximum conversion rate: 1.5ms per channel
- Maximum input: DC $\pm 15V$
- Number of output channel: 4 channels
- I/O point: 64 points
- Consumption current
 - Internal (DC 5V): 120mA
 - External (DC 24V): 62mA
- Additional function: Filter processing & average processing (time, frequency)

3) Analogue Output Module (XBF-DV04A)

- Analog output range: DC 0 ~ 10V (load resistance: 2K Ω)
- Digital input
 - 12-bit binary data
 - Unsigned value: 0 ~ 4000
 - Signed value: -2000 ~ 2000
 - Regular value: 0 ~ 1000
 - Percentile value: 0 ~ 1000

4) Temperature Module (XBF-RD01A)

- Number of input: 1 channel
- Digital output
 - PT100: -2000 ~ 6000
 - JPT100: -2000 ~ 6000
 - Scale display: 0 ~ 4000
- Conversion speed: 40ms per channel
- Terminal: 15 points
- I/O point (XBM/XBC): Fixed 64 points
- Sensor wiring: 3 wires
- Current consumption
 - Internal (DC 5V): 100mA
 - External (DC 24V): 100mA

Analogue Control System

- Fluid storage tank (top)
- Fluid storage tank (2nd stand)
- Fluid storage tank (bottom)
- Fitting device
- Solenoid valve module
- Proportional control valve module
- Digital pressure switch module
- Digital flow switch module
- Analog ultrasonic sensor module
- DC motor pump module
- Fluid pressure tank
- Pressure sensor
- I/O distribution unit: 1set
- Cable duct: 1set

STANDARD ACCESSORIES

- Power cord: 1ea
- User's guide manual: 1ea