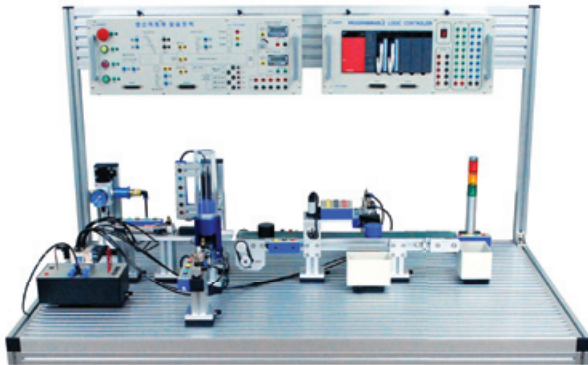


# CPE-AT3680

## Factory Automation Trainer



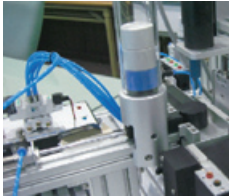
### FEATURES

- Hands-on factory automation practices: transfer, fabrication, testing, classification and warehousing
- One-touch clamping device mounted on each component allowing easy assembly and disassembly practices
- Capable of controlling the speed of conveyor
- Relay Module and Time Counter Module

### EXPERIMENTAL CONTENTS

- Wiring practices on the operation panel and PLC control panel
- Understanding automation process: transfer, fabrication, testing, classification and warehousing
- System installation practices using modules and components
- Speed control practices on the conveyor
- PLC programming practices

### Supply Process



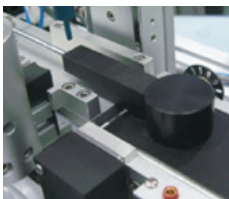
- Composition: Feed cylinder, feeding tube, fiber optic sensor, proximity switch and supply block
- Fiber optic sensor: Detects the presence or absence of work pieces in the feeding tube
- Proximity switch: Forward/backward detection (mounted on the cylinder)
- Work piece: Plastic and aluminum

### Drilling Process



- Composition: Drilling cylinder, drilling motor and proximity switch
- Proximity switch: Forward/backward detection (mounted on the cylinder)
- Drilling motor: DC 24V

### Transfer Process



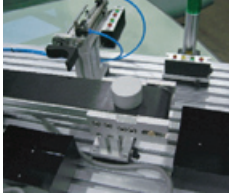
- Composition: Transfer cylinder, proximity switch, supply block, conveyor belt and conveyor driving motor
- Proximity switch: Forward/backward detection (mounted on the cylinder)
- Conveyor driving motor: DC 24V

### Inspection Process



- Inductive proximity sensor (18 $\phi$ )
  - Detectable distance: 8mm (metallic material detection)
- Capacitive proximity sensor (18 $\phi$ )
  - Detectable distance: 8mm (metallic & non-metallic material detection)
- Optical sensor (18 $\phi$ )
  - Detectable distance: 100mm (color detection)

## Extraction & Warehousing Process



- Composition: Extract cylinder, proximity switch, extract block and carrying boxes (passed & failed)
- Proximity switch: Forward/backward detection (mounted on the cylinder)

### SPECIFICATIONS

#### Worktable (with a control panel rack)

- Material: Aluminum profile (150mm in width)
- Slot interval: 25mm
- Dimension
  - Worktable: 610(W) x 1100(D) x 30(H) mm
  - Vertical frame: 1300(W) x 1100(D) x 750(H) mm

#### Materials Supply Unit

- Circular magazine: 40Ø
- Dummy work piece: 8ea
- Double acting cylinder: Ø16-100mm
- Reed switch: 2ea
- Optical sensor: 1ea

#### Fabrication Unit

- Double acting cylinder : Ø16-100mm
- Double rod cylinder (spin prevention type)
- Electric drill for fabrication

#### Transfer & Loading Unit

- Double acting cylinder: Ø16-100mm
- Conveyor system: 60(W) x 530(D) x 120(H) mm
- Gear motor: DC 24V, 1~ 15m/min speed
- Encoder: Pulse generation
- Material carrying box: 90(D) x 110(W) x 60(H) mm

#### Test & Classification Unit

- Material detection sensor
  - Capacitive sensor (standard)
  - Inductive sensor (option)
  - Optical sensor (option)
- Double acting cylinder : Ø16-100mm
- Material loading unit: 110(W) x 90(D) x 60(H) mm

#### Operation Panel

- Status indicator LED (Sensor & Actuator)
  - Cylinder indicator LED: 8ea
  - Motor indicator LED: 2ea
  - Sensor indicator LED: 3ea
- Operational switch: 4ea (start, stop, reset, emergency)
- 25-pin PLC connector: 1ea
- Power supply terminal: + (5ea), - (5ea)
- Dimension: 295(W) x 340(D) x 100(H) mm
- Motor speed control unit
  - Travel speed meter (m/min)
  - Motor connector: 4mm terminal
  - Encoder terminal
- Counter module
  - Setting range: 1 ~ 9999
  - Preset counter
  - Incremental
  - Reset function (MANUAL/AUTO)

#### PLC Control Unit

- Programmable logic controller: GM6 (16-point input and 16-point output)
- Power supply: DC 24V 5A
- Power supply connector: + (4ea) and - (4ea)
- 4mm I/O connector: 18ea
- Dimension: 295(W) x 340(D) x 100(H) mm

#### STANDARD ACCESSORIES

- AC cord: 1ea
- Connection cable: 1set
- 25-pin connector cable: 2ea (input and output)
- Pneumatic hose: 10m
- PLC application software CD: 1ea
- User's guide manual: 1ea