



Programmable Logic Controller Trainer II

Equipment Overview

- This trainer is mainly composed of training bench, control panel, mainframe module, simulation modules, three phase squirrel cage asynchronous motor, etc.
- It adopts modular type structure, the experiment modules can be replaced easily, which is convenient for function expansion and new experiment development. The PLC mainframe and experiment modules can not only be connected by self-locking type plug-in wires, but also by flat cable at a time.
- The device is designed with ground protection and leakage protection functions. Sheathed connecting wires, insulated socket and heat resisting table top are adopted to ensure safety.

Technical Parameters

1. AC power supply: Three phase five-wire AC380V $\pm 10\%$, 50Hz
2. Temperature: $-10 \sim 50^{\circ}\text{C}$, ambient humidity $\leq 90\%$
3. Overall power consumption: $\leq 1.0 \text{ kVA}$
4. Dimension:
Bench 1290mm $\times$ 230mm $\times$ 890mm (approx.)
Table 1700mm $\times$ 700mm $\times$ 820mm (approx.)

Note :

Due to keeping innovation, the specification and Machine pictures or color are subject to alteration without notice!



Training Content

- Understanding of PLC (soft hardware structure, system composition, basic instructions, wiring, etc.)
- Typical motor control operation (inching, self-lock, forward and reverse, star/delta changeover starting, etc)
- PLC simulation
- Three phase asynchronous motor inching control circuit
- Motor control simulation
- Seven segment digital display and tower light control simulation
- Automatic and manual traffic light control simulation
- Automatic water tower level control simulation
- Mail sorting machine control simulation
- Elevator control simulation
- Manipulator control simulation
- Five-phase stepping motor control simulation
- Automatic forming machine control simulation
- Automatic rolling mill control simulation
- Various liquids automatic mixing control simulation
- Automatic feeding and loading system control simulation
- Automatic vending machine control simulation
- Automatic washing machine control simulation
- Electroplating system control simulation
- Machining center tool magazine control simulation
- Music fountain control simulation
- Responder control simulation
- Mechanical sliding table control simulation
- Assembly line simulation
- Frequency converter functional parameter setting and operation
- Frequency converter alarm and protection function
- Inching control of external terminal
- Frequency converter controlled motor forward and reverse rotation
- Multistep speed selection and frequency control
- Stepless speed control
- Instantaneous power interruption and start control
- Motor forward and reverse rotation (PLC controls the frequency converter external terminals)
- Motor running time control (PLC controls the frequency converter external terminals)
- PLC digital quantity control mode based multistep speed control



Programmable logic controller (PLC-01)



- (1) SIMATIC S7-200 SMART CPU SR40
- (2) Digital input sockets 24pcs
- (3) Power switch and 24V+/0V sockets
- (4) Digital output sockets 16 pcs
- (5) Module power line

Frequency converter module (VFD-01)



- (1) SIEMENS MICROMASTER 420
- (2) +10V/0V/AIN/DIN/+24V/0V terminals
- (3) Braking/communication/A/D output/ relay terminals
- (4) Power in sockets and VFD out/PE socket
- (5) Toggle selection switches, potentiometer terminals
- (6) Frequency adjusting rotary knob

PLC experiment module (PLC-02)



- (1) Various liquids automatic mixing control system
- (2) Automatic punching machine system
- (3) Automatic vending machine
- (4) Motor automatic control system

PLC experiment module (PLC-03)



- (1) Traffic light control system
- (2) Automatic water tower level control system
- (3) Analog television transmitting tower
- (4) Automatic goods delivery and loading system

PLC experiment module (PLC-04)



- (1) Automatic molding machine
- (2) Plating system
- (3) Automatic elevator control system
- (4) Automatic washing machine system

PLC experiment module (PLC-05)



- (1) Stepping motor control system
- (2) Manipulator control system
- (3) Assembly line control system
- (4) Machining center tool magazine control system

PLC experiment module (PLC-06)



- (1) Music fountain
- (2) Mail sorting system
- (3) Responder control system
- (4) Mechanical sliding table control system

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Meshed plate (1pcs)
Three-way button (1pcs)
AC contactor (10A,380V) (3pcs)
Thermorelay (3.5A) (2pcs)
Terminal block (2pcs)
Screw (75pcs)
Fuse (3A) (3pcs)
Fuse base (3pcs)
Electronical time relay (1pcs)
Breaker (1pcs)
Three phase asynchronous motor