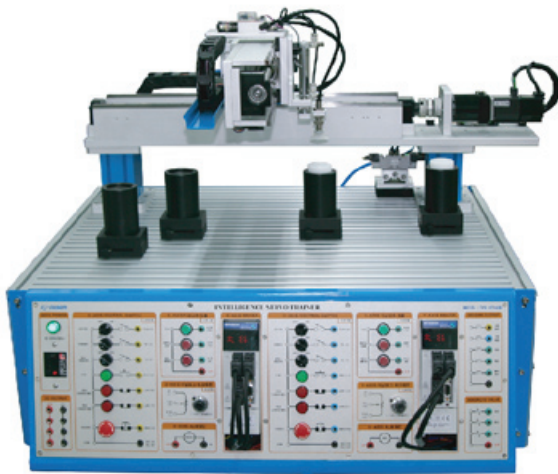


Intelligent 2-Axis Servo Control Trainer



SPECIFICATIONS

X-axis robot, Y-axis robot

1) Servo drive

- Main circuit power
 - Voltage/frequency: 1-phase or 3-phase AC 200V ~ 230V 50/60Hz
 - Permissible frequency change: Within $\pm 5\%$
- Power protection
 - Overcurrent prevention, overload prevention, overheat protection (servo motor), overspeed protection, instantaneous interruption protection and detector error protection
- Control method
 - Sine wave PWM control
 - Current control
- Position control mode
 - Max. input pulse frequency: 1Mpps (differential receiver)
- Speed control mode
 - Analog speed command: 1:2000
 - Internal speed command: 1:5000
- Torque control
 - Analog torque command input: DC 0 ~ $\pm 8V$
 - Structure: Natural cooling, open type (IP00)
- Environment
 - Ambient temperature: 0 ~ 55°C
 - Storage temperature: -20 ~ 65°C
 - Vibration: Below 5.9%

FEATURES

- Compatible with Universal PLC Trainer (Siemens PLC / Mitsubishi PLC / LS XGT PLC)
- Comprises 2-axis robot and Z-axis using AC Servo Motor and Servo Drive
- Capable of high speed and accurate control through the use of Ball Screw and LM Guide System
- Designed to learn motor control mechanism that covers jog, return to starting point, up/down limit control and continuous operation

EXPERIMENTAL CONTENTS

- Basic concept and operation of Servo Drive
- Position control with AC Servo Motor
- Speed control, torque level control and positioning control
- Control mechanism: Jog, starting point and step-by-step mode
- High speed and accurate control by Ball Screw and LM Guide System

2) Servo motor

- Rated output: 50W
- Rated speed of revolution: 3000RPM
- Maximum speed of revolution: 5000 RPM
- Rated torque: 0.16 N·m
- Power rate: 4.87kW/S
- Rated current: 0.9A
- Maximum current: 2.7A
- Speed & location detector: 262144P/rev (resolution per rotation of the encoder and servo motor)

3) Transfer distance

- X-axis: 300mm
- Y-axis: 200mm

4) Transfer speed: 0 ~ 100mm/s (adjustable speed)

5) Operational method: Ball screw & LM guide

6) Limit switch

- Top/bottom detection: 1ea
- Starting point detection: 1ea

Z-axis robot

- 1) Control method: Forward/backward absorption by pneumatic control
- 2) Absorption weight: 0.5Kg
- 3) 3/2-way solenoid valve: 1ea
- 4) 5/2-way solenoid valve: 1ea
- 5) Vacuum generator: 1ea
- 6) Absorption cup: 1ea

Control panel

- 1) Panel structure: Aluminum profile (25mm slot interval)
- 2) Servo drive unit: Protruding type (upper part) on the front panel
- 3) Power control ELCB: AC 220V (1ea)
- 4) Power indicator lamp: Green (1ea)
- 5) DC power output: DC 24V (red color and black color)
- 6) 4mm input terminal (automatic control)
 - Yellow color: 7ea
 - Blue color: 7ea
 - Black color: 2ea
- 7) Selector switch (manual control)
 - 2-position type: 6ea
- 8) Push button switch (manual control)
 - 1a contact: 2ea
 - 1b contact: 4ea
- 9) Emergency switch (manual control)
 - Red color: 2ea
- 10) Signal detection of axis error
 - 4mm output terminal: 8ea
 - 16mm indicator lamp: Green color (2ea), red color (2ea)
- 11) Axis analogue
 - 10-turn variable resistor (torque control): 2ea
- 12) Axis-alarm MC output terminal: 2ea
- 13) Axis-position sensor output terminal: 6ea
- 14) Z-axis starting input terminal: 4ea
- 15) AC 220V power inlet: 1ea

STANDARD ACCESSORIES

- Power cord: 1set
- Connection cable: 1set
- Interface cable: 1set
- Software program CD (Positioning Module & Servo Amp Drive): 1set
- Dummy work piece (white color, circular type): 4ea
- User's guide manual: 1ea

OPTIONS

- Multifunctional Digital Electric Meter (CEM-2200)
- PC-Based Servo Control Software (Automation Studio)
- PC-Based Servo Control I/O Unit (Automation Studio I/O Interface Unit)