

## MS-6500

### Mechatronics Training System (for PLC-220)



Since PLC (Programmable Logic Controller) was firstly introduced in 1970, it has been widely applied to various industrial uses such as machine and process controls.

The Modular Production System stations allow various simulations of real production processes that exist in industrial field. The system is universal, industry-based, modular and flexible for further expansion. Students can learn the entire process of production, such as feeding, processing, etc.

Each station simplifies the training of operation and can be expanded sequentially step by step through building complex automated procedure.



with PLC-220

#### ● Features

1. Input-simulation switches function as level and pulse Input for different input signal.
2. Windows-based development software
3. Assorted peripheral devices and devices that support external extensions, it is particularly suitable for laboratory experiment and project implementation.
4. Various simulations I/O devices for studying and observing the results
5. Using 4mm safety sockets on Input/Output terminals to ensure users' safety.

#### ● Specifications

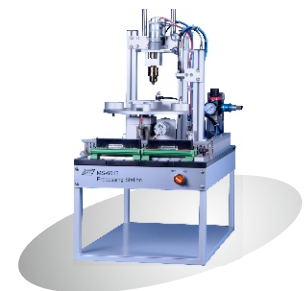
##### 1. Distributing Station (MS-6011)

- (1) Workpiece feeding module
  - a. Cylindrical feeder
  - b. Fiber optic sensor
  - c. Infeed cylinder
  - d. Workpiece fixture
- (2) Handling arm module
  - a. Swivel arm
  - b. Rotary cylinder
  - c. Suction cup



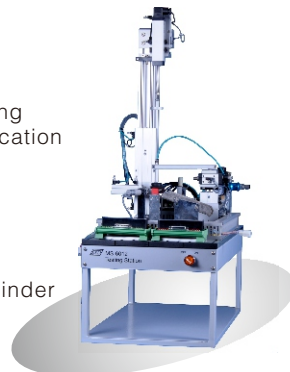
##### 3. Processing Station (MS-6013)

- (1) Index table module
  - a. Rotary index table
  - b. Drive actuator
  - c. Clamp cylinder
- (2) Drill and clamp module
  - a. Drill spindle drive
  - b. Drill feed cylinder
  - c. Drill chuck
- (3) Inspection module
  - a. Drill hole checker
  - b. Checker drive cylinder



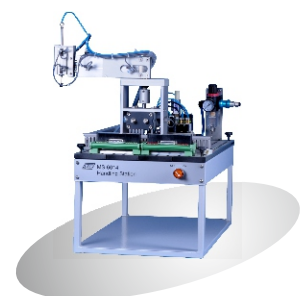
##### 2. Testing Station (MS-6012)

- (1) Material sorting module
  - a. Color identification
  - b. Object presence sensing
  - c. Metallic/plastic identification
- (2) Lifter module
  - a. Lift cylinder
  - b. Push cylinder
- (3) Height testing module
  - a. Linear potentiometer
  - b. Potentiometer drive cylinder
- (4) Airtight testing module
  - a. Z-Axis cylinder
  - b. R-Axis cylinder
  - c. Airtight testing cup



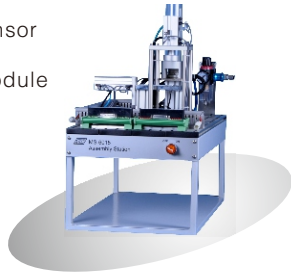
##### 4. Handling Station (MS-6014)

- (1) 3-Axis robot module
  - a. Z-Axis cylinder
  - b. Vacuum generator
  - c. Y-Axis cylinder
  - d. R-Axis cylinder



## 5. Assembly Station (MS-6015)

- (1) Transfer module
  - a. Transfer slide track
  - b. Reflective fiber optic sensor
  - c. Push cylinder
- (2) Matching parts feeding module
  - a. Matching parts feeder
  - b. Feed cylinder
- (3) Press module
  - a. Press bed
  - b. Press drive cylinder



## 6. Storing Station (MS-6016)

- (1) 4-Axis robot module
  - a. Parallel gripper
  - b. Y-Axis cylinder
  - c. Z-Axis cylinder
  - d. R-Axis cylinder
  - e. X-Axis step motor drive
- (2) Storage module  
 Storage locations: 6 locations  
 (3 col x 2 row)



## 2. PLC-25001 i-BOX

- (1) Emergence stop button
- (2) Expansion digital I/O module (8Digital input, 8Digital output)

## 3. Air Compressor

- (1) Air tank : 88L ± 10%
- (2) Max. pressure : 10kg/cm<sup>2</sup>
- (3) Flow rate : 185L/min ± 10%

## 4. Industrial Ethernet Cable, CAT 6, Length 6M

## 5. STEP 7 (TIA Portal) Basic Software CD



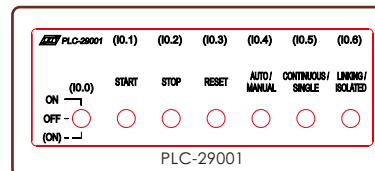
## ● Accessories (for each station)

1. 25-pin Male-Male Data Cable x 1 pce
2. 25-pin Female-Female Data Cable x 1 pce
3. 40-pin Flat Cable x 1 pce
4. 10-pin Flat Cable x 1 pce
5. Plastic Panel (PLC-29001) x 1 pce
6. Power Cord x 1 pce
7. Experiment Manual

## ● Optional but Necessary

### 1. PLC-220 Trainer

- (1) PLC main unit : SIEMENS S7-1214C
- (2) Digital input : 14
- (3) Digital output : 10
- (4) Analog input : 2



## ● System Requirement

1. Working Table : 1 pce for one station
2. Size : (150(L) x 75(W) x 75(H))cm (or above)

## Order Information:

