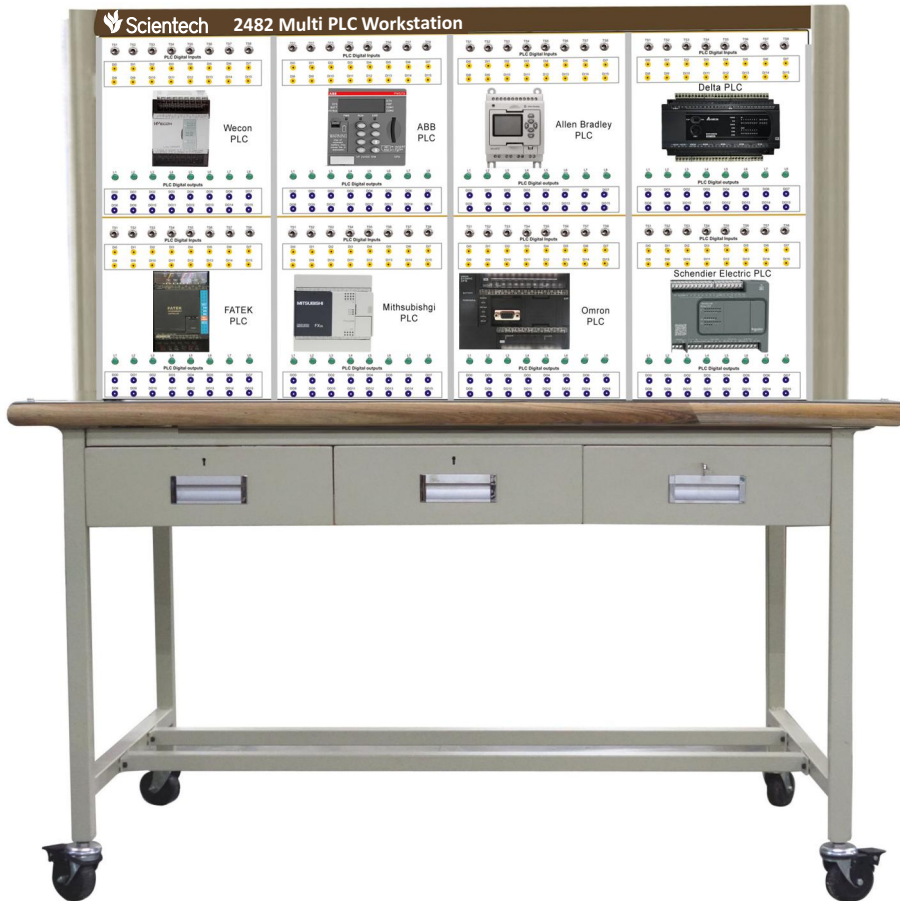


Work on the new PLC WorkStation from Scientech that is an integral part of IIoT, Industry 4.0 and the "Smart factory".



Today, manufacturing processes have become a lot more efficient due to the Internet of Things (IIoT), Intelligent Automation, Advanced Robotics and other Smart Factory initiatives. Despite rapid changes in technology, PLCs continue to play a vital role in manufacturing and act as a central processor for all real-time decisions. For instance, a PLC sends robust data, including sensor performance and other data that can be integrated with cloud computing to give a more holistic picture, i.e. a collection of "big data." Analysis tools can then help plant managers and others to better leverage resources, batch scheduling of jobs, logistics, supplier timing, and other functions that are critical to creating more efficient manufacturing processes.

PLCs have adapted well to modern manufacturing and automation systems. With no competitor on the horizon and solid fundamentals, PLCs and PLC programmers will continue to play an integral role in the manufacturing process.

Looking into Industry 4.0 career opportunities, Scientech has designed a unique Multiple Programmable Logic Controller (PLC) WorkStation. Scientech 2482 WorkStation includes PLCs from Siemens, Mitsubishi, Fatek, Delta, ABB, Allen Bradely, Omron, Schneider Electric, and Wecon.

Features

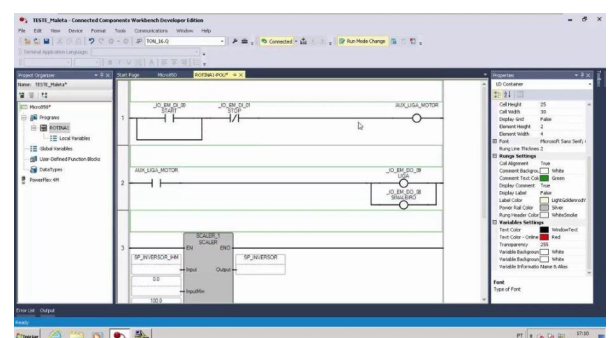
- Select any PLC from different makes - Siemens, Mitsubishi, Fatek, Delta, ABB, Allen Bradley, Omron, Schneider Electric, and Wecon.
- Open platform to explore a wide range of PLC applications.
- Industrial look and feel.
- Powerful instruction sets.
- PC based programming.
- Extremely easy and student friendly software to develop different programs.
- High execution speed.
- PLC interfacing with different application modules.
- Ready experimental details.
- Easy downloading of programs.
- Practice troubleshooting skills.
- Robust construction.
- Experiments configurable through patch board.
- MCB provided with AC supply for safety purpose.
- The aluminum profile plate used in conjunction with ergonomically designed WorkStation systems provide the perfect training environment for training in automation technology.
- Drawers for patch cords, module, and other accessories for storage, easy identification and access.
- Academic and vocational study for process control engineers and plant technicians.
- Castor wheels (with Locking mechanism).
- Online Product Tutorial.
- PC/Laptop (optional).

Note : For PLC Programming PC/Laptop is required.

Scope of Learning

- Hands on PLC programming.
- Study and use of normally open and close contact, timer, counter, and logic gates.
- Study construction and interfacing methods of nine different categories PLCs.
- Pick and place using PLC, pneumatic air suction and pneumatic gripper.
- Design water pump control.
- Design a fire indication system.
- Design traffic light control.
- Construction and sequential control of three pneumatic cylinders.
- Construction and control of a pneumatic solenoid.
- Control a three phase induction motor starter.
- Forward-and-reverse operation of a three phase induction motor.
- Interfacing PLC with input switch, sensors, and relay.
- Variable frequency drive control.
- Construction and interfacing of stepper motor.
- Construction and interfacing of seven segment display.

Software window



Technical Specifications

Main structure:

Main voltage	:	Single phase 220V / 50Hz
Working table	:	1 no.
Module storage cabinet	:	3 nos.
Air compressor	:	1 no.
Air FRL	:	1 no.

Programmable Logic Controller

PLC - 01

PLC	:	Siemens
Programming language	:	Ladder, functional flow chart diagram
Power Supply	:	1 no.
Digital input	:	08 nos.
Analog input	:	04 nos.
Analog output	:	02 nos.
Digital output	:	04 nos.
Display unit	:	Yes
Programming cable	:	PLC to PC communication cable

PLC - 02

PLC	:	Mitsubishi
Power Supply	:	24VDC
Input types	:	24VDC
Output types	:	Relay
Digital input	:	8 nos.
Digital output	:	8 nos. (relay)
Programming Software	:	Gx-Developer or equivalent
Programming cable	:	PLC to PC communication cable

PLC - 03

PLC	:	Fatek
Digital input	:	8 nos.
Digital output	:	6 nos.
Programming Software	:	WinProLadder
Programming cable	:	PLC to PC communication cable

PLC - 04

PLC	:	Delta
Power Supply	:	220VAC
Triggering voltage	:	24VDC
Digital input	:	18 nos.
Digital output	:	12 nos. (relay)
Programming cable	:	PLC to PC communication cable

PLC - 05

PLC	:	ABB
Digital inputs	:	6 nos.
Digital output	:	4 nos. (relay)
Programing cable	:	PLC to PC Communication Cable

PLC - 06

PLC	:	Allen Bradley
Digital input	:	12 nos.
Digital output	:	07 nos.
Analog input	:	04 nos.
Analog output	:	01 no.

PLC - 07

PLC	:	Omron
Power Supply	:	220VAC
Digital input	:	18 nos.
Digital output	:	12 nos. (relay)
Triggering voltage	:	24VDC
Programming cable	:	PLC to PC communication cable

PLC - 08

PLC	:	Schneider Electric
Digital input	:	14 nos.
Digital output	:	10 nos.
Programming cable	:	PLC to PC communication cable

PLC - 09

PLC	:	Wecon
Power Supply	:	220VAC
Digital input	:	8 nos.
Digital output	:	6 nos. (relay)
Programming cable	:	PLC to PC communication cable

Application modules are (included)**Traffic light control module : 1 no.**

- Built-in green, yellow, and red indicators for interfacing PLC and DC power supply
- Operating voltage : 24V
- PLC connection : 2mm and 4mm safety sockets

Pneumatic control module : 1 no.

- Pneumatic cylinder : 3 nos.
- Air pressure : 0.4~0.6Mpa
- PLC connection : 2mm and 4mm safety sockets

Pneumatic solenoid valve module : 1 no.

- Pneumatic solenoid valve : 3 nos.
- PLC connection : 2mm and 4mm safety sockets
- Interfacing facility pneumatic control module

Relay control module : 1 no.

- Double pole double through relay : 4 set (minimum)
- Relay operating voltage : 24VDC
- PLC connection : 2mm and 4mm safety sockets

Motor starter module: 1 no.

- Star delta status indication facility
- Relay operating voltage : 220V~240VAC
- PLC connection : 2mm and 4mm safety sockets

Input switch module: 1 no.

- Pushbutton switch : 4 nos.
- Push on push off switch : 4 nos.
- Relay operating voltage : 24VDC
- PLC connection : 2mm and 4mm safety sockets

Sensor module : 1 set

- Proximity sensor : 2 nos.
- Photo sensor : 2 nos.
- Thermocouplar : 2 nos.
- Operating voltage : 24VDC
- PLC connection : 2mm and 4mm safety sockets

Output Indicator module : 1 no.

- Output Indicator : 4 nos.
- Operating Voltage : 220V~240VAC
- PLC connection : 2mm and 4mm safety sockets

Variable Frequency Drive module : 1 no.

- Variable Frequency Drive : 1 no.
- Input : Single Phase
- Output : Three Phase 220VAC
- Input Operating Voltage : 220V~240VAC
- PLC connection : 2mm and 4mm safety sockets

Three Phase Induction motor module : 1 no.

- Three Phase Induction Module : 1 no.
- Input Operating Voltage : 220V~240VAC
- PLC connection : 2mm and 4mm safety sockets

Stepper Motor Control module : 1 no.

- Unipolar Stepper Motor : 1 no.
- Bipolar Stepper Motor : 1 no.
- Input Operating Voltage : 5V/12V
- PLC connection : 2mm and 4mm safety sockets

Seven Segment Display module : 1 no.

- Seven Segment Display : 2 nos.
- Input operating voltage : 5V/12V
- PLC connection : 2mm and 4mm safety sockets

Power Supply module : 1 no.

- Input operating voltage : 220V~240VAC
- Output AC voltage : 220V,50Hz
- Output DC voltage : 5V(1Amp),12V(1Amp), 24V(1Amp)
- PLC connection point : 2mm and 4mm safety sockets
- Fuse for safety.

MCB : 1 no.**Included Accessories:**

- Air compressor : 1 no.
- Connecting jack 2mm/4mm : 1 set
- Power cable : 1 no
- PLC to PC communication cable : 9 nos.
- PLC software