Scientech 2476 Pressure Measuring Workbench is a complete setup to control process through two points (On/Off) and three point (PID) controller. Pressure which we can control through an Ethernet based Data Acquisition System which has 24 bit ADC and digital input/output. Scientech 2476 also gives the exposure to Industrial components like Pressure Transmitter, Control Valves, Pressure Gauge, Solenoid Valve, Safety Valve users can learn how to calibrate, install, operate and tune the instruments for controlling the process. All electrical components are connected to the control panel to allow students to measure signals and connect the devices in wide variety of control configuration including open loop (manual control) and close loop (PID control, On/Off control).

Scientech 2476 comes with a versatile Software through which we can control it from any Computer in the local area network. The Software has features like logging of the process data, live and stored graphs that can be printed when needed, alarms that can be set for different points, animated real time view of complete process, with easy IP configuration.

Features

- 7″ Human Machine Interface (HMI)
- Types of Controller : DAQ, & HMI
- Study of Pressure Transmitter, Pressure Gauge, Control Valve, Solenoid Valve, PID, DAQ8 Channel 24 bit ADC & Safety Valve.
- Supplied with DAQ Software for supervisory control of the process with data acquisition
- Start, Stop, Compressor, Solenoid Valve buttons and Indicator for Visual Indicator, Audio Indicator, Compressor, Solenoid Valve
- Pressure Vessel
- Real time DAQ Inter face with ADC and Digital input/output
- Inter face with Ethernet based DAQ
- Industry-standard instruments and controls
- Academic and vocational study for process control engineers and plant technicians
- Experiments configurable through patch board
- Self -contained, bench-mounting arrangement
- Castor Wheel (with locking mechanism) is provided at legs of workstation so that it can be easily moved
- MCB is provided with AC supply for safety purpose
- Enhanced electrical safety consideration

Scope of Learning

Study and use of :

- Pressure transmitter Characteristics
- Control valve Characteristics
- On/Off controller using software
- Proportional controller using software
- Proportional-integral controller using software
- Proportional-integral-derivative controller using software
  Process Control & Monitor by HMI
- Creating Application/Screen in HMI
- Downloading and Uploading programs
- HMI Communication with PLC
- Creating Alarm Message in HMI
- Creating Trend in HMI

Technical Specifications

DAQ	: 1no.(Data Acquisition System)
Analog Input	: 1 no.
Digital Input	: 4 nos.
Digital Output	: 4 nos.
ADC Resolution	: 24 Bit
Two Unity Gain Amplifiers	: 0 to 5V
Ethernet	: Yes
Data Logging (PC based)	: Yes
RS485	: Yes
HMI	: 1no.(Human Machine Interface)
Supply	: +24V DC
CPU	: 32-bit 400MHz RISC
Storage	: 128M flash + 64M DDRAM
Display size	: 7 inch
Resolution	: 800×480 TFT LCD 65, 536 colors
Interface	: RS485
Touch Screen	: High precision four-wire resistive
Pressure Transmitter	: 1no.
Range	: 0-150psi
Accuracy	: ± 0.5 %
Output	: 4 to 20mA, 2 wire system
Control Valve	: 1no.
Input	: 4 to 20mA
Line Size	: 25mm
Supply Pressure	: 40 to 50 Psi
Type	: Linear
Pressure Gauge	: 3nos.
Range	: 0-110 psi (2), 0-150psi (1)
Dial	: 100 mm (2), 62mm (1)
Current Display	: 2nos.
Display	: 4 Digit, 7 segment digital displays
Keys	: 3 for digital setting
Input Type	: Current
Resolution	: 1 or 0.1 degree
Supply Voltage	: 230V AC

Safety Valve	:	1 no.
Range	:	120 Psi
4 to 20mA Source	:	1 no.
Potentiometer	:	1 no.
Output	:	4 to 20mA
Air Compressor	:	1 no.
Voltage	:	220V/50Hz
Power	:	0.75 HP
Pressure	:	100 Psi (maximum)
Tank Capacity	:	24 Liter
Push buttons	:	4 nos. (start, stop, compressor, solenoid valve)
Operating Voltage	:	+5V
Toggle Switch	:	4 nos.
Indicators	:	4 nos. (visual, compressor, solenoid valve, audio indicator)
AC Voltmeter	:	1 no.
Voltage	:	10 - 450Vrms
Accuracy	:	± (1% reading + 2 digits)
AC Ammeter	:	1 no.
Current	:	0.2 - 10Arms
Accuracy	:	±(1% reading + 2 digits)
Caster Wheel	:	4nos (with lock), 2 (without lock)
Size	:	4″
MCB	:	1 no.
Supply	:	230V AC
Current	:	16Amp.
Operating Voltage	:	+230V AC
Dimension in mm	:	H1630 x W1290 x D 830

Included Accessories

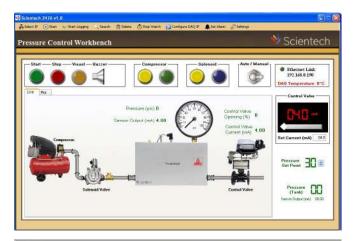|		
4mm patch cord 30″ (red)	:	10 nos.
4mm patch cord 30″ (black)	:	10 nos.
Ethernet cable	:	1 no.
Air Compressor	:	1 no.
PU Tube (10mm)	:	5 meters.

Windows OS Based PC (optional)

Note: Windows OS Based Computer is required to explore DAQ experiments

Software window

Subject to Change