



### Key features

Process Instrumentation Trainer Kit. is highly Flexible And modular system for studying of various Types of transmitters and actuators used in industrial Processes. It has been designed to include these processes in a single structure. The system includes Transducers, actuators, current source, heater control card, Digital panel meter and Electro pneumatic converter.

Key Words: -

- Flow Measurement loop.
- Level Measurement loop
- Pressure Measurement loop,
- Temperature Measurement loop,

### Technical Specifications

- Sump Tank 1 No. Material: P.P.5mm thick / Stainless Steel, 1.5 mm thick,
- Capacity: 53 liters, Dimension: 18"(L) ×12"(W) ×15"(H).
- Level Tank 1 No. Material: P. P. 5 mm thick, Dimension: 6 "×6"×24"
- Heater / Geyser 1 No. Capacity: 3 KW
- Piping 1" GI, Class B, with 1" SS ball valves (12 Nos)
- Centrifugal Pump 1 No. 1 HP, 1φ 230 V AC supply, Surface mounting
- Pneumatic Control Valve 1 No. Type: Pneumatic, Size: 1", Input: 3-15 psig, Linear / Equal Percentage
- Temperature Transmitter- 1 No. Température Probe PT100, Type-2 wire, Range: 0-100°C, Output: 4-20 mA,
- Flow Transmitter 1 No. 1", Turbine type / WFM type / DPT (Differential Pressure Transmitter) type. Range: 0-2000 LPH,

*Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.*



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- Output: 4-20 mA, Type: 3-wire type, Supply: 24 V DC: 100 mA
- Mounting: Horizontal, Connection: 1"
- Level Transmitter 1 No. Probe length Input: 0-500 mm Output: 4-20 mA, supply: 24 V DC,
- Type: 2-wire capacitance type, Mounting: Top 2"screwed connection
- Pressure Transmitter 1 No. GPT, Type: 2 wire, Range: 0-2.5 bar, Output: 4-20 mA, Connection -1/4 " BSP
- I to P Converter- 1 No. Current loop resistor, Input: 4-20 mA, Output: 3-15 psi, Supply- 1-4 Kg/cm<sup>2</sup>
- Thyresterized Phase Angle Control Card - 1 No. Input: 4-20 mA, Output: 0-230 VAC variable, 10 A Max
- Rotameter 1 No. Range: 100-2000 LPH, Glass tube type/acrylic body, Bob Material: SS 304 Connection: 1 ", Mounting: Inlet- Bottom, Outlet- Top.
- Air Filter Regulator With Pressure Gauge - 1 No. Connection- 1/4 ", Pressure Gauge Range: 0-10 Kg/cm<sup>2</sup>
- Pressure Vessel 1 No. Shape Cylindrical, Material MS CRCC, / SS 304
- Diameter: 150mm, Length: 300mm , Capacity: 15 Kg/cm<sup>2</sup> with 1/2 "/ 1/4 " BSP
- Connection For Pressure Gauge (0-4 Kg/cm<sup>2</sup> ), Pressure Transmitter and Inlet, outlet facility
- Air Compressor (Optional) 01 No. Tank capacity: 20/24 Liters, Discharge: 2 CFM
- Motor: 1 H.P/2 H.P, Supply-230 V AC, 50 Hz , Working pressure: 5-6 kg/cm<sup>2</sup>
- Current source 01 nos. input supply:-230 VAC, For measuring Transmitter Output, 4-20mADC, Programmable Type
- Digital panel meter 05 nos. Range: 0-20mA, Supply: 230 VAC, Programmable Display
- Electrical Control panel 01 No. MS Powder coated panel with switches, indicator, Test Points, Current source on front facia, UK 2.5 Terminal connectors mounted on DIN rail channel, Use of 1sq mm Multistrand wire with proper insulated Lugs, Ferruling & neat wire dressing & clamping Wires & power cables are seated through 1"x1"PVC cable tray. Dimension: 1ft (L) x1ft (W) x1ft (H).
- Orifice d/D =  $\beta = 0.51$ , thickness = 5mm, material SS type, Type : concentric
- Relay 01 nos. 24VDC, 2 C/O ,
- Pressure Gauge 02 nos, 0-4 Kg/cm<sup>2</sup>, Dial Size:100 mm, 0-2.5Kg/cm<sup>2</sup>, Dial Size 40mm
- Power Supply 01 nos. O/P- 24V DC, 3A ; Supply: 230VAC
- U Tube Manometer 01 No., U-Tube manometer, H-400mm, Panel mounting type
- Level Switch 01 Nos. MINI FLOAT LEVEL SENSOR FOR WATER: 2 Wire, Supply: 24VDC operated
- Solenoid Valve 01 Nos. 1/2" connection 24V DC operated
- Frequency transmitter 01 Nos. Freq I/P- 50 – 500Hz, O/P- 4-20mA ; Supply: 230VAC

### Features-

- Compact Ergonomic Design.
- User Friendly, Self Explanatory Systems.

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- Leak proof Safety Measures, sturdy piping.
- Enhanced Electrical Safety Considerations.
- Training Manuals and mimic Charts for Operation Ease.
- System Frame with Caster Wheel Arrangement for ease in movement.
- M.S. powder coated cubical plant with standard Instrument Mountings.
- Inbuilt Safety Measures to avoid improper usage.

**Range of Experiments-**

- Measurement Loop: - Study of Flow transmitter and measurement.
  - Study of Level transmitter and measurement.
  - Study of Temperature transmitter and measurement.
  - Study of Pressure transmitter and measurement.
- Study of Control valve & its characteristics.
- Study of electro-pneumatic converter & its operation.
- Study of frequency transmitter & its operation.
- Study of solenoid valve & its operation.

**System Dimension** - Approx 57" (L) X 21" (W) X 67" (H)**Weight:** Approx. 200kg.

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