



Calibration Trainer (52389) gives an idea regarding the procedure for operation & calibration of Actuators & Transducers. Electricals and pneumatic signals are used for the operation and calibration of these Actuators & Transducers. Precision Air Pressure Regulator (APR) with manometer are used to generate pneumatic signals. Voltage-Current source is used as auxiliary power source for instruments which requires electrical supply as a input. Various control loop components such as Control valve with positioner, Voltage-Current source, Calibrator, Controller, Transducers are used in the calibration trainer using supplied hoses and cables.

#### Features

- Compact Ergonomic Design.
- User Friendly, Self Explanatory Systems.
- Robust Construction.
- MS Powder coated movable vertical Frame.
- Training Manual for Operation Ease.
- Caster wheel mounted movable frame

#### Experiments

- To study the Calibration of Differential Pressure Transmitter
- To study the Calibration of Manometer
- To study the Calibration of Pressure Transmitter
- To study the Operation & inherent characteristics of Pneumatic Control Valve
- To study the Operation of Electro Pneumatic Positioner
- To study the Operation of Universal Calibrator

Note: Specifications are subject to change.

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- To study the Operation of Controller
- To study the Operation of different signals: 1) Pneumatic Signal, 2) Electrical Signal.
- To study of inter connection of control loop components

#### System Accessories-

- Differential Pressure Transmitter
- Controller
- Manometer
- Precision Regulator
- Process Indicator (mA indicator)
- Air supply distribution manifold
- Pressure Transmitter
- Calibrator
- Pneumatic Control Valve with Positioner
- Voltage-Current Source

#### Services Required

- Electric supply 230 V AC, 50 Hz.
- Suitable compressed air supply (0-4 Kg/cm<sup>2</sup>)

### Technical Specification

| No. | Item Name   | Technical Specifications  |
|-----|---|---|
| 1   | Controller  | With Serial PC Interface (ASCII Protocol) USB / Ethernet / RS 485 / RS 232, Cut Out Size: 92mm ´ 92mm ´ 144mm, Input: 4-20 mA, Output: 4-20 mA, Display: Dual for PV & SP, Bar graph display for Output & deviation, Hi-Low Alarm annunciation. |
| 2   | Differential Pressure Transmitter                         | Input: 0-4000 mm of WC, Output: 4-20 mA, Power supply: 24 V DC, 30 mA.  |
| 3   | U-Tube Manometer  | Range: 0-1000 mm of WC, Glass tube type   |
| 4   | Precision Air Pressure Regulator                          | 0-2.1 Kg/cm <sup>2</sup> With gauge, Vertical wall mounting type  |
| 5   | Pneumatic Control Valve with Electro Pneumatic Positioner | Size: ½", Type: Two way Globe type (Air to Close), Cv: 5 US GPM, with diaphragm actuator, equal % characteristics. Positioner I/P: 4-20mA & O/P: 3-15 psig.   |
| 6   | Calibrator  | Hand held portable source and sink for mV, mA, Resistance & Temperature. Battery as well as 230V AC operated, With fine and Coarse adjustment.  |
| 7   | Pressure Transmitter                                      | Input: 0-2.5 Kg/cm <sup>2</sup> / 0-4 Kg/cm <sup>2</sup> , Output: 4-20 mA, Type: 2-wire Piezoresistive type, Supply: 24 V DC, 50 mA, Mounting: Top ½" BSP connection   |
| 8   | Process Indicator   | Input: 4-20 mA, 3 ½ digit display, 230 V AC operated  |
| 9   | Voltage-Current Source                                    | Input: 230 V AC Supply, Output: 0-10V & 4-20mA  |
| 10  | Air manifold  | ¼", 4/6 ways.   |
| 11  | Air Compressor (Optional)                                 | Tank capacity: 25 Liters, Discharge: 2 CFM<br>Motor: 1 H.P. 230 V AC Operated, Working pressure: 5-6 kg/cm <sup>2</sup>   |

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