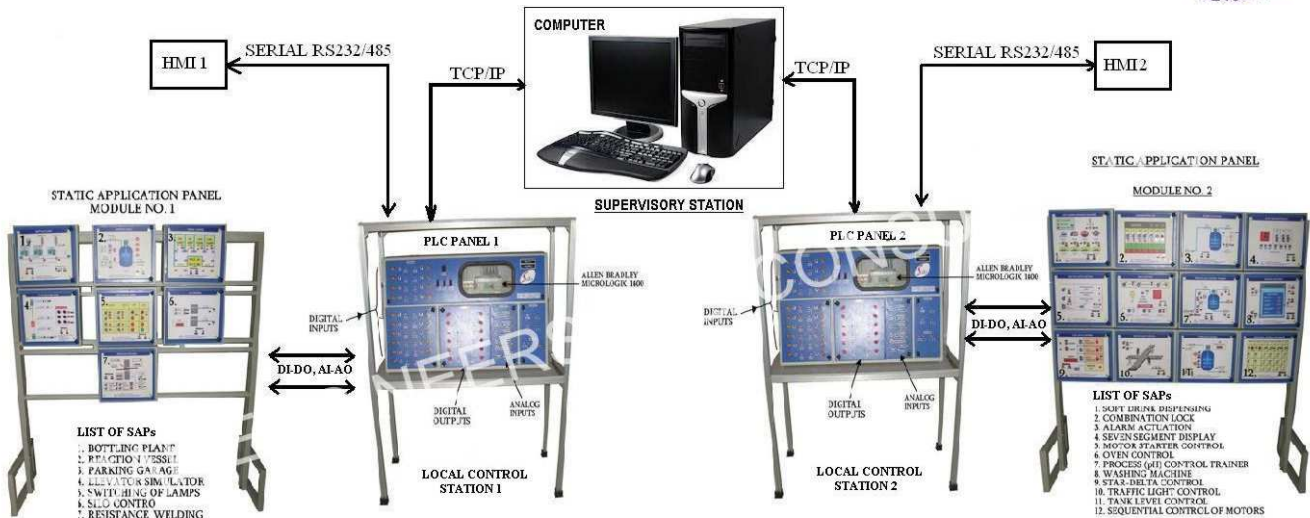


# SAP E & C DISTRIBUTED CONTROL SYSTEM SIMULATOR TRAINER (PRODUCT CODE: SAP - 90)



The **Distributed Control System Simulator Trainer (SAP - 90)** outlines the principle of Distributed control System used in Industrial Environment. The Static Application Panels provide an idea of different Process Plants. The Static Application Panels (SAPs) are mounted on M S Powder coated Frame and can be arranged in sequence as per the requirement.

The SCADA software & an interfacing package, PLC-Master Controller based data logging & Distributed Control facility gives the overall idea regarding its application.

### Technical Specification:

No.	Item Name	Technical Specifications
<b>A] PLC PANEL/ LOCAL CONTROL STATIONS:</b>		
All digital as well as Analog I/Os are brought out on these panels for easy connection.		
1	PLC-	2 No.s, <b>Allen-Bradley Micrologix 1400 L32BXBA / STD. Equivalent</b> , 8 Point Ethernet Switch. Digital inputs: 20, Digital outputs: 12 ( <b>Micrologix 1400</b> ) Analog Inputs: 4, Analog Outputs: 2 <b>RS LOGIX Software:</b> 1 NO., Ladder diagram programming on PC. <b>RS LOGIX 500 MICRO STARTER 9324RLM0100ENE.</b> <b>Communication-</b> RS 232 / RS 485 / Ethernet/ TCP-IP.
2	Power Supply-	24 V DC, 3 A, Size: 4" (L) X 2" (W) X 2" (H).
3	Interface Facility-	PC interface facility. PC-PLC interfacing cable 1761-CBL-PM02
4	RS 485 / RS 232 Converter-	For Converting RS485 Signals (If RS 485 protocol is used) into RS232 signals.
5	Electrical Control Panel-	MS Powder coated panel with switches, indicator, Test Points, controller on front fascia, UK 2.5 Terminal Connectors mounted on DIN rail channel. Use of 1sq mm multi-strand wire with Proper insulated Lugs, Ferruling & neat wire Dressing & clamping Wires & power cables are Seated through 1"×1" PVC cable tray. Input - Output LED indication on front panel. Necessary Input -Output simulating devices. Front panel for display of digital I/O status: Lamps (14no.), LED Indicators (10no.)

**SAP E & C DISTRIBUTED CONTROL SYSTEM SIMULATOR TRAINER**  
**(PRODUCT CODE: SAP - 90)**



**B] SUPERVISORY STATIONS:**

6	<b>SCADA Application Software (Optional)-</b>	Above PLC can be turned into SCADA Trainer using PC Based SCADA Application Software. SCADA Application Software with 75 Tags is provided for Simulation of the following 19 Static Application Panels. RS View 75 Tags SCADA Application S/W, PID setting (P, PI And PID mode), Auto/Manual Tuning of PID, Software Data Storage, Off Line analysis, Online Data Acquisition, Simulation and Printing Of data in Graphical and tabular form. Interactive Graphical User Interface (GUI) includes.
7	<b>Computer (Optional)-</b>	PC with color monitor: 15", PC Pentium Dual Core, with serial communication ports, 160/300 GB HDD, 512MB/ 1 GB RAM.

**C] STATIC APPLICATION PANELS:**  
**[To be hooked up with PLC Trainer – (PCST – 14)]**

Simulating Modules consisting of Display on Mimic mounted on M.S. Powder Coated Frame with Indicators for Input-Output & Toggle Switches.

\* These Modules can be purchased either individually or collectively

- 1) Oven Control (Optional)
- 2) Bottling Plant (Optional)
- 3) Parking Garage (Optional)
- 4) Combination Lock (Optional)
- 5) Elevator Simulator (Optional)
- 6) Silo Control (Optional)
- 7) Alarm Actuation (Optional)
- 8) Motor Starter Control (Optional)
- 9) Resistance Welding (Optional)
- 10) Sequential Control Of Motors (Optional)
- 11) Soft Drink Dispensing Machine (Optional)
- 12) Star Delta Control (Optional)
- 13) Seven Segment Display (Optional)
- 14) Switching Of Lamps (Optional)
- 15) Tank Level Control (Optional)
- 16) Traffic Light Control (Optional)
- 17) Washing Machine (Optional)
- 18) Reaction Vessel (Optional)
- 19) Process (Ph) Control Trainer (Optional)

**D] M.S. Powder Coated Frame for Mounting Eight Static Application Panels & for Supervisory Station**

**E] HMI (Optional)**

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**(PRODUCT CODE: SAP - 90)**



**Range of experiments-**

- ❖ Study of Distributed Control System.
- ❖ Auxiliary Experiments.
- ❖ Study of Hierarchical control system.
- ❖ Study of SCADA Application Software/
- ❖ Computerized Control of Distributed Control System.

**Features-**

- ❖ Compact Ergonomic Design.
- ❖ User Friendly, Self Explanatory Systems.
- ❖ Leak proof safety Measures, sturdy piping.
- ❖ Enhanced Electrical Safety Considerations.
- ❖ Training Manuals & 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.

**Services Required:**

- ❖ Electrical supply of 1 $\phi$  230V 50Hz.

**Note:**

All descriptive matter and illustrations are intended to give only a general idea of the equipment detailed specifications may be altered at the company's discretion without any notice.

Manufactured/Marketed By

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