

SIMULATOR OF PROGRAMMABLE SYSTEMS

Mod. SSP-1/EV

INTRODUCTION

Simulating various systems and installations is very useful in training practice; in fact, the physical part of an installation is often complex and cumbersome, but in the meantime it is essential from a functional point of view; simulators are designed to replace this part of systems.

System Simulator mod. SSP-1/EV is equipped with 20 interchangeable masks, thus it can reproduce different installations with sequential and analog control. Simple electric connections can interface the process reproduced on the mask to PLC inputs and outputs. Processes are represented on masks via LEDs, bargraphs, pushbuttons, limit switches, etc...

Users can write the control program in the programmable controller or they can use the programs supplied with the controller that can also be customized.

This System Simulator consists of a basic module that houses the various masks corresponding to the system having to be simulated, from time to time. This simulator is also equipped with a handbook including some exercises already developed for each mask (available also on CD) for PLC training panel mod. PLC-V7/EV (not included).

TRAINING PROGRAM:

The training programme includes the following exercises:

1 - FILLING A BIN

Managing the process control for filling a bin

2 - ELEVATOR

Controlling an elevator moving on 4 floors

3 - PEDESTRIAN TRAFFIC LIGHT

Controlling a traffic light unit on main road with pedestrian crossing

4 - STARTING AN ASYNCHRONOUS WOUND-ROTOR MOTOR

Controlling the starting sequence by 1, 2 or 3 (selectable) steps. Resetting the initial conditions at stop

5 - STARTING DAHLANDER MOTOR

Controlling the HIGH / LOW motor speed

6 - REVERSAL OF ROTATION OF ASYNCHRONOUS MOTOR

Controlling the direction of rotation of the motor

7 - STAR-DELTA START OF ASYNCHRONOUS MOTOR

Controlling the D/Y starting sequence at adjustable times; resetting the initial conditions at stop

8 - SEQUENTIAL NEON SIGN

Controlling different programs of sequential lighting of 1 to

8 lamps, with separate variation of lighting times; operation: AUTO/MAN and UP/DOWN

9 - DRINK MACHINE

Simulating the different operation sequences of a drink machine

10 - REACTOR

Managing the reaction with control of refrigerant (hot and cold) and of mixer

11 - MIXER

Controlling the mixing process of different substances

12 - STARTING AN ASYNCHRONOUS MOTOR

Starting sequence of an asynchronous motor

13 - CAR PARK

Controlling a car park with indications of "FULL" and of "FREE BAYS"

14 - COMPRESSED AIR NETWORK

Controlling compressors and tank for production and distribution of compressed air

15 - CONVEYOR BELTS 1

Transport of sandy material controlled by three conveyor belts

16 - CONVEYOR BELTS 2

Controlling conveyor belts for the transport of various products

17 - FILLING SYSTEM 1

Automatic filling process of tablets

18 - FILLING SYSTEM 2

Filling process of three tanks

19 - MACHINING LINE

Implementation of different sequences by the use of all the phase or of some of them

20 - MONITORING THE OPERATION OF FOUR PUMPS

Controlling the operation of four pumps for testing pressure inside a distribution network



TECHNICAL SPECIFICATIONS:

This System Simulator consists of a panel that can be used as tabletop unit or mounted on vertical frame.

It includes 12 inputs and 12 digital outputs connected via safety leads with plugs of Ø 4 mm. Two potentiometers enable to set two analog variables (0 – 10 V) used, for instance, to indicate the filling rate of a bin, the up and down movements of an elevator, etc...

6 instantaneous contacts held by switches and 6 LEDs of state indication are available on the fore panel.

A bargraph display will show the level of a tank or the position of an elevator; 6 electric limit switches enable to monitor the minimum/maximum positions, as well as the intermediate positions.

Dimensions: 390 x 297 x 100 mm

Net weight: 5 kg

SUPPLIED ACCESSORIES:

Set of 24 leads with safety plugs (Ø 4 mm)

SYSTEM REQUIREMENTS - PLC:

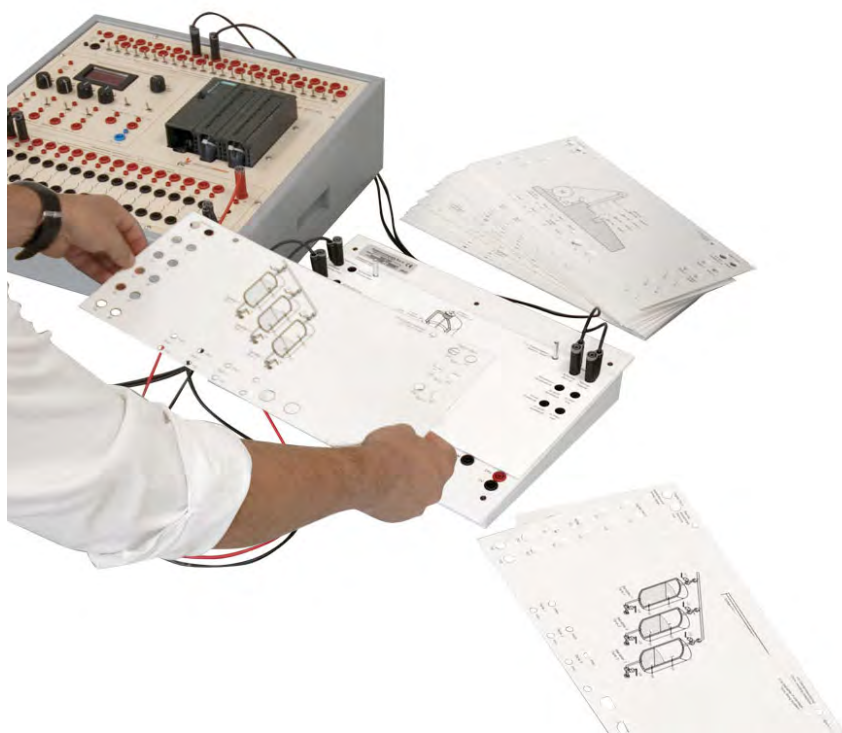
- 12 positive-logic digital inputs
- 12 digital outputs, 24 Vdc
- 2 analog inputs, 0-10 Vdc
- 2 analog output, 0-10 Vdc

RECOMMENDED PLC:

For a better educational experience use PLC Training panel mod. PLC-V7/EV (not included).

AS AN ALTERNATIVE:

PLC Training panel mod. PLC-V8/EV (not included). Remark: Mask 14 - *Compressed air network* cannot run with this PLC.



Example of configuration with a PLC training panel (not included)

POWER SUPPLY:

24 Vdc (that can be output by the PLC)

THEORETICAL-EXPERIMENTAL HANDBOOKS

Handbook of installation and of theoretical-experimental use, with exercises. It includes the application for PLC on magnetic storage medium.