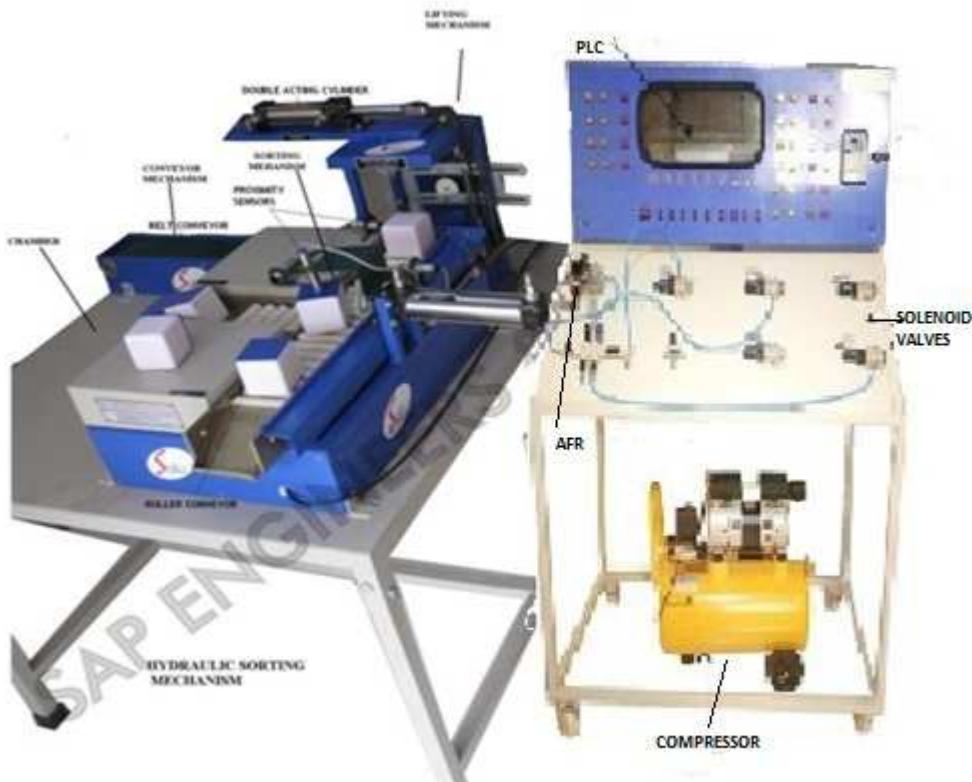


**SAP E & C PLC BASED ELECTRO PNEUMATIC (COLOR/MOC) SORTING MECHANISM**  
(PRODUCT CODE: SAP – 87 P)



**PLC Based Electro Pneumatic (Color/MOC) Sorting Mechanism (SAP – 87 P)** outlines the basic Principle of Pneumatic Control System & its applications for Sorting Mechanism using PLC, electronic Proximity position sensor & electro-mechanical actuators (solenoid valves).

**FIG. PLC BASED ELECTRO PNEUMATIC (COLOR/MOC) SORTING MECHANISM**

**A] ELECTRICAL CONTROL PANEL-**

No.	Item Name	Technical Specifications
1	PLC-	Siemens Logo/Allen Bradley Micro 800 series/Equivalent, Digital Inputs- 8, Digital Outputs- 6, Supply 24V DC, with Programming Software and Communication Cable
2	Power Supply-	24 VDC, Power Source- 3A.
3	Proximity Sensors-	Inductive type : 3nos., 3 wire PNP type, 24 VDC, Sensing Distance: 5-8mm Optical Type: 4nos, 3 Wire, Sensing Distance: 50mm, 24 VDC
4	Color Sensor -	1 No., 3 wire PNP NO type, 24 VDC Operated, Sensing Distance: 7-10mm
5	Indicating Lamps-	24 V DC, On front panel for display of digital input/output status Amber : 8 Nos., Red : 6 Nos.
6	Momentary Push Buttons-	24 V DC operated, 8 nos.
7	Electronic 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, Feruling & Through 1"x1" PVC Cable Tray. Dimensions: 2.5" x 1.5" x 5.5"

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**B] PNEUMATIC WORK STATION:-**

No.	Item Name	Technical Specifications
1	Double Acting Cylinder-	4 Nos., Bore: 25 mm, Stroke: - 100mm, Mounting: Foot.
2	5/2 Single Solenoid Valves-	4 nos. 24 V DC operated, ¼" Connection
3	A.F.R. / F.R.L. Unit-	¼", 0-10 Kg/cm <sup>2</sup> with Pressure Gauge
4	Plastic Tubing-	PUN 4×0.75, Exterior Diameter-6mm, Interior Dia.- 4mm, Transparent – 10mtrs/Blue- 10mtrs.
5	Air Compressor-	Tank capacity: 25 Liters, Discharge: 2 CFM,1 H.P.

**C] PROCESS MODULES:-**

**I) STACKING MODULE-**

No.	Item Name	Technical Specifications/Objective
1	Raw material stacker-	01 No., Dimension: 80mm x 80mm x 460mm
2	Double Acting Cylinder -	Used for Pushing the object from stacker to conveyor module.
3	Raw material-	Cubical Blocks, 6 Nos., Dimension: 75mm x 75mm x 75mm

**II) CONVEYOR MECHANISM/MODULE-**

No.	Item Name	Technical Specifications
1	Conveyor Belt-	1 No., 100mm X 800mm
2	Roller Conveyor-	1 No., 100mm X 650mm

**III) LIFTING MECHANISM/MODULE-**

No.	Item Name	Technical Specifications
1	Chain-Sprocket-	1 No.
2	Double Acting Cylinder-	Used for Lifting Up the Objects, thus forming a Lifting Mechanism. The Piston rod of the Double Acting Cylinder lifts the object.

**IV) SORTING MECHANISM/MODULE-**

No.	Item Name	Technical Specifications
1	Sorting Mechanism-	Used to sort different Objects, such as Metallic Objects & non-metallic objects
2	Double Acting Cylinder-	Used to sort the Object & push it off the Roller Conveyor.
3	Objects to be sorted-	The Sorted Object is collected in a Chamber(Metallic & Non-Metallic Blocks)

**Feature: -**

- ❖ Compact Ergonomic Design.
- ❖ All Pneumatic components identical to those used in industry.
- ❖ User Friendly, Self Explanatory Systems.
- ❖ Leak proof Safety Measures, sturdy piping & Robust Construction.
- ❖ Training Manual, mimic Charts for Operation Ease.

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- ❖ System Frame with Caster Wheel Arrangement for ease in movement.
- ❖ M.S. fabricated powder coated with necessary fittings and Pneumatic mountings.
- ❖ Inbuilt Safety Measures to avoid improper usage.
- ❖ Integration of Electronic, Instrumentation and Pneumatics in single unit.
- ❖ Detailed Operation & Instruction Manual

**Services Required:**

- ❖ Electric supply 1 $\phi$  230 V AC , 50 Hz

**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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