Order Code - 52384
PLC Based Electro Pneumatic Sorting Mechanism

PLC Based Electro Pneumatic (Color/MOC) Sorting Mechanism (52384) outlines the basic Principle of Pneumatic Control System & its applications for Sorting Mechanism using PLC, electronic Proximity position sensor & electro-mechanical actuators (solenoid valves).

Services Required

- 1φElectric Supply of 230 VAC, 50Hz

Features

- 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.
- 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

(A) ELECTRICAL CONTOL PANEL

Technical Specification

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"×1" PVC Cable Tray. Dimensions: 2.5" x 1.5" x 5.5"

Note: Specifications are subject to change.

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(B) PNEUMATIC WORK STATION

Technical Specification		
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/cm2 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)

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