VPL-PLCTS

PLC & HMI Training System (Allenbradley/Siemens)

SPECIFICATIONS

1. **PLC Unit–1No.**
   - Atleast 16 digital inputs each connected with toggle switch and 4 mm sockets
   - At least 16 digital outputs each connected with 4 mm sockets

     Atleast 4 analog inputs on 4 mm safety sockets with options to switch to simulate via potentiometer
   - Atleast 2 analogue outputs on 4mm safety sockets
   - Inbuilt 24V DC power supply unit
   - This PLC unit be compatible with above electropneumatics kit and also with below modular production system
   - Preference: Reputed make
   - Mounting arrangement to fix with electrical mounting frame and able to use as a tabletop
2. **PLC Programming Software,**

   1 user: - 1 No.(perpetual).
3. **Touchpanel - 1No.**
   - Size: Atleast 7 inches
   - Touch and button functionality
   - It has a Ethernet Switch to connect with above PLC
   - Mounting arrangement to fix with electrical mounting frame and able to use as a tabletop
4. **Ethernet cable, 2M: 2 Nos.**

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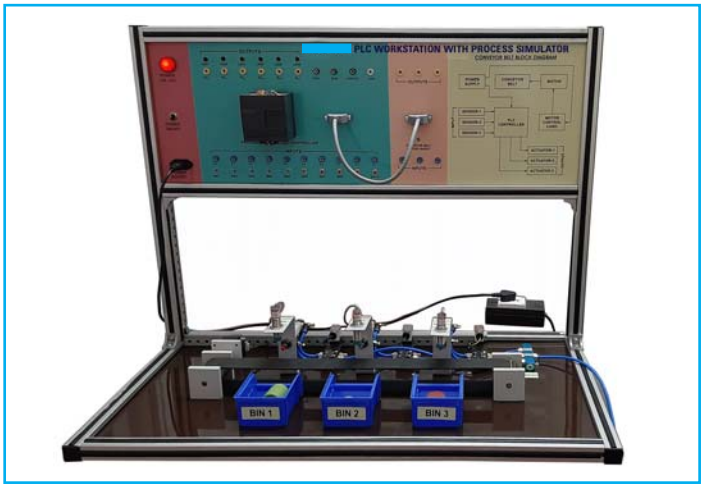
VPL-PLCS-PCS

IIOT Enabled PLC-based Sorting Process Control Application Training System



FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 8 digital inputs, 6 digital outputs, 2analog inputs, and 1 analog output, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics.
- The system comes with licensed PLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- Real-world components like Pneumatic Solenoid valve and Pneumatic Cylinder with Reed switch, Small Air compressor, Conveyor belt with DC brushless motor and its driver, Inductive Proximity Sensor, Capacitive Proximity sensor, toggle switches, proximity sensors, selector switches, visual and audio indicators, DC motors, relays, contactors, and voltage displays offer students a hands-on, practical experience with equipment they might encounter in the field.
- Sorting process monitor and control from anywhere using mobile devices and applications.

TECHNICAL SPECIFICATIONS:

- PLC has 8 digital inputs, 6 digital outputs, 2 analog inputs with10 bit resolution, 1 analog outputs with Ethernet communication facility.
- This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor 1 no. , Selector switch 1no., Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relaycard 1no. (Contains 2 relays), Contactor 1no., Pneumatic Solenoid Valve 2Nos.
- Pneumatic Double Acting cylinder with magnetic reed switch 2 Nos. , Nema17 Planetary Geared BLDC Motor 14Kg cm 290 RPM with industrial Brushless DC Motor Driver (BLDC) 250W with RS485 Modbus, Small Air Compressor, IIOT Device 1 No.

Experiments:

- Program operation of NO (normally open) and NC (normally closed) instruction, Types of logic gates, Set and reset bit, Types of timers (TON, TOFF,TONR), Types of counter (CTU, CTD, CTUD), Types of compare instruction, Types of math function, Mov instruction, Analog Input and Outputs, SCALE_X (Scale) and NORM_X (Normalize) instructions.
- Interfacing of Inductive proximity sensor and capacitive proximity sensor with PLC.
- Interfacing of Pneumatic Solenoid Valve and Pneumatic cylinder with PLC.
- Write a Ladder program for Sorting process of Metallic object and nonmetallic using Inductive proximity sensor and capacitive proximity sensor, Pneumatic Solenoid Valve and Pneumatic cylinder and PLC.
- Realtime interface of web SCADA with PLC.
- Learn how to develop and utilize cloud- based SCADA systems for global access to process data and remote control. With Cloud SCADA, users can access live process data, control operations, and monitor systems from anywhere using mobile devices and applications.
- Gain experience in data logging, downloading data, and analyzing alarm histories through the Cloud SCADA system.
- Use tools to export data directly into Excel, helping track process performance, monitor trends, and optimize operations.

Note: Images given are for representation only and the final equipment can change according to its specifications.

VPL INFOTECH & CONSULTANTS, 101-102, 1st Floor, Savitri Sadan-II, 15 Comm. Centre, Preet Vihar, Delhi-110 092 (India).
Phone: +91-11-42421466 E-mail: vplinf@gmail.com, vplinf@rediffmail.com Http://www.vplinf.com, www.vplinfotech.com

VPL-PLCS-ECT

IIOT Enabled PLC based Elevator Control Application Training System

FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 20 digital inputs, 12 digital outputs, 4 analog inputs, and 2 analog output, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics.
- The system comes with licensed PLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- 4-floor model designed for training purposes in order to see the PLC and electromechanics carrier applications together.
- It is designed in a transparent structure order to examine the mechanical and electronic systems.
- Real-world components like DC Motor, Limit Switch, Proximity sensor toggle switches,selector switches, visual and audio indicators, DC motors, relays, contactors, and voltage displays offer students a hands-on, practical experience with equipment they might encounter in the field.
- Elevator process monitor and control from anywhere using mobile devices and applications.

TECHNICAL SPECIFICATIONS:

- PLC has Digital Inputs 20 Nos., Digital Outputs 12 Nos., Analog Inputs 4 Nos., Analog Outputs 2 No., Communication Ethernet.
- This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor 1 no. , Selector switch 1 no., Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relay card 1 no. (Contains 2 relays), Contactor 1 no., 4 pcs inductive floor level sensors, 2 pcs inductive limit sensors, 4 pcs call to floor button with led indicator, 4 pcs bring to floorbutton with led indicator, 5 pcs 7 segment floor level displays, DC motor with reducer,Transparent cabin door and IIOT device 1 No.

Experiments:

- Program operation of NO (normally open) and NC (normally closed) instruction, Types of logic gates, Set and reset bit, Types of timers, Types of Counter, Types of compare instruction,Types of math function, Mov instruction, Analog Input and Outputs.
- Examination of operating principle of elevator mechanism.
- Connection and control of mechanical tructure. On-board sensor circuit applications. Examination of motor control.
- Interfacing of proximity sensor with PLC.
- Interfacing limit switch with PLC.
- Interfacing with Seven Segment display with PLC.
- Write a ladder program for Elevator control using PLC.
- Learn how to develop and utilize cloud- based SCADA systems for global access to process data and remote control. With Cloud SCADA, users can access live process data, control operations, and monitor systems from anywhere using mobile devices and applications.
- Gain experience in data logging, downloading data, and analyzing alarm histories through the Cloud SCADA system. Use tools to export data directly into Excel, helping track process performance, monitor trends, and optimize operations.

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VPL-PLCS-TLC

PLC Control Traffic Light Control application Training System

FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 16 digital inputs, 16 digital outputs, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks control, and diagnostics.
- The system comes withPLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- A training system features is an educational tool used for teaching students and engineers about traffic light control systems, automation, and PLC programming.
- This system simulates how real-world traffic light systems function, helping learners understand the interactions between inputstimers) and outputs (such as traffic lights) controlled by a Programmable Logic Controller (PLC).
- Real-world components like proximity sensors, selector switches, visual and audio indicators, DC motors, relays, contactors, and voltage displays offer students a hands-on, practical experience with equipment they might encounter in the field.

TECHNICAL SPECIFICATIONS:

- PLC has Digital Inputs 16 Nos., Digital Outputs 16 Nos., Communication Ethernet communication facility.
- This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor 1 no., Selector switch 1 no., Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relay card 1 no. (Contains 2 relays) Contactor 1 no., Traffic light module: 1 No.

Experiments :

- Program operation of NO (normally open) and NC (normally closed) instruction, Types of logic gates, Set and reset bit,Timers, Counters, Types of compare instruction, Types of math function.
- Study of traffic light.
- Study and use of memory bit and timers.
- Traffic light control by PLC through ladder program.
- Study of signal indications for two direction.
- Students will gain practical experience with controlling multiple devices (LEDs, sensors, actuators) in a coordinated manner.
- Students will understand how timers and counters are used in automation to sequence events (e.g., switching from Green to Yellow to Red).

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VPL-PLCS-TCT

IIOT enabled PLC Control Temperature Control application training system

FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 6 digital inputs, 6 digital outputs, 2 analog inputs, and 1 analog output, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics.
- The system comes with PLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- Real-world components like Temperature Sensor, small heater and fan toggle switches, proximity sensors, selector switches, visual and audio indicators, DC motors, relays, contactors, and voltage displays offer students a hands-on, practical experience with equipment they might encounter in the field.
- Temperature Control process monitor and control from anywhere using mobile devices and applications

TECHNICAL SPECIFICATIONS:

- PLC has Digital Inputs 6 Nos., Digital Outputs 6 Nos., Analog Input 2 Nos., Analog Output 1 No., Communication Ethernet. This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor1 no., Selector switch 1 no., Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relay card 1 no. (Contains 2 relays), Contactor 1 no., Temperature Sensor 1 No., Heater and Fan 12V DC with 6A Relay and IIOT Device 1 No.

Experiments :

- Program operation of NO (normally open) and NC (normally closed) instruction, Types of logic gates, Set and reset bit, Timers, Counters, Types of compare instruction, Types of math function, MOV Instruction, Analog Input and Analog Outputs.
- Interfacing of Temperature sensor with PLC.
- Temperature Sensor Controlling a heater and fan Temperature control by PLC through ladder program.
- Learn how to develop and utilize cloud- based SCADA systems for global access to process data and remote control. With Cloud SCADA, users can access live process data, control operations,andmonitorsystemsfrom anywhere using mobile devices and applications.
- Gain experience in data logging, downloading data, and analysing alarm histories through the Cloud SCADA system. Use tools to export data directly into Excel, helping track process performance, monitor trends, and optimize operations.

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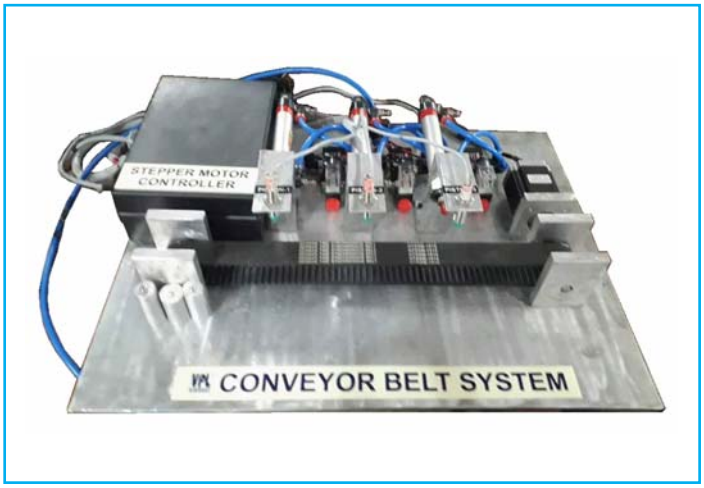
VPL-PLCS-BFT

IIOT enabled PLC Control Bottle Filling Application PLC Training System



FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 16 digital inputs, 16 digital outputs, 5 analog inputs, and 2 analog output, providing the necessary I/O capabilities for various industrial automation tasks. It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics. The system comes with Licensed PLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- Real-world components liketoggle switches, proximity sensors, selector switches, visual and audio indicators, DC motors, relays, contactors, and voltage displays offer students a hands-on, practical experience with equipment they might encounter in the field.
- A Conveyor System with PLC control for the movement of bottles, including liquid filling operations and bottle counting, is aindustrial automation setup. This system is commonly used in bottling plants where bottles are moved along a conveyor, filled with liquid, and counted for packaging and distribution.
- Bottle Filling Control process monitor and control from anywhere using mobile devices and applications.

TECHNICAL SPECIFICATIONS:

- PLC has Digital Inputs 16 Nos., Digital Outputs 16 Nos., Analog Inputs 5 Nos. Analog Outputs 2 No, ethernet communication facility and suitable licensed software.
- This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor 1 no., Selector switch 1 no., Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relay card 1 no. (Contains 2 relays), Contactor 1 no., Conveyor System with Motor unit, Water Pump, Float Switch, Solenoid valve.

Experiments:

- Program operation of NO (normally open) and NC (normally closed) instruction, Types of logic gates, Set and reset bit, Types of timers, Types of Counter, Types of compare instruction, Types of math function, Mov instruction, Analog Input and Outputs. Study and use of Bottle filling system.
- Interfacing of Solenoid with PLC.
- Interfacing of Pump with PLC.
- Interfacing of Conveyor system with PLC.
- Interfacing of Capacitive Sensor with PLC.
- Write a Ladder program for Bottle filling operation.
- Write a Ladder program for bottle counting.
- Learn how to develop and utilize cloud- based SCADA systems for global access to process data and remote control. With Cloud SCADA, users can access live process data, control operations, and monitor systems from anywhere using mobile devices and applications.
- Gain experience in data logging, downloading data, and analysing alarm histories through the Cloud SCADA system. Use tools to export data directly into Excel, helping track process performance, monitor trends, and optimize operations

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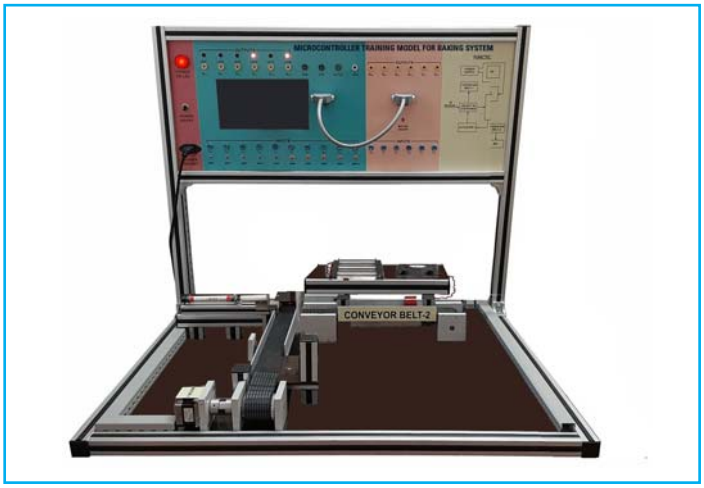
VPL-PLCS-BST

PLC and HMI Control Baking System application training system



FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 20 digital inputs, 12 digital outputs, 4 analog inputs, and 2 analog output, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics.
- The system comes with Licensed PLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- 7" HMI with Ethernet communication and Programming software.
- Real-world components like toggle switches, proximity sensors, selector switches,visual and audio indicators, DC motors, relays, contactors, and voltage displays, Baking system, Solenoid valve, BO motorand offer students a hands-on, practical experience with equipment they might encounter in the field.
- Understanding the concept of Baking System.

TECHNICAL SPECIFICATIONS:

- This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor 1 no., Selector switch 1no, Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relay card 1 no. (Contains 2 relays), Contactor 1 no. The Human Machine Interface (HMI) features a 32-bit 400MHz RISC CPU with a 7-inch high- resolution TFT LCD display (800 × 480) offering 65,536 colors. It supports a +24V DC power supply, with 128MB flash storage, 64MB DDRAM, and a high-precision four-wire resistive touchscreen, and includes an Ethernet interface for connectivity. Conveyor system, BO Motor, Solenoid valve, heater and exhaust fan.

Experiments :

- Program operation of NO (normally open) and NC (normally closed) instructions., Types of logic gates., Set and reset bits, Types of timers (TON, TOFF and TONR), Types of counters (CTU, CTD), Types of compare, instructions (greater than, equal to and less than), Types of math instructions (addition, subtraction, multiplication and division), Analog input and analog output instructions using MOV instruction.
- Understating the concept of Baking system.
- Human Machine Interface (HMI) Create a GUI that displays the status of both normally open (NO) and normally closed (NC) contacts and allows control over them.
- Create a GUI to monitor and control timers in a HMI.
- Create a GUI to monitor and control a counter connected to the HMI.
- Create a GUI to display and monitor analog input data from a PLC.
- Create a GUI that allows the operator to control ananalog output signal to control device.

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VPL-PLCS-IMC

IIOT enabled AC induction motor speed control training system using PLC and HMI

FEATURES:

- The PLC (Allenbradley/Siemens) system is equipped with 12 digital inputs, 8 digital outputs, 4 analog inputs, and 2 analog output, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics.
- The system comes withPLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- 7" HMI with Ethernet communication and Programming software.
- Real-world components liketoggle switches, proximity sensors, selector switches, visual and audio indicators, DC motors, relays, contactors, and voltage displays, AC Drive and induction motor and offer students a hands-on, practical experience with equipment they might encounter in the field.
- AC Motor Speed Control process monitor and control from anywhere using mobile devices and applications.

TECHNICAL SPECIFICATIONS:

- This system included Toggle switches 8 nos., Push to ON switches 5 nos., Proximity sensor 1 no., Selector switch1 no., Visual indicators 4 nos., Audio indicator 1 no., DC motor 1 no., Relay card 1no. (Contains 2 relays), Contactor 1 no., AC Induction motor with VFD 1 No., IIOT device: 1 no.

Experiments:

- Program operation ofNO (normally open) and NC (normally closed) instructions, Types of logic gates., Set and reset bits., Timer, Counter, Types of compare instructions (greater than,equaltoandlessthan),Types of math instructions (addition, subtraction, multiplication and division), Analog input and analog output instructions using MOV instruction. Write a Ladder Program for Controla AC Induction motor using PLC.
- Create a GUI that displays the status of both normally open (NO) and normally closed (NC) contacts and allows control over them.
- Create a GUI to monitor and control timers in a HMI.
- Create a GUI to monitor and control a counter connected to the HMI.
- Create a GUI to display and monitor analog input data from a PLC.
- Create a GUI that allows the operator to control an analog output signal to control devices.
- Control Speed of Induction motor using HMI
- Variable Frequency Drive(VFD), Working principle of VFD.
- Hardware connection of VFD. Parameter setting of VFD.
- Acceleration & deceleration time setting in VFD.
- Jog mode operation in VFD.
- Direction control operation of motor
- Learn how to develop and utilize cloud- based SCADA systems for global access to process data and remote control. With Cloud SCADA, users can access live process data, control operations, and monitor systems from anywhere using mobile devices and applications.
- Gain experience in data logging, downloading data, and analyzing alarm histories through the Cloud SCADA system.
- Use tools to export data directly into Excel, helping track process performance, monitor trends, and optimize operations.

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VPL-TT-IST

Industrial Sensor Training System

FEATURES:

- The platform includes a wide variety of common industrial sensors, representing different sensing principles (photo-electric, capacitive, inductive, fiber optic) and configurations (through-beam, retro- reflective, diffuse).
- Features like the protective enclosure, clear electrical terminals, and ease of operation suggest a user-friendly design suitable for beginners. The ready assignment details are particularly helpful for structured learning.
- The inclusion of a motorized module with speed control allows users to test thesensorsinadynamicenvironment, simulating real-world industrial applications. This is important for understanding sensor response in a control loop.
- It included necessary components like power supply, counter, tachometer, and relay makes the platform self- contained, minimizing the need for external equipment.

TECHNICAL SPECIFICATIONS:

- The Photoelectric Through Beam Sensor features a through beam sensing method, offering a maximum sensing distance of 5 meters, with a PNP control output and an operating voltage range of 12–24V DC, making it ideal for long-range object detection in industrial applications.
- The Photoelectric Retro-Reflective Sensor with a reflective sensor offers a maximum sensing distance of 2 meters, PNP control output, and an operating voltage range of 10–30V DC. The M6 Reflective Fiber coupled with a fiber sensor amplifier provides a PNP control output and operates within a 12–24VDC voltage range.
- Diffuse Reflective Sensor offers a maximum sensing distance of 50–70 cm, PNP control output, and an operating voltage range of 10–30V DC. Diffuse Reflective Sensor with Adjustable Sensitivity provides a maximum sensing distance of 10–30cm, PNP control output, and an operating voltage range of 10–30V DC. Distance Settable Sensor offers a maximum sensing distance of 2mm to 80mm, PNP control output, and an operating voltage range of 10–30V DC. Digital Counter has a 4-digit, 0.56-inch red LED display, accepts PNP sensor/switch inputs, counts from 0- 999999, and operates on a 230V AC supply.
- Tachometer has a 4-digit, 0.56-inchred LED display, a range of 4-5000 RPM, and accepts PNP sensor/switch inputs. The Switch and LED Module consists of 3 LED lights, 2 momentary switches, and operates with a 24VDC supply.
- Motorized (24VDC) Rotary Disc with black and white regions and the second disc with yellow, green, blue, and red regions both operate on a 24VDC supply.
- Cylindrical Capacitive Sensor provides a maximum sensing distance of 10mm, PNP control output, and operates within a 10–30VDC voltage range.
- Cylindrical Inductive Sensor offers a maximum sensing distance of 8mm, PNP control output, and operates within a 10–30VDC voltage range.8 Pin DIN Mounted 24VDC Coil
- Electromagnetic Relay is a DPDT type relay with a 24VDC coil voltage

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VPL-PLCS-WLC

IIOT enabled PLC Controlled Water Level Control Application Training System

FEATURES:

- The PLC system (Allenbradley/Siemens) is equipped with 8 digital inputs, 4 digital outputs, providing the necessary I/O capabilities for various industrial automation tasks.
- It also features Ethernet communication support, enabling seamless integration into industrial networks for remote monitoring, control, and diagnostics.
- The system comes with PLC programming software, allowing users to program the PLC using standard languages such as ladder logic or structured text.
- The system allows for remote monitoring and control via mobile devices and applications, enabling real-time process oversight from anywhere.
- A durable polycarbonate tank with a capacity to store water, designed specifically for accurate measurement purposes.
- Equipped with three float level switches to sense the low, middle, and high water levels in both the sump tank and measuring tank, ensuring precise monitoring of water levels.
- Visual indicators that clearly signal when the process begins and ends, providing immediate feed back to the operator.
- Astudent-friendly software interface to develop different programs, enhancing the learning experience and facilitating hands-on programming practice.

TECHNICAL SPECIFICATIONS:

- The system includes PLC (Allenbradley/Siemens) with 8 digital inputs and 6 digital outputs(relay), with a program size of 4096 words and Ethernet interfacing enables smooth communication with external devices.
- The Measuring Water Tank and Sump Water Tank are made of polycarbonate and each measure 300mm x 350mm x 300mm, while 6 float switches are included, with 3 in the upper tank and3 in the lower tank. These components ensure effective water level monitoring and control.
- Control Panel features metal frame enclosure, push buttons, indicators, and a buzzer for operation control, while the Control Box includes MCB (16A), RCCB, and 24V DC power supply (10A) for safe system functioning.
- It operates on 230VAC supply. structure is built with a 30x30 aluminium profile frame, providing a sturdy and light weight support for the two water tanks, which are vertically aligned to optimize space and ensure efficient water flow and measurement.
- This design offers both strength and durability while maintaining a compact footprint.
- IIOT Device for Remote monitoring and control.

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VPL-PLCS-AWB

Automation Workbench

FEATURES:

- Nine industrial (Allenbradley/Siemens) make PLCs.
- Open platform to explore a wide range of PLC applications.
- Extremely easy and student friendly software to develop different programs.
- PLC interfacing with different application modules.

TECHNICAL SPECIFICATIONS:

- PLC1 has Digital input 14 nos., Digital output 10 nos. with USB Communication facility.
- PLC2 has Digital input 16 nos., Digital output 16 nos. with Ethernet Communication facility.
- PLC3 has Digital input 8 nos.,Digital output 6 nos. (relay) with USB Communication facility.
- PLC4 has Digital input 24 nos., Digital output 16 nos.(relay), with USB Communication facility.
- PLC5 has Digital inputs 6 nos., Digital output 4 nos., Analog Input 2 nos, Analog output1 no. with Ethernet communication facility.
- PLC6 has Digital input 18 nos., Digital output 12 nos.(relay), with USB Communication facility.
- PLC7 has Digital input 8nos., Digital output 07 nos.(relay), Analog input 04 nos., Analog output: 01 no., with Ethernet communication facility
- PLC 8 has Digital input 8 nos., Analog input 2 nos., Analog output 02 nos., Digital output 04 nos. with Ethernet communication facility PLC9 has Digital input 8 nos., Digital output 6 nos.(relay), with USB Communication facility.
- Switches module included Push button switch 4 nos., Push on push off switch 4 nos.,PLC connection 4mm sockets
- Sensor module included Proximity sensor 2 nos., Photo sensor 2 nos., RTD 2 nos., PLC connection 4mm sockets, Relay control module, Double pole/through relay 4 nos., Relay operating voltage 24VDC, PLC connection 4mm sockets.
- Indicators module included Visual indicator4 nos., Operating voltage 220VAC, Audio indicator 2 nos., Operating voltage +5V/ +12VDC, PLC connection 4mm sockets.
- Seven Segment display Application module PLC connection 4mm sockets.
- AC Induction Motor Control Application module PLC connection 4mm sockets.

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VPL-PLC-CBS

Conveyor Belt Training System

Features:

- This Conveyor belt training system is the basic training in the fields of automation technology and mechatronics.
- This setup is be modular and ergonomic learning system which allows learners to acquire essential skills in mechanical assembling, commissioning, and electrical commissioning as well as sensor and control technology.
- This setup possible to Microlevel dismantle & assembly for enhancing the skills in mechanical assembling, commissioning & electrical wiring.
- The learning system shall be suitable for use in both single workpiece flow and goods carrier flow with pallets infuture.
- The system consist of following items at least 1 each
  - Conveyor belt
  - DC motor
  - Control box with control console
  - Diffuse reflection sensor
  - Through-beam sensor
  - 24V DC power supply
  - Electrical cable set
  - Workpiece set

TECHNICAL DATA:

- Operating voltage : 24VDC, 4A, = 100 W output power
- 2 sensors for object detection
- Digital Input - 8 numbers,
- Digital output - 8 numbers
- Analog Input - 2 numbers, Analog output - 1 number, Voltage type
- Electrical Connections with 4mm banana sockets.
- Digital input & output signals socket - 4mm Black colour sockets.
- Analog input & output signals socket - 4mm white colour sockets.
- 24V & 0V socket connection - 4mm Red & Blue sockets.
- Conveyor belt training system Dimension approximately 700mmx 350 mm x 200 mm
- The conveyor is able to connect with above PLC

Conveyor Motor Setup:

- Conveyor motor setup with DC motor, DC driver & Belt.
- The DC motor relates to auniversal flange. The motor can be easily replaced and converted into an Control Panel:
  - 1x Start Button N/O contact type, Momentary with illuminated
  - 1x Stop Button N/C contact type, Momentary
  - 1x Selector switch N/C contacttype,Toggle
  - 1x Reset Button N/O contact type, Momentary with illuminated
  - 2x indicator lamps

Electrical cable set:

- Cables has the following specification:
  - 4mm Banana cables
  - Plugs with rigid protective sleeve and axial socket
  - Conductor cross section: 1 mm2
  - 800V CATII
  - Rated current: 15A

Workpiece set:

- Minimum 3 different colour pieces.
- It has cylindrical body.

Documentation:

- Conveyor belt training system supplied with following manuals:
  - Operating instructions
  - Assembly instructions
  - Electrical circuit diagram

Note: Images given are for representation only and the final equipment can change according to its specifications.

VPL INFOTECH & CONSULTANTS, 101-102, 1st Floor, Savitri Sadan-II, 15 Comm. Centre, Preet Vihar, Delhi-110 092 (India).
Phone: +91-11-42421466 E-mail: vplinf@gmail.com, vplinf@rediffmail.com Http://www.vplinf.com, www.vplinfotech.com