Overview

The PLC and HMI Training Platform is a comprehensive test facility designed to provide hands-on experience with industrial automation systems. It is intended for students, researchers, and professionals to gain practical knowledge of **Programmable Logic Controllers (PLC)**, **Human Machine Interfaces (HMI)**, **SCADA systems**, and **Distributed Control Systems (DCS)**. This platform is suitable for training, experimentation, and application development in both academic and industrial environments.

Key Features & Specifications

PLC Unit

- Siemens (or equivalent industrial-grade) controller.

- Minimum I/O configuration: **14 Digital Inputs + 10 Digital Outputs** (expandable options such as 8DI + 8DO, 16DI + 16DO, or higher).

- Integrated **Ethernet communication interface** for seamless connectivity.

HMI Module

- **7-inch touchscreen HMI** with Ethernet communication support.

- Intuitive and user-friendly interface for process visualization and monitoring.

Indicator and Relay Section

- Minimum **8-channel combination of LED indicators and relay outputs**.

- Relay rating: **24V coil**, contact rating up to **230VAC / 1A**.

Connectivity & Wiring

- Equipped with a **35-pin D-type connector** for fast and flexible connections (ideal for complex training models like elevators).

- Patch cords and terminal blocks provided for efficient wiring practices.

Power Supply

- Dedicated **SMPS unit** with **24V DC, 2A output** for reliable operation of connected devices.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

Baseboard & Application Panels

- Baseboard with **minimum 50 LEDs**, including **10 LEDs arranged as a bar graph** for analog output indication.

- Support for **replaceable static application panels**:

  - At least **10 panels** compatible with the baseboard for simulation.

  - Expandable option for **15 or more models**, each designed with selective LEDs for practical applications.

Accessories & Software Package

- Industrial-grade **Ethernet cables**.

- Minimum **5 static application panels** included.

- Licensed **PLC programming software**.

- Licensed **HMI programming software**.

- Assorted **2 mm patch cords** in various colors.

- **Terminal blocks and connectors** set.

- Control devices: **Toggle switches, push-to-on switches, and indicator lamps**.

- **24V DC power supply module** included.

Applications

- Industrial automation training and testing.

- Development and simulation of SCADA-based systems.

- Education and research in PLC/HMI programming.

- Practical demonstration of DCS and process control concepts.

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