

# S7-1200 PLC Training Kit



**Kit code :ES-1200P**

## OVERVIEW

The EISAC PLC Industrial Training Kit – Siemens S7-1200 Edition is a specialized laboratory instrument designed for mastering industrial logic and automation control. Built around the globally-standardized SIMATIC S7-1200 CPU, this kit offers a high-fidelity simulation of a factory control environment. It integrates digital and analog signal processing into a single, ruggedized portable unit, providing an ideal platform for safe firmware testing, hardware troubleshooting, and advanced system integration using the Siemens TIA Portal.

## TRAINING EXPERIMENTS

Logic Foundations: Developing motor starters, timers, and counter-based logic

Analog Scaling: Interfacing with variable sensors for temperature and pressure control

High-Speed Counting: Implementation of encoder inputs and pulse detection

Communication Protocols: Setting up TCP/IP and PROFINET industrial networks

System Diagnostics: Hardware fault finding and online monitoring via TIA Portal

## SAFETY FEATURES

Isolation Barrier: Galvanic isolation between 220V AC power and 24V DC control

Short-Circuit Protection: Stabilized power supply with automatic electronic shutdown

Fused Input: Primary AC protection via integrated high-speed industrial fuse

Touch-Safe Terminals: 4mm shrouded banana jacks to prevent accidental electrical contact

Visual Safety: Illuminated master power switch for clear "Operational" status

## SYSTEM COMPONENTS

Main Controller	Siemens SIMATIC S7-1200 CPU (DC/DC/DC)
Digital I/O Unit	8 Digital Inputs & 8 Digital Outputs with manual simulation
Analog Unit	Dual Integrated Potentiometers for sensor data simulation
Power Management	Integrated Siemens 24V DC Supply for stable logic voltage
Network Interface	PROFINET LAN Port (RJ45) for high-speed programming
Signal Access	4mm Safety Banana Terminals for all digital and analog points

## TECHNICAL SPECIFICATIONS

Control Logic	High-speed real-time processing with S7-1200 architecture
Digital Inputs	24V DC signals with 3-way toggle switches (On-Off-Mom)
Digital Outputs	24V DC Transistor outputs with dedicated LED status indicators
Analog Inputs	2 Channels (0-10V DC) via high-precision multi-turn dials
Communication	Integrated Ethernet/PROFINET for TIA Portal and HMI linking
Interface	Laser-engraved control panel with standardized industrial labeling

## MECHANICAL SPECIFICATIONS

Industrial Enclosure: Heavy-duty, impact-resistant "Hard Case" for laboratory and field use

Functional Zoning: Front panel layout optimized for intuitive signal identification and wiring

Wear Resistance: Professional-grade surface finish with permanent, scratch-resistant labeling.

Vibration Protection: Internal components secured to a rugged, vibration-dampening chassis

Enhanced Portability: Ergonomic carrying handle with secure locking latches for easy transport

## SOFTWARE & COMPATIBILITY

Programming Software: Siemens TIA Portal V13 SP1 to latest (V19+)

Language Support: LAD (Ladder), FBD, and SCL (Structured Control Language)

Connectivity: Standard Ethernet Cat6 cable for PC/PG interface



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