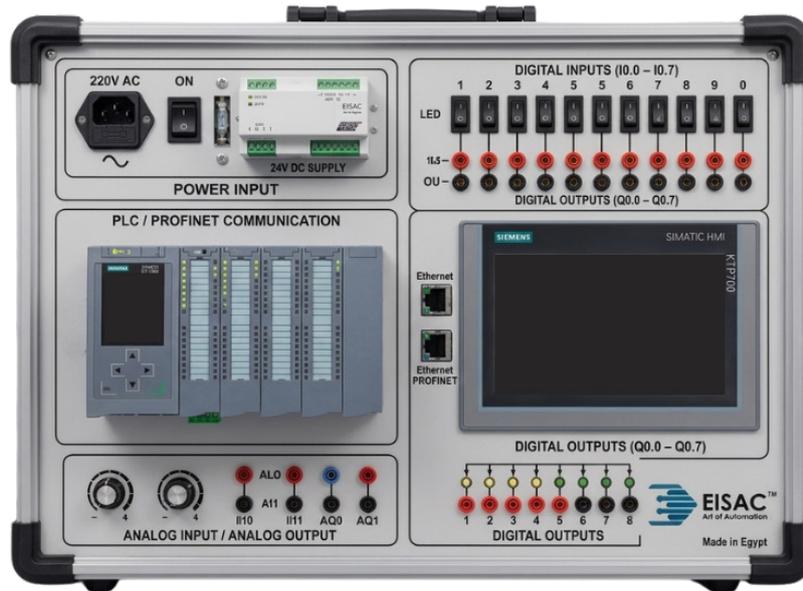


# S7-1500 PLC +HMI Training Kit



**Kit Code :ES-1500H**

## Overview

The EISAC Advanced Integrated Automation Suite is a premier industrial training solution designed for high-level automation engineering and technical education. This suite provides a comprehensive, "all-in-one" environment for developing, testing, and simulating complex industrial control systems. By integrating the industry-standard Siemens S7-1500 PLC with the KTP700 Basic HMI, it offers a seamless platform to master the TIA Portal ecosystem.

The system is engineered for versatility, allowing it to function as a standalone trainer or as a master controller for external industrial processes via its standardized interface.

## APPLICATIONS

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Complex Process Control: Advanced PID loops and mathematical algorithms

Diagnostic Mastery: Utilizing the S7-1500 on-board display for hardware troubleshooting

Network Integration: Master/Slave configurations and machine-to-machine (M2M) protocols

Motion & Drives: Interfacing with Servo/Stepper drives via high-speed outputs

## TRAINING EXPERIMENTS

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Advanced S7-1500 Programming: Data blocks, Function Blocks (FB), and SCL language

Integrated Diagnostics: Analyzing system faults directly from the CPU display

Professional HMI UX: Advanced alarm logging, recipe management, and user administration

PROFINET Networking: Configuring distributed I/O and industrial communication

## SYSTEM COMPONENTS

Advanced Controller	Siemens SIMATIC S7-1500 CPU with integrated diagnostic display
Visualization Unit	Siemens KTP700 Basic (7-inch High-Resolution Touchscreen)
Expansion Modules	Additional I/O Modules for large-scale industrial logic simulation
Control Interface	Functional Zone-Divided Panel (Power, Digital, Analog, Comms)
I/O Ecosystem	Manual Toggle Switches & LED Status Indicators
Power Management	Industrial 24V DC Stabilized Unit with Overload Protection
Connectivity Hub	Dual Ethernet/PROFINET Ports for high-speed networking

## TECHNICAL SPECIFICATIONS

PLC Performance	High-speed command execution with integrated system diagnostics
HMI Display	800 x 480 px, 65k colors, dimmable LED backlight
Digital Matrix	8 x Inputs (24V DC) & 8 x Outputs (Transistor/Relay options)
Analog Section	Dual precision potentiometers for AI simulation (0-10V / 4-20mA)
Networking	Full PROFINET support with RJ45 dual-port access
Terminal Interface	Standardized 4mm safety banana terminals for all I/O

## SAFETY FEATURES

**Galvanic Isolation:** Full electrical separation between the 220V AC input and the 24V DC control circuits

**Electronic Protection:** Integrated short-circuit and overload protection within the 24V DC power unit

**Primary Fusing:** Main AC power line is guarded by a high-speed industrial fuse to prevent internal damage.

**Shrouded Terminals:** All I/O points utilize 4mm safety-insulated banana jacks for touch-safe operation.

**Real-time Monitoring:** Instant visual feedback via LED indicators for safe status tracking and diagnostics.

## MECHANICAL SPECIFICATIONS

**Functional Zoning:** Intelligently divided faceplate layout (Power, Digital, Analog, Comms) for optimized workflow.

**Laser-Engraved Labeling:** High-contrast, permanent labeling resistant to wear, scratches, and industrial cleaners.

**Vibration Resistance:** Internal components are mounted on a rugged chassis to ensure stability during transit.

**Portable Ergonomics:** Equipped with a reinforced carrying handle and secure-lock latches for field mobility.



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