

CM284-S12 Programmable Automation Controller



Siemens Integrated Automation Training System Featuring the S7-1200 PLC with Simatic HMI.

The CM284-S12 is a complete industrial-based PLC with Human Machine Interface (HMI) training system featuring the Siemens S7-1200 PLC with the KTP700 HMI. The S7-1200 platform is a powerful series of programmable automation controllers featuring Siemens industry-leading Windows-based TIA V13 Portal programming software. This system will enable learners to develop competence in operating, programming, and troubleshooting a true industrial Programmable Automation Controller using TIA V13 Portal software.

Instructor's Guide with student manual and exercises provide complete, clear instructions and laboratory exercises, permitting the student to rapidly attain PLC and HMI competency. The curriculum begins with basic wiring concepts and moves quickly through circuits, logic, and programming; encouraging proficiency of PLC operation, automation connectivity via Ethernet communications, and industrial applications.

The CM284-S12 experiment station permits easy access to the PLC digital and analog input/output terminals with simple banana-jack connectors. This allows a rapid set-up and testing of wiring changes, using the built-in input/output devices including digital pushbutton switches/lights, analog potentiometers and panel meter displays, or user-identified external devices. Also included is built-in Ethernet communications.

The Siemens controller is programmed using relay ladder, function block diagram, sequential function block, or structured text programming using Windows-based TIA V13 Portal programming software.

Because of the CM284-S12's flexible design and expansion capabilities like adding sensor inputs, PID process control, robotic interfacing, or other advanced applications; coupled with TIA Portal performance features, means you can create a PLC and HMI learning experience that will be industrially relevant today and in the future.

SPECIFICATIONS

The CM284-S12 series of PLC and HMI training systems feature the Siemens S7-1200 Programmable Automation Controller. The standard configuration, CM284-S12 with S7-1200 series processor and the KTP700 Basic HMI panel is described below. Regardless of the configuration selected, using the included instructor's guide and student activity manual with detailed exercises and written testing materials, the learner will develop competence in operating, programming, and troubleshooting a true industrial Programmable Automation Controller. Also included as standard is a computer interface for PC to PLC communications and Windows-based TIA Step 7 V13 software for on-line/off-line logic programming.

The CM284-S12 PLC with HMI Trainer is installed in a 16-gauge fabricated steel "wedge shaped" cabinet. The components are mounted on a 16-gauge brushed stainless steel panel. All features of the panel are silkscreened for easy identification.

CM284-S12 Workstation Specifications:

The workstation is mounted into the cabinet for convenient interfacing with other trainers. A power on toggle switch with light indicator and system fuse protection is located along the cabinet side. The training panel contains the Siemens S7-1200 PLC with KTP700 HMI (both internally fused) with built-in 24 VDC power supply, Ethernet communications, and digital/ analog I/O prewired.

Panel Components:

- 8 pushbuttons with colored bezels:
 - 2 momentary/normally open
 - 2 momentary/normally closed
 - 2 latching/normally open
 - 2 latching/normally closed
- 8 indicator lights prewired and addressed
- 8 female connectors for interfacing to external devices using the universal connecting patchcord/banana jack system
- 37 pin full I/O interface port
- 2 potentiometers
- 3 panel meters
- Fault insertion back panel (**OPTIONAL**)

Siemens S7 PLC Specifications:

Processor Memory:	S7-1200 CPU with 50K user memory, other CPUs and memory available
Digital I/O:	14 Inputs; 10 Outputs
Analog I/O:	2 Inputs; 1 Outputs
Memory Backup:	Integral EEPROM
Communication:	Ethernet and USB
Certification:	U.L. Listed/CSA Approved

Siemens Simatic KTP700 Display Specifications:

Display Screen:	7 inch screen size Touch activated Color active matrix (TFT) Resolution 800 x 480
Programming:	TIA V13 Portal Software – relay ladder, function block diagram, structured text, sequential function block
Communication:	Ethernet and USB
Certification:	U.L. Listed/CSA Approved

Totally Integrated Automation Portal V13 Software

- Windows-based
- Offline/online programming
- Graphical I/O configuration
- Program reporting and documentation
- Automatic instruction addressing, block transfer placement, and tag generation
- Ethernet communications

CM284-S12 FEATURE SUMMARY

- Comprehensive Courseware
- Programming instructions for Siemens S1200 PLC and TIA portal for the HMI
- On-board inputs with full bank of switches
- On-board outputs with full bank of lights
- Potentiometers and panel meters for analog control and visualization
- High speed counter with applicator
- Built-in connectors for easy interfacing with user-selected input and output devices
- Ethernet port communications built-in
- Five-port industrial Ethernet switch included

Trainer Dimensions: 16 in. W x 16 in. H x 13 in. D
Shipping Weight: 50 lbs.

For more information, customer service, or technical assistance please call 800-451-2169

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