Advanced PLC Training System (Siemens)
595849 (3355-A0)

LabVolt Series

Datasheet

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Festo Didactic
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Table of Contents

General Description

Programming a PLC efficiently requires a strong familiarity with the specifics of the programming environment and languages. This is exactly the purpose of the Advanced PLC Training System with high-end products from Siemens.

This training system allows students to acquire hands-on experience with industrial control equipment. Realistic examples are used to motivate students. These examples are displayed on the graphic terminal, and correspond to real PLC applications that can be interfaced with the trainer.

The system comprises industrial components of the latest technology: a Siemens S7-1200 controller, a 7" widescreen TP700 Comfort Panel with PROFINET, MPI/PROFIBUS DP, and USB interfaces, and a SCALANCE XB005 unmanaged industrial Ethernet switch. Several inputs (16 digital inputs, including 6 high-speed counters, and 4 universal analog inputs) and outputs (14 digital outputs, including 4 high-speed outputs, and 2 configurable analog outputs) are accessible from the front panel using 2-mm test leads. Controls and lights can also be connected. Eight switches allow the addition of electrical faults during troubleshooting exercises. A SysLink interface allows connection to Modular Production System (MPS) stations from Festo.

The system also comprises a one-seat license of the SIMATIC WinCC (TIA Portal) Engineering Software.

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PLC applications developing students’ understanding

PLC Applications, Series 8075, aim to further develop the students' understanding of PLC programming. These small-scale systems are typical of what can be found in the industry. The systems' training capabilities are enhanced by their modularity and their instructor-inserted faults. The modules of the PLC Applications Series can be interconnected with those of other Festo training systems for interdisciplinary training applications. The PLC Applications series is divided into seven systems, each system covering a specific topic related to PLC controls: - Traffic Lights - Electro-Pneumatics - Electro-Mechanical – DC Motor - Electro-Mechanical – Stepper Motor - Wind Turbine - Level Process Control - Bottling Process The exercises provided with the Advanced PLC Training system are inspired by the Traffic Lights, Electro-Pneumatics, and Level Process Control applications. Students can connect these additional components while developing their programs or simulate the inputs and outputs instead.

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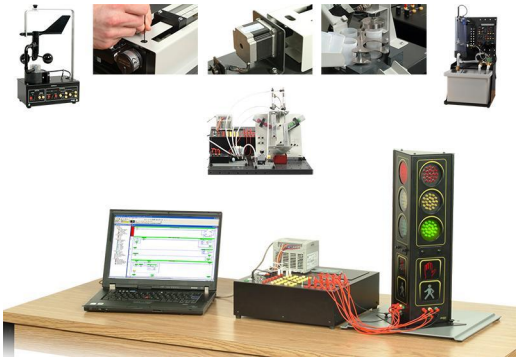
PLC applications developing students' understanding



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- Traffic Lights
- Electro-Pneumatics
- Electro-Mechanical – DC Motor
- Electro-Mechanical – Stepper Motor
- Wind Turbine
- Level Process Control
- Bottling Process

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Topic Coverage

- Familiarization with WinCC (TIA Portal)
- Using standard PLC instructions, and understanding PLC addressing and operation
- Programming in four different IEC 61131 languages: ladder, sequential function chart, function block, and structured text.
- Designing human-machine interfaces
- Troubleshooting

Features & Benefits

- Work with Siemens software and hardware that are commonly used in industrial environments.
- Rely on comprehensive learning resources.
- Optimize space usage with this compact, portable system, mounted in a rugged suitcase with casters for easy transportation and safe storage.
- Develop industry-relevant skills for successfully performing automation and maintenance tasks.

List of Manuals

Description	Manual number
PLC and HMI Programming (Workbook (Instructor))	8088960 (80889-60)

Description	Manual number
PLC and HMI Programming (Workbook)	8088962 (80889-62)

Table of Contents of the Manual(s)

PLC and HMI Programming (Workbook) (8088962 (80889-62))

Additional Equipment Required to Perform the Exercises (Purchased separately)

Qty	Description	Model number
1	SIMATIC Manual Collection on DVD	192883 (1928-83)

Software

Qty	Description	Model number
1	Step 7 professional and WinCC Advanced, 6 users (perpetual) + 20 Students (1 year), Educational (81646-50)	8164650
1	Step 7 professional and WinCC Advanced, 20 Students (1 year), Educational	8164652 (81646-52)

Module Options Description

SIMATIC Manual Collection on DVD 192883 (1928-83)

5 languages, all manuals for S7-1200/1500/200/300/400, LOGO!, SIMATIC DP, PC, PG, STEP 7, Engineering software, runtime SW, SIMATIC HMI, SIMATIC NET, SIMATIC IDENT

Step 7 professional and WinCC Advanced, 6 users (perpetual) + 20 Students (1 year), Educational 8164650 (81646-50)

Trainer Package V17 STEP 7 Professional, Safety, WinCC Advanced and Unified Engineering

- STEP 7 Professional, Safety, WinCC Advanced and Unified Engineering, RT and Options, CFC, DCC, SiVArc, Test Suite, SIRIUS, Multiuser, Teamcenter Gateway, Cloud Connector; Target, ODK, PRODIAG, OPC UA, PLCSIM Advanced, Startdrive Advanced

- 6 x software license unlimited

- 20 x trial license for 365 days

- Software on DVD or Download

- License key on USB flash drive

- 9 languages: de,en,zh included, fr,es,it,ru,ja,ko as download

- Executable in Windows 10

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- For configuring of SIMATIC S7- 1500/1200/300/400/WinAC, SIMATIC Panels

Technical changes are possible.

Special license rules apply for schools and educational institutes in the commercial sector.

Step 7 professional and WinCC Advanced, 20 Students (1 year), Educational 8164652 (81646-52)

Trainer Package V17 STEP 7 Professional, Safety, WinCC Advanced and Unified Engineering

- STEP 7 Professional, Safety, WinCC Advanced and Unified Engineering, RT and options, CFC, Test Suite, Multiuser, PLCSIM Advanced, Target, ODK

- 20 x trial license for 365 days

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