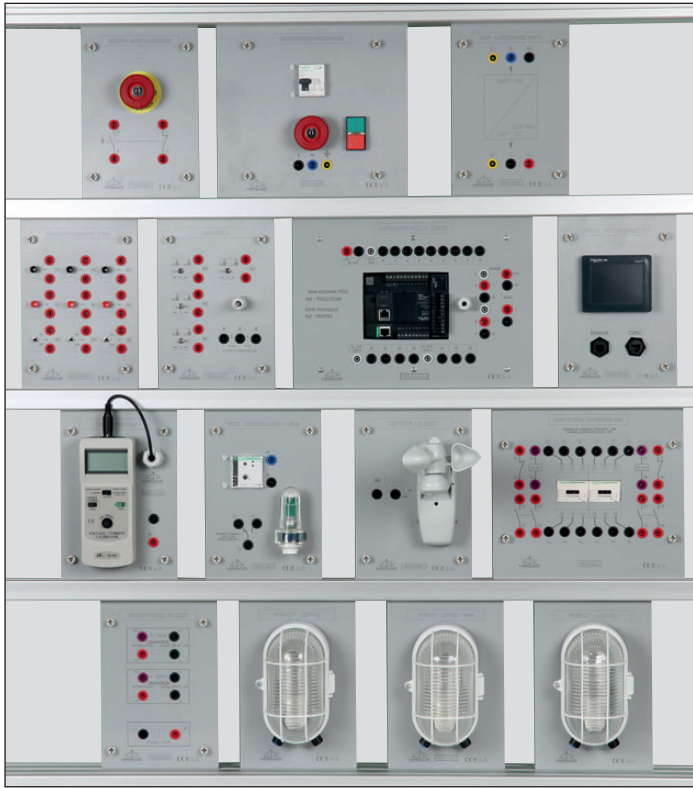


STUDY OF THE PROGRAMMING OF PLC AND HMI (HUMAN MACHINE INTERFACE)



ref. QUICK-DPLUS (Siemens)

SIEMENS

ref. QUICK-D

without frame and console

ref. QUICK-ECPLUS (Schneider)

Schneider Electric

ref. QUICK-E

without frame and console

AUTONOMOUS WIFI

EDUCATIONAL OBJECTIVES

- Study of a complete diagram with automation sensors and components for connecting to the inputs/outputs of a PLC.
- Study the configuration of an Ethernet for computers.
- Study the programming of a PLC in contact language.
- Study the programming of an HMI (Human Machine Interface).
- Study an analogue signal by current and voltage.
- Configure a WiFi network and control components from a tablet (QUICK-ECPLUS only)

TEACHING RESOURCES STUDENT & TEACHER

Proposed Practical Works

- Creation of the complete wiring diagram of a PLC, an HMI and binary and analogue sensors.
- Creation of the configuration of an Ethernet.
- Creation of a complete PLC program in contact language.
- Creation of a supervision program with control from the HMI.
- Configuration of the PLC with analogue inputs/outputs for 4-20mA and 0-200mV signal.
- Cabling an Ethernet network (QUICK-ECPLUS only)
- Carry out the Wifi configuration (QUICK-ECPLUS only)

Comprises

QUICK-DPLUS version : SIEMENS®

- 1 Siemens® PLC module SIMATEC S7-1200 Ethernet 14I/10O binary with 1 input and 1 output 4-20mA. Optional LOG-STEP programming software.
- 1 Siemens HMI module Simatic KTP600 Ethernet 5.7". Optional LOG-STEP programming software.

QUICK-ECPLUS version : SCHNEIDER®

- 1 Schneider® PLC module M221 Ethernet 14I/10O binary with 1 analog expansion card. Supplied with SoMachine Basic programming software.
- 1 Schneider HMI module HMISTU Ethernet 3.7" colour. Supplied with VijeoDesigner programming software.
- 1 configured WiFi router (local WiFi specific to the system). Control via the free VijeoDesign'air application.

Common modules

- 1 Emergency stop module.
- 1 Distribution module of 230VAC on 4mm terminals with RC circuit-breaker 30mA-16A.
- 1 Power supply module 230V AC - 24V DC - 2A.
- 1 Pushbutton and switch module.
- 1 Module with limit switch and PT100 temperature sensor.
- 1 Signal generator module 0-10V and 0-200mV.
- 1 Light sensor module.
- 1 Wind sensor module.
- 1 Voltage dimmer module 230V AC with analogue input 4-20mA.
- 1 Module with 2 auxiliary contactors 24V DC.
- 1 Indicator light module 24V DC.
- 3 Bulkhead light modules 230V AC, 40W.
- 1 Set of safety leads for carrying out the different practical works.
- 1 frame with wheels (H x W x D): 1610 x 940 x 500mm equipped with rack for cords (30 fingers)
- 1 single-phase power console:
 - 1 thermal magnetic circuit breaker (16A)
 - 1 Emergency stop push button with key
 - 1 Push button + LED indicator
 - 1 230V single-phase output on 4mm safety terminals
 - 2 230Vac sockets (2P + E) + 12 230Vac sockets (2P + E), at the back



Sockets on the back of the console for connecting the modules