



# AUTOMATION AND CONTROL



## PROGRAMMABLE LOGIC CONTROLLER – 26 IN/22 OUT DL 2210A



### **DESCRIPTION**

The DL 2210A is a programmable controller that combines high performance and ease of use for those who are entering the world of PLCs for the first time.

It allows controlling machines and plants using the sequential logic that replaces traditional electromechanical panels, saving relays, timers and counters.

Flexibility, as it can be reprogrammed, the possibility of its use in environments with harsh working conditions, reliability and safety, as well as the ability to process both digital and analog signals, are its main advantages.

With this module, students can perform experiments commonly used in the industrial automation environment.

All sections (power supply, digital and analog I/O, and interfaces) are identified through clear blocks that show their types and symbols.



## **TECHNICAL FEATURES**

The DL 2210A configuration includes the following components:

- 1 power supply, 24Vdc/2.7A
- 1 selector for the use of the I/O via terminals or connectors
- 1 CPU (model Siemens 1212C of the S7-1200 series) with 8 digital inputs, 6 relay outputs and 2 analog inputs
- 1 digital expansion module (model SM 1223) with 16 digital inputs and 16 relay outputs
- 1 Ethernet LAN port for programming

The front panel also features input/output terminals, suitably duplicated using 37-pin connectors, for digital and analog I/O to facilitate connections between the DL 2210A module and the hardware applications in the automation laboratory.

It is complete with the software STEP 7 (TIA Portal) for programming with single license and Ethernet cable, supply cable, 2mm cables and connectors.

Power supply: single-phase from mains.

## **EXPERIMENTS:**

- How to create a simple latch circuit,
- How to create a simple latch circuit (with timer),
- Countdown experiment,
- Simulation and control of a conveyor belt,
- Simulation with detection of the direction of a conveyor belt,
- Simulation of a traffic light,
- How to implement an equation,
- Simulation of starting and stopping a motor,
- Simulation of starting a motor clockwise and counterclockwise,
- Simulation of Y/Δ starting a three-phase motor,
- Simulation of control in sequence of starting and stopping a motor,
- Simulation of a stepper motor.