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PRODUCT DATA SHEET
Catalogue reference for product evaluation

Phone: +91 7015865225 **Email:** info@scienticoindia.com **Web:** scienticoindia.com **Address:** #71, Industrial Area, Ambala Cantt, Haryana, India

Programmable Logic Control Trainer (Siemens Based) | NexuMation-52

Category: Automation and Control Technology · **Order Code:** NEXUMATION-52 · **Country of Origin:** India

Product Overview

The Programmable Logic Control Trainer (Siemens Based) NexuMation-52 is an advanced PLC training platform for engineering laboratories, built around the Siemens CPU 1215C with 22 digital inputs, 18 digital outputs, 2 analog inputs, 2 analog outputs, and 125 KB program memory. This programmable logic control trainer supports Ladder, STL, and FBD programming, with built-in digital input simulators (8 toggle, 8 momentary), an analog input simulator, dual Ethernet PC interface, and fixed DC power supplies at 24 V, +12 V, -12 V, and 5 V. Two 40-pin IDC expansion connectors enable simultaneous dual optional module connection, and 13 optional control modules extend the platform to industrial automation applications including conveyor, elevator, robot, and HMI control.

View this product online: https://scienticoindia.com/product/programmable-logic-control-trainer-siemens-based-nexumation-52/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Technical Specifications

Parameter	Detail
Model Reference	NexuMation-52
PLC Model	Siemens CPU 1215C
Digital Inputs	22
Digital Outputs	18 (10 x 24 V DC Source confirmed)
Analog Inputs	2 x Voltage Type
Analog Outputs	2 x Voltage Type
Program Memory	125 KB
Programming Languages	Ladder, STL, FBD
Digital Input Simulator	8 x Toggle Inputs, 8 x Momentary Inputs
Analog Input Simulator	Installed
Analog Voltage Source	2 x +10 V
Fixed DC Supply	24 V, +12 V, -12 V, 5 V
PC Interface	Ethernet ports x 2
Optional Module Interface	2 x 40-pin IDC Connectors

Technical Data

PLC Core

Parameter	Value
PLC Model	Siemens CPU 1215C
Digital Inputs	22
Digital Outputs	18 (10 x 24 V DC Source confirmed)
Analog Inputs	2 x Voltage Type
Analog Outputs	2 x Voltage Type
Program Memory	125 KB
Programming Languages	Ladder, STL, FBD

Input Simulators

Parameter	Value
Toggle Inputs	8
Momentary Inputs	8
Analog Input Simulator	Installed

Power Supplies

Rail	Value
Fixed DC Supply 1	24 V
Fixed DC Supply 2	+12 V
Fixed DC Supply 3	-12 V
Fixed DC Supply 4	5 V
Analog Voltage Source	2 x +10 V

Interfaces

Parameter	Value
PC Interface	Ethernet ports x 2
Optional Module Interface	2 x 40-pin IDC Connectors

Key Features

Key Features

- PLC Core: Siemens CPU 1215C with 125 KB program memory
- Digital I/O: 22 digital inputs, 18 digital outputs (10 x 24 V DC source confirmed)
- Analog I/O: 2 x voltage-type analog inputs, 2 x voltage-type analog outputs on this programmable logic control trainer
- Programming Languages: Ladder, STL, and FBD supported simultaneously
- Digital Input Simulators: 8 toggle inputs and 8 momentary inputs installed
- Analog Input Simulator: installed for signal simulation without external sources
- Analog Voltage Source: 2 x +10 V
- Fixed Power Supplies: 24 V, +12 V, -12 V, and 5 V DC rails installed
- PC Interface: dual Ethernet ports for programming and monitoring
- Dual Expansion Interface: 2 x 40-pin IDC connectors for simultaneous dual optional module connection
- Optional Modules: 13 control modules available including traffic light, conveyor, elevator, motor, robot, HMI, and weight control

Experiments

- Implementation of Logic Gates
- Implementation of Timers
- Implementation of 4-bit Digital to Analog Converter
- Implementation of UP/DOWN Counter
- Implementation of 4-bit Analog to Digital Converter

Construction and Design

The Programmable Logic Control Trainer (Siemens Based) NexuMation-52 is built around the Siemens CPU 1215C PLC module integrated within a self-contained training panel. All power supplies are installed internally, providing 24 V, +12 V, -12 V, and 5 V DC fixed rails alongside two analog voltage sources at +10 V each. Digital input simulation is handled by 8 toggle switches and 8 momentary pushbuttons installed on the panel, with an analog input simulator for voltage signal generation. Two Ethernet ports provide PC connectivity for programming and real-time monitoring. Two 40-pin IDC headers are mounted on the panel, allowing simultaneous connection of two optional expansion modules, distinguishing the NexuMation-52 from single-interface PLC trainers. This programmable logic control trainer supports all three IEC 61131-3 compliant programming languages available on the Siemens S7-1200 platform: Ladder, STL, and FBD. The unit ships ready for use with all accessories and experiment manual included. Thirteen optional control modules extend the platform to cover a comprehensive range of industrial automation scenarios.

Optional Modules

- Traffic Light Control by PLC
- Water Level Control by PLC
- Temperature Control by PLC
- Conveyor Control by PLC
- Elevator Control by PLC
- Motor Control by PLC
- Robot Control Module by PLC
- Module for Testing Selecting Pieces Control by PLC
- Weight Control Module by PLC
- Storage Control Module for Prismatic Pieces by PLC
- Conveyor Belt Control Module by PLC
- HMI Module
- Pushbutton Panel

Scope of Delivery

- 1 experimental unit
- 2 mm patch cords
- Power cord
- Experiment manual
- IDC cable
- PLC programming cable
- Software CD

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q1: Which PLC model is used in the Programmable Logic Control Trainer (Siemens Based) NexuMation-52?
The unit is built around the Siemens CPU 1215C, configured with 22 digital inputs, 18 digital outputs, 2 analog inputs, 2 analog outputs, and 125 KB program memory.

Q2: How does the NexuMation-52 differ from the NexuMation-51 in terms of I/O and expansion capacity?
The NexuMation-52 provides 22 digital inputs and 18 digital outputs compared to 14 inputs and 10 outputs on the NexuMation-51. It

also features two 40-pin IDC expansion connectors instead of one, allowing simultaneous connection of two optional control modules.

Q3: What programming languages does this programmable logic control trainer support?
Three programming languages are supported: Ladder, STL (Statement List), and FBD (Function Block Diagram), consistent with IEC 61131-3 standards for the Siemens S7-1200 platform.

Q4: Are input simulators included, or must external signal sources be connected?
Both digital and analog input simulators are installed on the panel. Digital simulation uses 8 toggle inputs and 8 momentary inputs. An analog input simulator is also built in, enabling all experiments without external signal sources.

Q5: How is the NexuMation-52 connected to a PC for programming?
Two Ethernet ports provide PC connectivity. A PLC programming cable is included in the scope of delivery.

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