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PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Programmable Logic Control Trainer (Fatek Based) | NexuMation-49

Category: Automation and Control Technology · **Order Code:** NEXUMATION-49 · **Country of Origin:** India

Product Overview

The Programmable Logic Control Trainer (Fatek Based) NexuMation-49 is a complete PLC training platform for engineering laboratories, built around the Fatek CPU FBs24MAT with 14 digital inputs, 10 digital outputs, 2 analog inputs, 1 analog output, and 20K words of program memory. This programmable logic control trainer supports Ladder programming, with built-in digital input simulators (8 toggle, 8 momentary), an analog input simulator, USB to DIN PC interface, and fixed DC power supplies at 24 V, +12 V, -12 V, and 5 V. All accessories are included for immediate use, 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-fatek-based-nexumation-49/



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

Technical Specifications

Technical Specifications

Parameter	Detail
Model Reference	NexuMation-49
PLC Model	Fatek CPU FBs24MAT
Digital Inputs	14 x 24 V DC (Source/Sink)
Digital Outputs	10 x 24 V DC (Source/Sink)
Analog Inputs	2 x Voltage/Current Type
Analog Outputs	1 x Voltage/Current Type
Program Memory	20K Words
Programming Language	Ladder
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	USB to DIN Connector Cable
Optional Module Interface	40-pin IDC Connector

Technical Data

PLC Core

Parameter	Value
PLC Model	Fatek CPU FBs24MAT
Digital Inputs	14 x 24 V DC (Source/Sink)
Digital Outputs	10 x 24 V DC (Source/Sink)
Analog Inputs	2 x Voltage/Current Type
Analog Outputs	1 x Voltage/Current Type
Program Memory	20K Words
Programming Language	Ladder

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	USB to DIN Connector Cable
Optional Module Interface	40-pin IDC Connector

Key Features

Key Features

- PLC Core: Fatek CPU FBs24MAT with 20K words program memory
- Digital I/O: 14 x 24 V DC digital inputs (source/sink), 10 x 24 V DC digital outputs (source/sink)
- Analog I/O: 2 x voltage/current analog inputs, 1 x voltage/current analog output on this programmable logic control trainer
- Programming Language: Ladder logic supported
- 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: USB to DIN connector cable for programming and monitoring
- Optional Module Interface: 40-pin IDC header for expansion 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 (Fatek Based) NexuMation-49 is built around the Fatek CPU FBs24MAT 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 and current signal generation. A USB to DIN connector cable provides PC connectivity for programming and monitoring. A 40-pin IDC header is mounted on the panel for direct connection to optional expansion modules. This programmable logic control trainer supports Ladder programming language for the Fatek FBs series platform. 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 (Fatek Based) NexuMation-49?
The unit is built around the Fatek CPU FBs24MAT, configured with 14 digital inputs, 10 digital outputs, 2 analog inputs, 1 analog output, and 20K words of program memory.

Q2: What programming language does this programmable logic control trainer support?
The NexuMation-49 supports Ladder programming language, standard for Fatek FBs series PLC platforms.

Q3: 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.

Q4: How is the NexuMation-49 connected to a PC for programming?
PC connectivity is provided via a USB to DIN connector cable, included in the scope of delivery.

Q5: What optional modules are available for the NexuMation-49?
Thirteen optional modules are available, including traffic light control, water level control, temperature control, conveyor control, elevator control, motor control, robot control, weight control, HMI, pushbutton panel, piece selection testing, conveyor belt control, and prismatic piece storage control.

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