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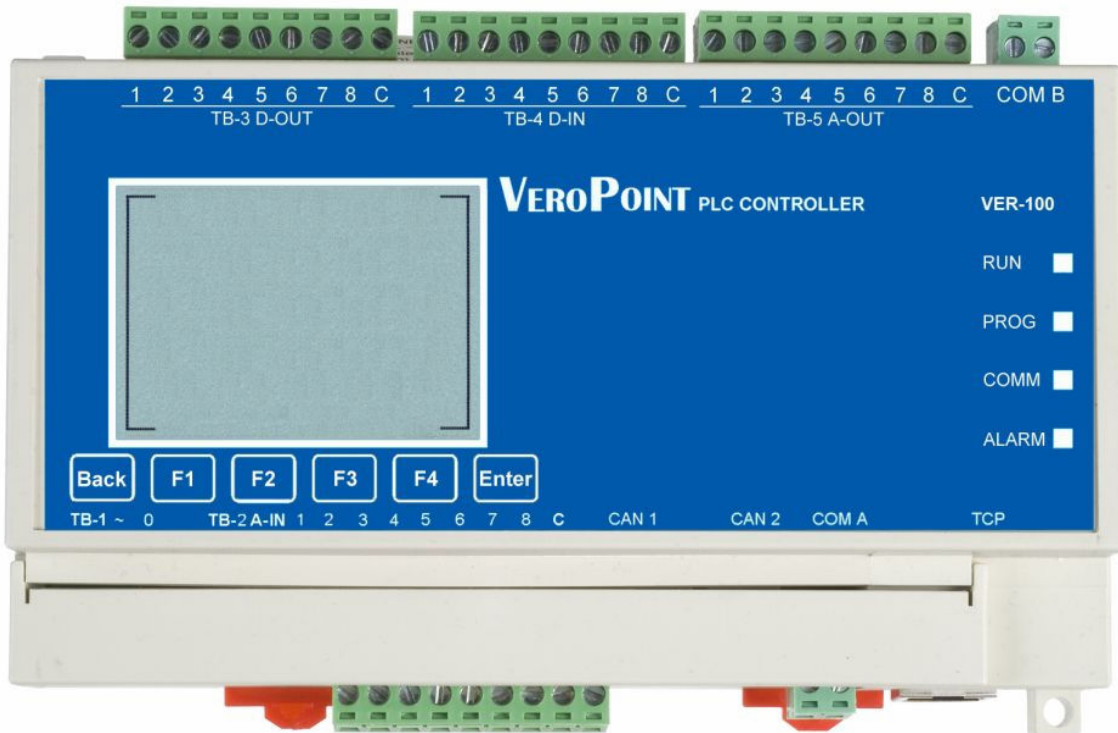Prodaja in zastopstvo: FENIKS PRO d.o.o., Maribor, Slovenija

VeroPoint stand-alone universal Programmable Logic Controller (PLC)

General

VeroPoint is a stand-alone universal Programmable Logic Controller (PLC), especially designed to control and monitor heating, ventilation and air conditioning systems (HVAC), energy and electrical systems, and automation processes. VeroPoint is the optimal solution for controlling and monitoring public, commercial buildings, hospitals, hotels and industrial process.

Features
* Universal (programmable) input/output points for maximum flexibility.
* Network communication (TCP/IP) via Ethernet.
* Two RS-485 communication ports.
* Two CANBUS communication ports.
* Extendable variable IO cards – up to 10 cards.
* Compatibility with most industry standard sensors.
* Modern 128 X 64 graphic LCD display.
* Simple multi lingual menus.
* Built in HMI screens.
* Simple DIN RAIL installation.
* Built in Web Browser.
* Historical Alarms log.
* Alarms by email.
* Stand-Alone Operation with internal Clock and Calendar.
* Application Programs in Flash Memory
* Data Logging Programs

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* Ladder/Flow Diagram Programming
* Ready to use Programming Functions
* HVAC Software Library
* Energy Saving Programs

Universal Input/Output Points

The VeroPoint's input and output points are especially designed to be completely compatible with the conventional HVAC and electrical control equipment regularly used in the market. The VeroPoint controller can operate standard control equipment, such as valve actuators, damper motors, relays, etc. with the following specifications:

Analog output: 0-10 VDC
Digital output: 0/10 VDC (100 mA max) or 24
VAC (100 mA max)

Each output is protected by an automatic fail-safe mechanism. The input points are compatible with a wide variety of sensors such as: temperature, humidity, voltage, pressure and current. All the active sensors: 4-20 mA,
0-20 mA and 0-10VDC may be connected directly to the controller.

VeroPoint's basic IO configurations

TYPE	CAPACITY	DEFINITION	RANGE	COMBINATION
OUTPUTS	50%	ANALOG OUT	0-10 VDC	8
		DIGITAL OUT	0/24 VAC\VDC	8
UNIVERSAL INPUTS	50%	ANALOG IN	VOLTAGE 0-10 VDC 0-1VDC	8
			CURRENT 0-20 mA 4-20 mA	
			RESISTANCE NI-1000 PT-1000 DRY CONTACT	
		DIGITAL IN	DRY CONTACT PULSE IN	8

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Networking and communication

Communications between the controller and its extension cards is done via CANBUS protocol in addition VeroPoint controller can communicate with other devices (PC, controllers) via 2 RS485 communication ports and ETHERNET TCP/IP port simultaneously.

Communication Port	Contents
CAN 1	CANBUS
CAN 2	CANBUS
COM A	RS485
COM B	RS485
TCP	Ethernet

Stand Alone Operation

The VeroPoint PLC controller has the capability of functioning as a stand-alone control unit independent of a central computer or clock. Its application programs are stored in FLASH MEMORY and its calendar and clock are backed-up by a battery. The user friendly menus and built in HMI graphic screens allow easily to adjust time schedules and monitor all the real time data.

Open Protocols

The VeroPoint controller can be delivered to be compatible with open protocols (optional) such as Modbus, Bacnet and other standard open protocols.

Programming

VeroPoint programming tools enable the drawing of ladder/flow diagrams using ready-to-use programming functions such as PI, PID, FIFO, sequence, clocks, timers, fan interlocks, multiply, divide, summarize and many other functions. In additional the application engineer can prepare the graphics for the HMI screen and program the applications alarms to be send by email.

HVAC Software Library

VeroPoint includes up to 400 automation software applications stored in its flesh memory. By using simple multilingual menus the user can easily define the application programs to use or use his/her own software modules and enter them into the library. The library supplied with the VeroPoint contains many standard modules used for HVAC applications, electrical and building control applications including:
- Single/multi-zone temperature control
- Humidity and temperature control
- Temperature control with summer/winter compensation.
- Hot water temperature control with outdoor compensation
- Temperature/enthalpy economizer damper control
- Static pressure control
- Binary/proportional step controller

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- Chiller/boiler optimization
- Cold \ Heat rooms
- Hot\Chilled water distribution stations.

Energy Saving Programs

OPTIMUM START/STOP time programs that calculate optimal start times needed to achieve desired comfort level as well as the optimal stop
time needed in order to preserve the desired comfort condition for the remaining occupancy time. ENTHALPY CONTROL utilizes fresh air for
cooling when the calculated fresh air enthalpy is less than the return air enthalpy. NIGHT PURGE enables the entry of cool fresh air into the building at night to pre-cool and purge the air inside.

Installations

To install the VeroPoint or its additional extension IO cards it needs simply to be placed in the electrical panel on a DIN Rail and its removable IO terminals can be easily wired.

Specifications

Environmental Operation
Temperature: 0-70° C
Humidity: 0-95% RH

Power Requirements
Voltage 24AC ± 20%
Minimum Transformer Size 50VA
Frequency 50/60 Hz

Wiring
Ethernet wiring .... FTP.
RS485 and Analog In .... twisted pairs, shielded cable.
Digital in and out, analog out ... twisted pairs.

Dimensions
320 mm x 105 mm x 70 mm

 Shipping Weight
850 Grams

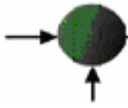Draft rev 1.0

Extension IO cards:

VeroPoint PLC basic unit allows connecting up to 10 additional IO cards via its high speed CANBUS communication ports. Once connected the extension cards are interlocked with the main controller's CPU unit.

1- Digital Inputs\Outputs card:

TYPE	CAPACITY	DEFINITION	RANGE	COMBINATION
OUTPUTS	50%	DIGITAL OUT	0/24 VAC\VDC	16
INPUTS	50%	DIGITAL IN	DRY CONTACT PULSE IN	16

2- Digital Inputs card:

TYPE	CAPACITY	DEFINITION	RANGE	COMBINATION
INPUTS	100%	DIGITAL IN	DRY CONTACT PULSE IN	16

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3- Universal IO Card

TYPE	CAPACITY	DEFINITION	RANGE	COMBINATION
OUTPUTS	25%	DIGITAL OUT	0/24 VAC\VDC	8
UNIVERSAL IN/OUT	25%	ANALOG OUT	0-10 VDC	8
		DIGITAL IN	DRY CONTACT	
UNIVERSAL INPUTS	50%	ANALOG IN	VOLTAGE 0-10 VDC 0-1VDC	16
			CURRENT 0-20 mA 4-20 mA	
			RESISTANCE NI-1000 PT-1000	
		DIGITAL IN	DRY CONTACT	

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