

EC100XP

SMART I/O™



DESCRIPTION

The Smart I/O™ EC100XP is a fully programmable controller allowing a complete sequence of operation customization for today's ever-changing control strategies that are required to meet continued energy efficiency requirements. The reliable cost effective I/O is continuously monitored and precisely controlled by a microprocessor for exceptional performance. To eliminate memory constraints caused by today's complex applications an additional 8K of external SRAM has been added to the existing memory architecture of the EC100XP. A precision airflow sensor provides reliable and accurate measurements allowing superior performance. Communication for monitoring, control and diagnostics is achieved utilizing a LonTalk® TP/FT-10 network with a simple twisted-pair, un-polarized cable.

The five universal inputs (UI) can be configured in a variety of ways. Universal inputs 1 through 4 (UI1-UI4) can interface with resistive type sensors for temperature measurements. These four inputs can also measure 0-5 volts from typical low output resistance sensors. Universal inputs 1 through 4 are also well suited for reading digital inputs and dry contacts for status or alarm conditions. Universal input 5 (UI5) is specifically set-up to measure only voltage. The default voltage range is 0-5 volts and can be set to measure 0-10 volts with the change of an option jumper. The UI's are well suited to measure voltage values from humidity and many other transducer output signals. With 12-bits of resolution, the universal inputs are field adaptable and accurate for many types of measurements.

The five digital outputs (DO) are Triac outputs for control of additional on/off or pulsed external devices where the current does not exceed 1A at 24 VAC.

The EC100XP controller is protected from reverse power supply input wiring, over-voltages, transients, and other common events that can damage unprotected inputs and outputs.

User defined algorithms and functions can be programmed using VisualControl™, NodeBuilder, LonBuilder or other third party LONWORKS programming tools. The application program can be downloaded over the LonTalk network and is stored in non-volatile memory allowing the application to be retained even after loss of power. The versatile I/O allows numerous applications to be development and implemented with the EC100XP.

The enclosure snaps securely onto a 35mm DIN-rail for quick and easy mounting. A spring-loaded locking clip allows for quick and easy removal.

The wide operating temperature range, -20 to 70 °C, makes the EC100XP well suited for many demanding applications.

APPLICATIONS

- VAV Controller
- Zone Control
- Heating & Cooling
- Electric Reheat
- Hot Water Reheat
- Single & Two Stage Reheat
- CO2 Sensor Monitor
- Occupancy Sensor Monitor
- Room Pressurization Control
- Energy Management
- Custom Applications

FEATURES

- LonTalk Protocol
- Free Topology Communication (FTT-10)
- Precision Onboard 0-2"W.C. Air-Flow Sensor
- 5 universal inputs: UI1-UI4 has 0-5V, thermistor or dry contact and UI5 is voltage only with 0-5V or 0-10V
- 5 digital outputs (Triac, 1 A)
- FLASH Memory for Network Downloading of Applications
- 62 programmable network variables with no SNVT type limitations
- DIN-rail mounting
- Compact Size for Minimal Panel Space
- Fully programmable
- 2 Year Limited Warranty

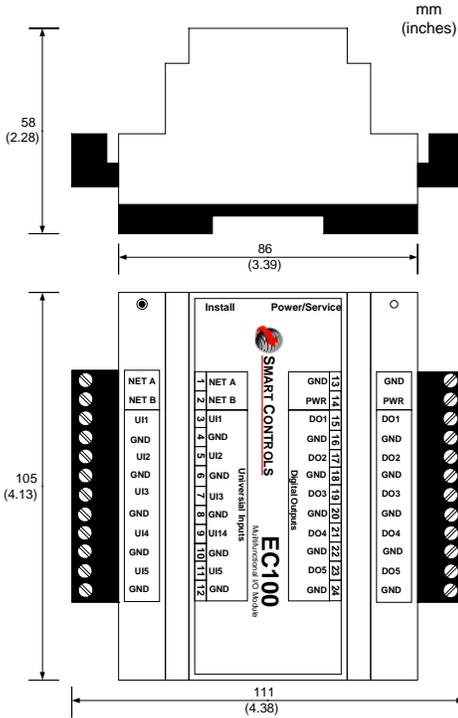
SELECTION GUIDE

S-EC100XP

└ Fully Programmable VAV Controller

SPECIFICATIONS

DIMENSIONS



General
 Communication: LONTALK™ Protocol
 Transceiver: FTT-10, Free Topology
 Processor: Neuron 3150 @ 10 MHz
 Memory: 48K bytes FLASH(External)
 2K bytes SRAM (Neuron)
 8K bytes SRAM (External)
 0.5K bytes EEPROM (Neuron)

Air-Flow
 Type: Differential Pressure
 Range: 0-2"W.C.(0-500 Pa)
 Resolution: 12 bits
 Accuracy: 0.2% Full Scale
 (32°F -122°F, 0°C-50°C)

Power
 Nominal Input Voltage: 24 VAC
 Input Voltage Range: 21-28 VAC
 Maximum Consumption: 6 VA, does not include Triac loading

Inputs
 Number: 5
UI1-UI4
 Voltage: 0-5 Volts
 Thermistor: Type 2, 3: 10Kohms (25°C, 77°F)
 Digital: Dry Contact
UI5 Only
 Voltage: 0-5 Volts
 0-10Volts (Option Jumper)

Environmental
 Operating Temperature: -20 °C to +70 °C, -4 °F to 158 °F
 Storage Temperature: -40 °C to +70 °C, -40 °F to 158 °F
 Relative Humidity: 5% to 95% (non-condensing)

All Inputs
 Resolution: 12 bits
 Accuracy: ±1% FS (25°C, 77°F)
 Protection Circuitry: Transient Voltage, ESD

Enclosure
 Dimensions: L 105 x W 86 x H 58 mm
 (4.13" x 3.39" x 2.28")
 Cover: Lexan 940, UL94-V0 rated
 Base: Noryl VO1550, UL94-V0 rated

Outputs
 Number: 5
 5- Digital: Triac 1.0 A @ 24 VAC
 Voltage Sourcing
 Protection Circuitry: Transient Voltage, ESD

Warranty
 Period: 2 Years (Limited)

EXAMPLE WIRING DIAGRAM

CONTACT



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IMPORTANT WIRING INFORMATION

All inputs are software selected for analog, digital or resistive inputs.

- 1) Secondary of Class 2 Transformer should always be earth grounded to provide reliable communication and sensor readings.
- 2) *External fuse not supplied. Size fuse according to application load and not to exceed 5 Amps.

