



# EC120

## SMART I/O™

### DESCRIPTION

The Smart I/O™ EC120 programmable controller incorporates 12 channels of cost effective analog and digital I/O. The I/O is monitored and controlled by a Neuron 3150 chip with Free Topology communication over a LonWorks® network. As an option, the EC120 can be selected with a Super Cap backed-up Real Time Clock, selectable FLASH/SRAM and Serial EEPROM. The EC120 can be utilized in many custom or fixed distributed control applications.

The I/O of the EC120 makes it perfect for a variety of equipment control applications. The wide operating temperature range, -20 to 70 °C, makes the EC120 well suited for many demanding applications.

The six universal inputs (UI) can be configured in a variety of ways. The controller can interface with resistive type sensors for temperature measurements. The UI's can measure voltage from humidity or transducer readings. The UI's can input current for pressure measurements. The UI's can also be used to read digital inputs and dry contacts. With 12 bits of resolution, the universal inputs are field adaptable and accurate for many types of measurements.

The even pins of the universal inputs can be configured to provide regulated 20 Vdc to current transducers for simplified interfacing. The 20 VDC source is protected by an internal auto-resettable fuse.

The four universal outputs (UO) can be configured as Triac or 0-10 VDC outputs. The controller can use Triac outputs to provide on/off or pulsed control for controlling control damper positions, valves, alarms, lights or other loads where the current does not exceed 1A at 24 VAC. The 0-10 VDC output has 10 bits of resolution for accurate control external devices.

The two 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 EC120 controller is protected from reverse power supply input wiring, over-voltages, transients, and other common events that can damage unprotected inputs and outputs.

The versatile I/O allows numerous applications to be development and implemented with the EC120. The Real Time Clock and expanded memory allow applications for data logging, scheduling and time stamp monitoring and control.

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 free topology network and is stored in non-volatile memory so it is retained even after loss of power.

The enclosure snaps right onto a 35mm DIN-rail for quick and easy mounting. Its spring-loaded latching mechanism makes it easy to remove.

### APPLICATIONS

- Air Handling Units
- Fan Coil Units
- Roof Top Units
- Heat Pumps
- VAVs
- Chillers
- Boilers
- Lighting
- Energy Management
- Refrigeration
- Custom Applications

### FEATURES

- LonTalk Protocol
- Free Topology Communication (FTT-10)
- 6 universal inputs with 0-5V, 0-10V, 0-20mA, thermistor or dry contact
- 4 universal outputs with Triac or 0-10V
- 2 digital outputs with Triac
- FLASH Memory
- DIN-rail mounting
- Compact Size for Minimal Panel Space
- Fully programmable
- 2 Year Limited Warranty

### SELECTION GUIDE

S-EC120P-F-

**B** - Standard (56K FLASH)

**C** - Real Time Clock with Super Cap Back-up, Selectable Memory (FLASH, SRAM) and 8K Serial EEPROM

