EC100

SMART I/O™

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)
- 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
- Optional selectable memory (Flash, SRAM)
- DIN-rail mounting
- Compact Size for Minimal Panel Space
- Fully programmable
- 2 Year Limited Warranty

DESCRIPTION

The Smart I/O™ EC100 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, as an option, the EC100 can be specified with selectable FLASH/SRAM memory. Communication for monitoring, control and diagnostics is achieved utilizing a LonTalk® TP/FT-10 network with a simple twisted-pair, un-polarized cable. The EC100 can be utilized in many custom or fixed distributed control applications.

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 EC100 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 free topology network and is stored in non-volatile memory so it is retained even after loss of power. The versatile I/O allows numerous applications to be development and implemented with the EC100.

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

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

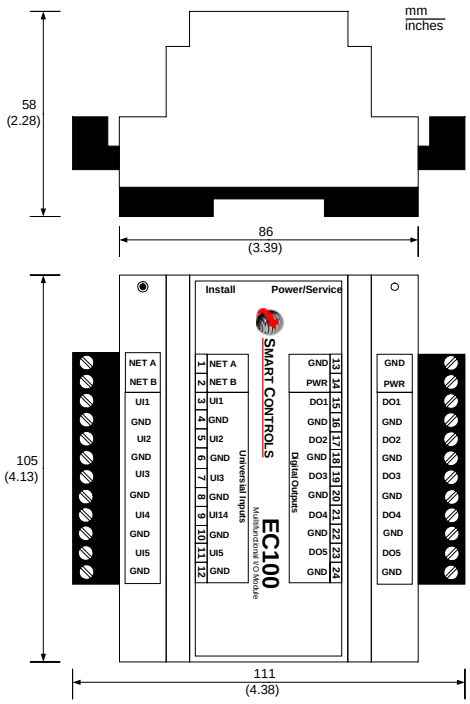
SELECTION GUIDE

S-EC100P-F-☐

B - STANDARD 56K Flash Memory Only

M - Selectable Memory (FLASH, SRAM)

DIMENSIONS



CONTACT

SMART CONTROLS

Office:
10000 St. Clair Avenue
Fairview Heights, IL 62208
U.S.A.
Phone: +1 618 394 0300
Fax: +1 618 394 1575

E-mail:
sales@smartcontrols.com

Web site:
www.smartcontrols.com

AGENCY

CE FC

SPECIFICATIONS

General
Communication: LONTALK™ Protocol
Transceiver: FTT-10, Free Topology
Processor: Neuron 3150 @ 10 MHz
Memory: 56K bytes FLASH
2K bytes SRAM (Neuron)
24K bytes SRAM (External)*
0.5K bytes EEPROM (Neuron)

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

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)

Warranty
Period: 2 Years (Limited)

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, 0-10 Volts (Option Jumper)
All Inputs
Resolution: 12 bits
Accuracy: ±1% FS (25°C, 77°F)
Protection Circuitry: Transient Voltage, ESD

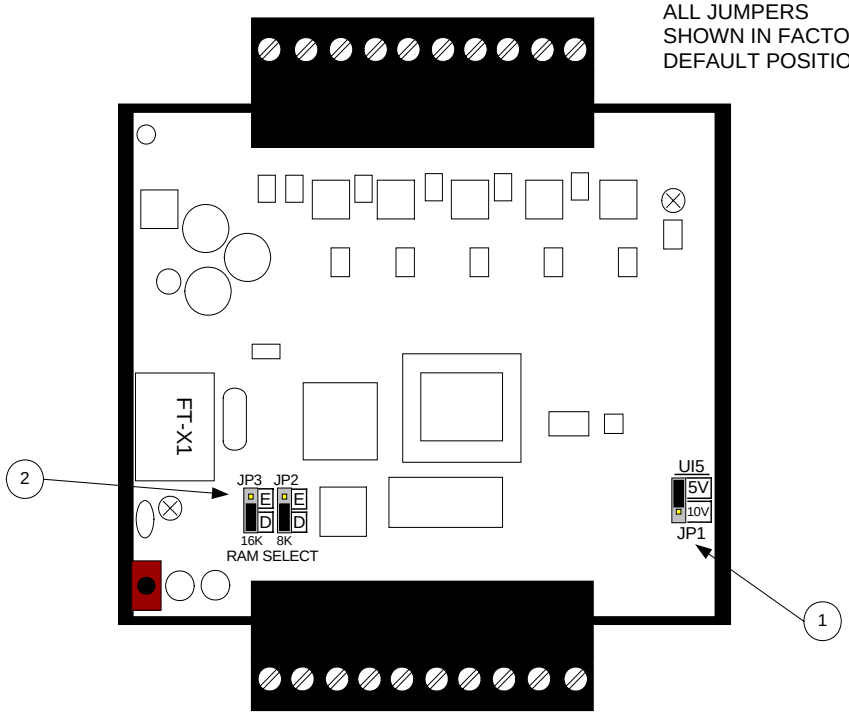
Outputs
Number: 5
5- Digital: Triac 1.0 A @ 24 VAC Voltage Sourcing
Protection Circuitry: Transient Voltage, ESD

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

*Optional – Only available on models with "M" option

OPTION JUMPER SELECTIONS

ALL JUMPERS SHOWN IN FACTORY DEFAULT POSITION



1- 5V/10V Selection
5V – Input Sensing for 5V Signals
10V – Input Sensing for 10V Signals
Note: UI5 only.

2- RAM Memory Selection*
E – Enable
D – Disable
*Optional – Only available on models with "M" option.

FLASH	RAM	16K(JP3)	8K(JP2)
56K	0K	D	D
48K	8K	D	E
40K	16K	E	D
32K	24K	E	E

Document Number: 37-0222, ver. 1.1.0