



ENTERTRON INDUSTRIES, INC.

Programmable Controllers



SK1600-RIC

High Performance, Versatile and Inexpensive

The SK1600-RIC is the successor to Entertron's SK1600-R programmable logic controller, first introduced in 1985. This product has been continually improved during its 15+ year history. A wide variety of applications, from Radio Frequency Remote controls to Dock Levelers, confirm that the versatility and performance are unquestionable. No small or micro PLCs from our competitors use a Form C relay or offer the current driving capabilities that the SK1600-RIC does.

The form C relay allows you the capability of controlling two devices with one output. For example, you have two status lights. One would be off when the other is on, and visa versa. Both lights can be wired to the one output. One light would be wired to the normally opened contact, the other to the normally closed contact. Thus allowing you to reduce your number of outputs. Most other PLCs provide a form A relay only, thus, you would have to use two outputs to control both status lights. Imagine not having to waste valuable I/O.

The majority of our competitors offer relay output ratings of approximately 2 amps / output. With that limited load, you may have to interface additional relays to handle your current load requirements. Imagine, not needing to do that. The SK1600-RIC offers a minimum of 8 - 8 amp outputs with no restrictions.

This controller is the perfect bridge between the micros and rack systems. From a price / performance point of view, the SK1600-RIC offers more power than today's micros and is far less expensive than going to a rack system. This controller can be configured for up to 32 inputs / 24 outputs and 4 analog I/O.

We are so confident about the performance of the SK1600-RIC, that we have extended our warranty again !!! This time from 3 years to 5 years. No other PLC manufacturer offers a warranty greater than 1 year.

The latest improvements to this controller include:

- AC inputs (24 or 120)
- Option for a second serial port (RS232 or RS 485)
- Greater noise immunity for superior performance.

Highlights:

AC or DC inputs (1000 mA power supply for DC input units)	2 serial ports
Pluggable Terminal Blocks	Analog Capabilities
Pluggable Memory	Windows or DOS programming software
Operator Interface Capabilities	5 year warranty
8 amps / outputs (Form A & Form C)	

Specifications

Item	SK1600-RICS	SK1600-RICSA
Power Requirements	120 / 240 VAC @ 50 / 60 Hz Transformer Provided (12 or 24 VDC, 24 VAC optional)	
Digital Inputs	16, 24, 32	
Digital Input Voltages	120 VAC or 12 VDC sink (24 VAC, 5 volt TTL, optional) Optically Isolated (source optional) (1000 mA power supply included for DC inputs)	
Digital Outputs	12, 20, 24	
Digital Output Type	12 Relay Outputs - 8 Form C (NO/NC), 4 Form A (NO) (9 commons) 20 Relay Outputs - 12 Form C (NO/NC), 8 Form A (NO) (17 commons) 24 Relay Outputs - 16 Form C (NO/NC), 8 Form A (NO) (18 Commons)	
Digital Output Rating	12 Relay Outputs - 8 @ 8 amps / output; 4 @ 8 amps / 4 outputs 20 Relay Outputs - 16 @ 8 amps / output; 4 @ 8 amps / 4 outputs 24 Relay Outputs - 16 @ 8 amps / output; 8 @ 8 amps / 4 outputs	
Digital Output Voltage	up to 277 VAC or 30 VDC	
Analog Inputs	N/A	up to 4 @ 0 - 2.5 to 0 -10 VDC
Analog Outputs	N/A	up to 4 @ 0 - 2.5 to 0 -10 VDC
Analog Resolution	N/A	8 Bit (0-255)
Program Capacity	4K	
Memory Type	EPROM / BBRAM	
Serial Port - Standard	RS232 - Full Duplex	
High Speed Counter	1 @ 10 KHz	
Scan Rate	15 ms / K ladder logic instruction	
Timers / Counters	up to 250	
Internal Relays	149	
Serial Port - Option	2nd RS232 port - Full Duplex; 2 wire RS485	
Expanded Memory - Option	up to 12K	
Real Time Clock - Option	Yes	
High Speed Counters - Option	2 HSC @ 5 KHz	
Bi-Directional HSC - Option	Bi-Directional HSC with Interrupt @ 5KHZ	
Quadrature Decoder - Option	Software Quadrature @ 500 Hz	
UL - Option	UL - 508 Standard	
Operator Interfaces	Communicate with Eclipse Operator Interfaces and Touch Screens	
Communications Protocols	ASCII; ModBus RTU	
Networking	ModBus RTU - up to 16 slaves	
Dimensions	7.75" x 10.00" x 2.00" (single board without mounting plate) 9.00" x 13.00" x 2.50" (single board with mounting plate) 7.75" x 10.00" x 4.00" (two boards without mounting plate) 9.00" x 13.00" x 4.50" (two boards with mounting plate)	
Operating Temperature	0-60 C (32 - 140 F) 90% relative humidity non-condensating All components used are rated for at least 0-70 C (32 - 158F)	

Ordering Information

Part Number	Description
16RICS-1612-PT	16 DC in / 12 Relay out, Plate and Transformer
16RICS-16A12R-PT	16 AC in / 12 Relay out, Plate and Transformer
16RICS-2420-PT	24 DC in / 20 Relay out, Plate and Transformer
16RICS-24A20R-PT	24 AC in / 20 Relay out, Plate and Transformer
16RICS-3224-PT	32 DC in / 24 Relay out, Plate and Transformer
16RICS-32A24R-PT	32 AC in / 24 Relay out, Plate and Transformer
16RICSA-1612-PT	16 DC in / 12 Relay out, 1 analog I/O, Plate and Transformer
16RICSA-16A12R-PT	16 AC in / 12 Relay out, 1 analog I/O, Plate and Transformer
16RICSA-2420-PT	24 DC in / 20 Relay out, 1 analog I/O, Plate and Transformer
16RICSA-24A20R-PT	24 AC in / 20 Relay out, 1 analog I/O, Plate and Transformer
16RICSA-3224-PT	32 DC in / 24 Relay out, 1 analog I/O, Plate and Transformer
16RICSA-32A24R-PT	32 AC in / 24 Relay out, 1 analog I/O, Plate and Transformer
A2	one additional analog channel (two total)
A3	two additional analog channels (three total)
A4	three additional analog channels (four total)
I	2nd serial port - RS485 (two wire)
M	Expanded Memory
R	Real Time Clock
S	2nd serial port - RS232
U	UL - Standard 508
X	Expansion capabilities

