

Serial-Stat™



XC-SSA16/CLK Serial-Stat Network Controller

Non-Expandable

- **CONTROL UP TO 16 SERIAL-STATS**
- **REAL-TIME CLOCK/CALENDAR**

(2) RS-232C Ports

GENERAL DESCRIPTION

The XC-SSA16/CLK network controller supports up to 16 Serial-Stat thermostats. The XC-SSA16/CLK includes a real-time clock/calendar that allows simple, yet robust environment control. The network controller enables simple integration with any control system, automation system or personal computer. Two RS-232C ports are included for dual connections to local and remote needs. Removable screw terminals are included for power and the Serial-Stat bus for communications, and a serial cable is included for RS-232C connection. The XC-SSA16/CLK accepts simple ASCII commands using a published open protocol and replies with readable text answers. The entire family of controllers has built-in intelligence to correct illegal thermostat settings that might damage equipment.

Standard Features

Hardware

- Two RS-232 Serial Ports; One Serial-Stat Communications Port
- Allows full control of up to 16 thermostats on the controller
- No additional hardware needed at the thermostat
- Any Serial-Stat can be up to 1000' away; Combined total of 4000' for all thermostats
- Any mix of home-run, daisy-chain or multi-drop wiring can be used
- Only two wires needed for communications with the thermostat using CAT5 cabling
- Advanced protection circuitry for data inputs/outputs; All input/output/power on removable connectors
- Non-volatile clock/calendar setpoint memory
- Integrated Real-Time Clock/Calendar allows hundreds of scheduled programs

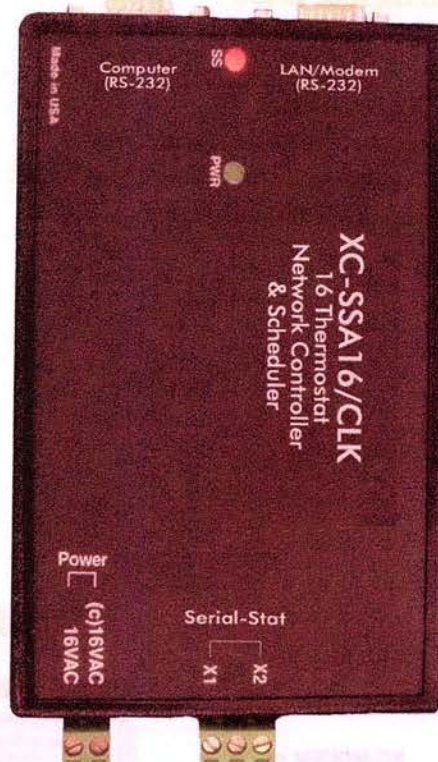
RS-232 Features

- One port connects directly to any PC or control system
- One port connects directly to the XC-MODEM External Modem or XC-LAN232 Ethernet Adapter

Software/Manuals

- Open ASCII Protocol allows custom software development
- Two Operation Modes with ASCII Protocol; **Polled, Periodic Update**
- ASCII Protocol Summary and complete Protocol Manual available
- Installation Manual included; Pre-wire Manual available
- XCI Command Center, Windows-based software included
- All Manuals/Software/Application Notes available on the web site

Note : Specifications subject to change without notice.



SPECIFICATIONS

Rated Voltage :

16VAC nominal, +/- 20 %

Rated A.C. Current :

200 mA maximum

Indicator LEDs :

PWR (power)

blinking - normal operation;

steady - system interruption occurred

SS (Serial-Stat)

flashing - transmission in progress

Dimensions :

3.6" H x 6.25" W x 7/8" D (91mm x 159mm x 22mm)

Power Terminations :

16VAC - power, 16VAC(c) - power common

Communication Terminations :

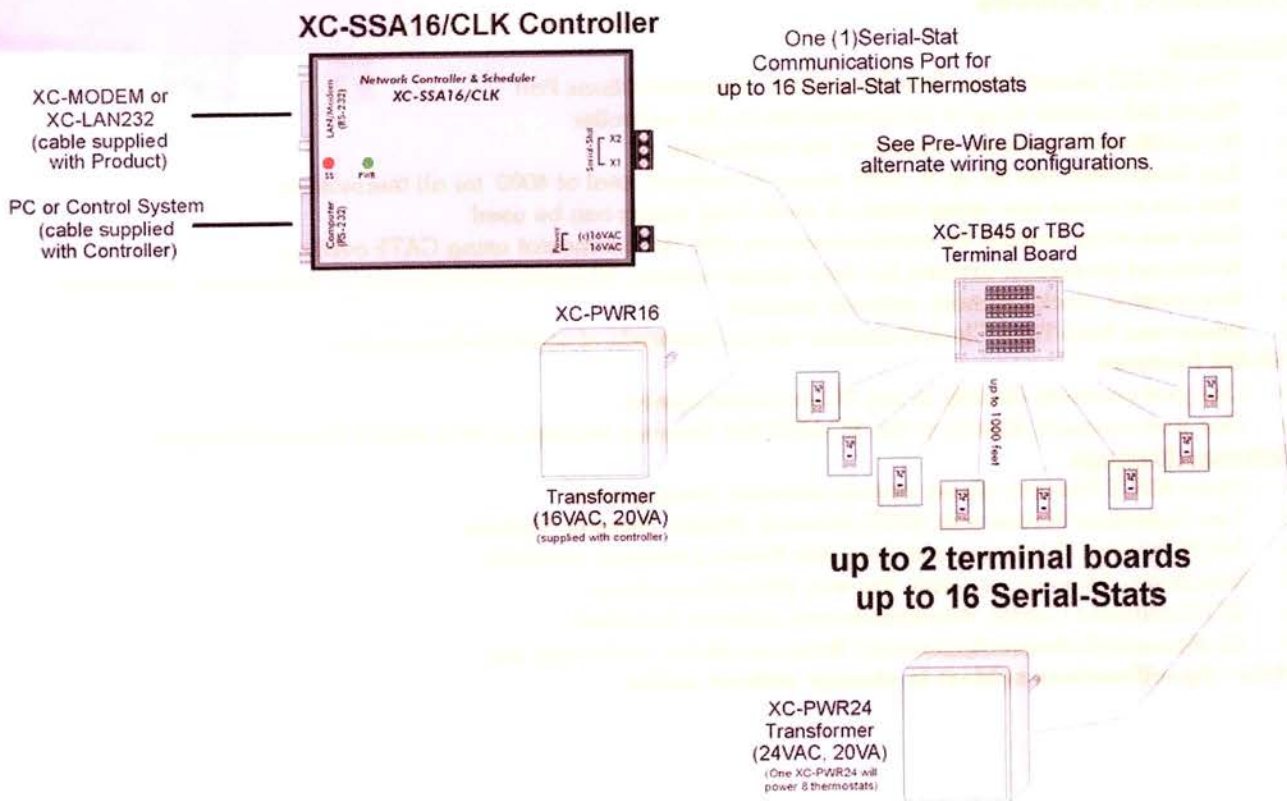
X1 - Data(+); X2 - comm(-)

RS-232 Terminations :

1) LAN/Modem - 9-Pin Female D-Sub, pins 2, 3, 5; 7 & 8 opt. (RTS/CTS)

2) Computer - 9-Pin Male D-Sub, pins 2, 3, 5; 7 & 8 opt. (RTS/CTS)

Typical Wiring Diagram



Serial-Stat™



XC-SSA32/CLK Serial-Stat Network Controller

Non-Expandable

- **CONTROL UP TO 32 SERIAL-STATS**
- **REAL-TIME CLOCK/CALENDAR**
- (2) RS-232C Ports**

GENERAL DESCRIPTION

The XC-SSA32/CLK network controller supports up to 32 Serial-Stat thermostats. The XC-SSA32/CLK includes a real-time clock/calendar that allows simple, yet robust environment control. The network controller enables simple integration with any control system, automation system or personal computer. Two RS-232C ports are included for dual connections to local and remote needs. Removable screw terminals are included for power and the Serial-Stat bus for communications, and a serial cable is included for RS-232C connection. The XC-SSA32/CLK accepts simple ASCII commands using a published open protocol and replies with readable text answers. The entire family of controllers has built-in intelligence to correct illegal thermostat settings that might damage equipment.

Standard Features

Hardware

- Two RS-232 Serial Ports; Two Serial-Stat Communications Ports
- Allows full control of up to 32 thermostats on each adapter
- No additional hardware needed at the thermostat
- Any Serial-Stat can be up to 1000' away; Combined total of 4000' for all thermostats
- Any mix of home-run, daisy-chain or multi-drop wiring can be used
- Only two wires needed for communications with the thermostat using CAT5 cabling
- Advanced protection circuitry for data inputs/outputs; All input/output/power on removable connectors
- Non-volatile clock/calendar setpoint memory
- Integrated Real-Time Clock/Calendar allows hundreds of scheduled programs

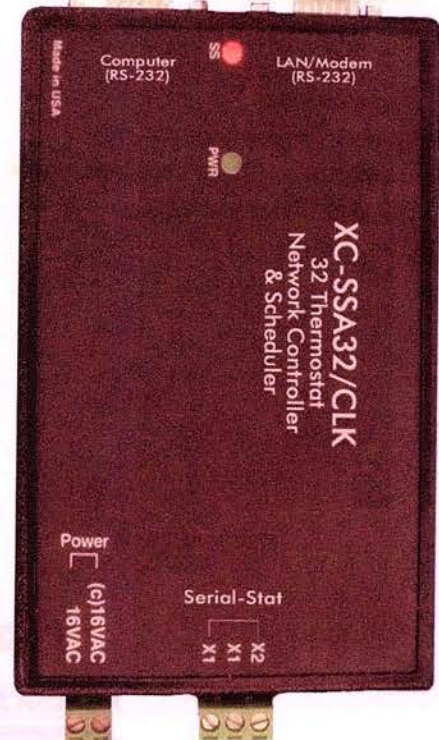
RS-232 Features

- One port connects directly to any PC or control system
- One port connects directly to the XC-MODEM External Modem or XC-LAN232 Ethernet Adapter

Software/Manuals

- Open ASCII Protocol allows custom software development
- Two Operation Modes with ASCII Protocol; **Polled, Periodic Update**
- ASCII Protocol Summary and complete Protocol Manual available
- Installation Manual included; Pre-wire Manual available
- XCI Command Center, Windows-based software included
- All Manuals/Software/Application Notes available on the web site

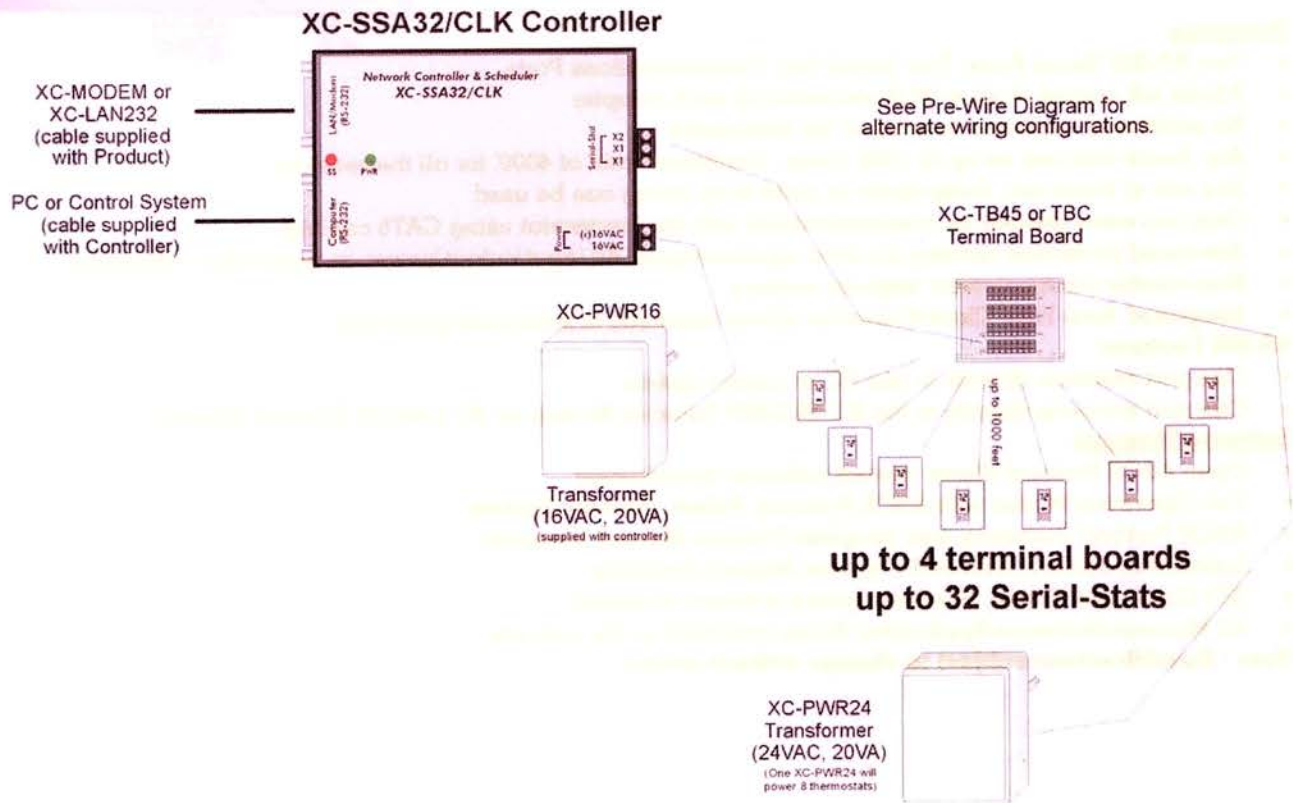
Note : Specifications subject to change without notice.



SPECIFICATIONS

Rated Voltage :	16VAC nominal, +/- 20 %
Rated A.C. Current :	200 mA maximum
Indicator LEDs :	PWR (power) blinking - normal operation; steady - system interruption occurred
	SS (Serial-Stat) flashing - transmission in progress
Dimensions :	3.6" H x 6.25" W x 7/8" D (91mm x 159mm x 22mm)
Power Terminations :	16VAC - power, 16VAC(c) - power common
Communication Terminations :	X1 - Data(+); X2 - comm(-)
RS-232 Terminations :	1) LAN/Modem - 9-Pin Female D-Sub, pins 2, 3, 5; 7 & 8 opt. (RTS/CTS)
	2) Computer - 9-Pin Male D-Sub, pins 2, 3, 5; 7 & 8 opt. (RTS/CTS)

Typical Wiring Diagram



Serial-Stat™



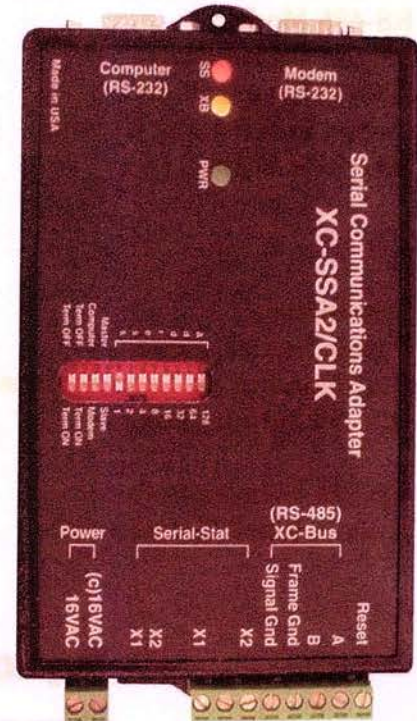
XC-SSA2/CLK Serial-Stat Network Controller

Expandable for Large Networks

- **CONTROL UP TO 32 SERIAL-STATS**
- **REAL-TIME CLOCK/CALENDAR**
- (2) RS-232C and (1) RS-485 Port**

GENERAL DESCRIPTION

The XC-SSA2 family of network controllers communicate with up to 32 Serial-Stat thermostats. The XC-SSA2/CLK includes a real-time clock/calendar which allows simple, yet robust environment control. The entire Serial-Stat Controller family enables simple integration with any control system or personal computer. Two RS-232C and one RS-485 ports are included with the controller for complete versatility of environments. Removable screw terminals are included for power, RS-485 and the Serial-Stat bus for communications, and a serial cable is included for RS-232C connection. The XC-SSA2/CLK accepts simple ASCII commands using a published open protocol and replies with readable text answers. The entire family of controllers has built-in intelligence to correct illegal thermostat settings that might damage equipment.



Standard Features

Hardware

- Two RS-232 Serial Ports; One RS-485 Serial Port; Operates at 9600 baud
- Allows full control of up to 32 thermostats on each adapter
- No additional hardware needed at the thermostat
- Any Serial-Stat can be up to 1000' away; Combined total of 4000' for all thermostats
- Any mix of home-run, daisy-chain or multi-drop wiring can be used
- Only two wires needed for communications with the thermostat
- Advanced protection circuitry for data inputs/outputs; All input/output/power on removable connectors
- Adapters Addressable from 1 - 255
- Non-volatile clock/calendar setpoint memory (*XC-SSA2/CLK only*)
- Integrated Real-Time Clock/Calendar allows 1,000 timed programs (*XC-SSA2/CLK only*)

RS-232 Features

- One port connects directly to any PC or control system
- One port connects directly to the XCI External Modem (available separately)

RS-485 Features

- 4-wire multi-drop configuration (2 data, signal ground, frame ground)
- Up to 255 adapters on multi-drop (total of 8160 thermostats)
- Supports any combination of XCI adapters, sensors and modules for a total of 255 units

Software/Manuals

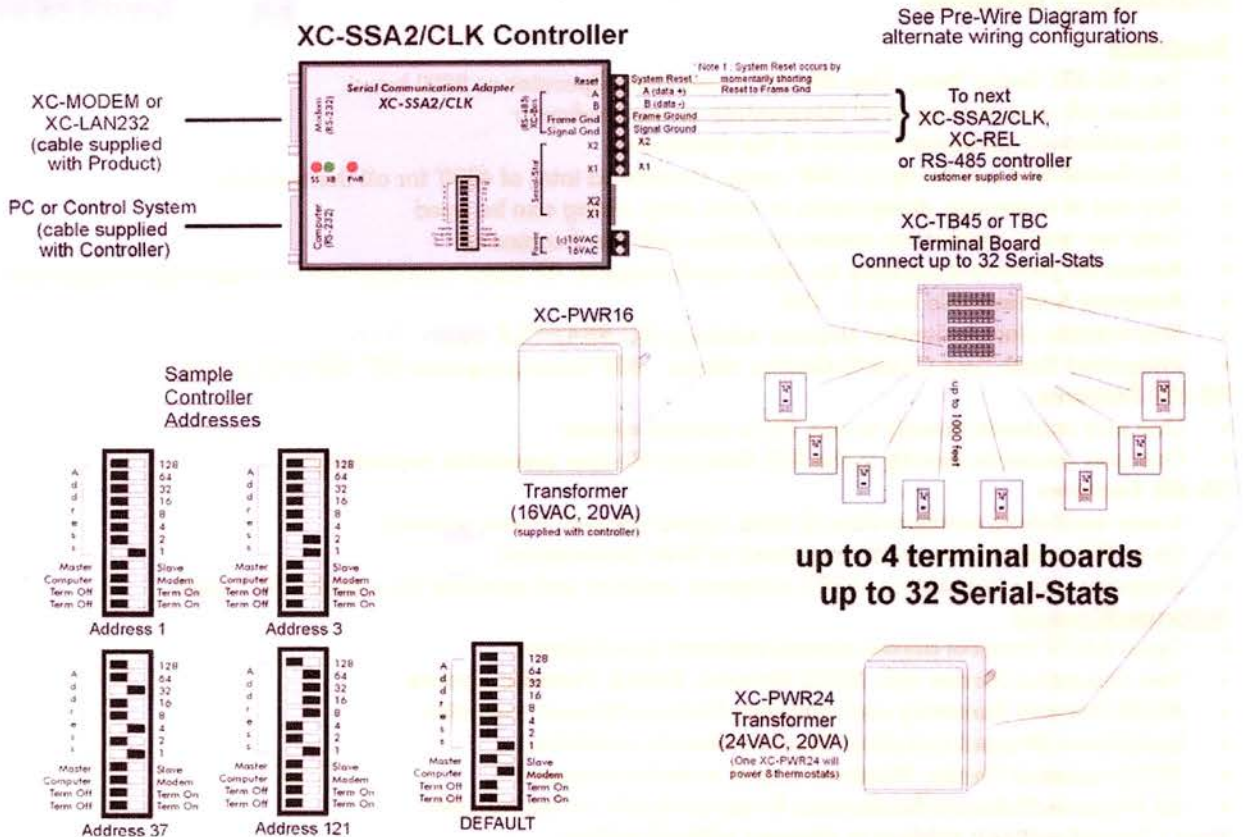
- Open ASCII Protocol allows custom software development
- Two Operation Modes with ASCII Protocol; **Polled, Periodic Update**
- ASCII Protocol Summary and complete Protocol Manual available
- Installation Manual included; Pre-wire Manual available
- XCI Command Center, Windows-based software included
- All Manuals/Software/Application Notes available on the web site

Note : Specifications subject to change without notice.

SPECIFICATIONS

Rated Voltage :	16VAC nominal, +/- 20 %
Rated A.C. Current :	250 mA maximum
RS-485 Mode :	Master / Slave; front panel switchable
RS-485 Addressing :	1 - 255; front panel switchable
RS-485 Termination :	Front panel switchable
Comm Port Priority Control:	Modem or Computer front panel switchable
Indicator LEDs :	PWR (power) blinking - normal operation; steady - system interruption occurred
	SS (Serial-Stat) flashing - transmission in progress
	XB (XC-Bus) flashing - transmission in progress
Dimensions :	3.6" H x 6.25" W x 7/8" D (91mm x 159mm x 22mm)
Power Terminations :	16VAC - power, 16VAC(c) - power common
Communication Terminations :	X1 - comm(+), X2 - comm(-); alt. connection via RJ-45 Connector
RS-232 Terminations :	Modem - 9-Pin Female D-Sub, pins 2, 3, 5; 7 & 8 opt. (RTS/CTS) Computer - 9-Pin Male D-Sub, pins 2, 3, 5; 7 & 8 opt. (RTS/CTS)
RS-485 Terminations :	A (data +), B (data -), Signal Ground, Frame Ground
System Reset Terminations:	Reset

Typical Wiring Diagram



Serial-Mod™



XC-REL Communicating Relay Module

FOUR (4) INDEPENDENT NC/NO RELAYS with ON-BOARD SCHEDULING

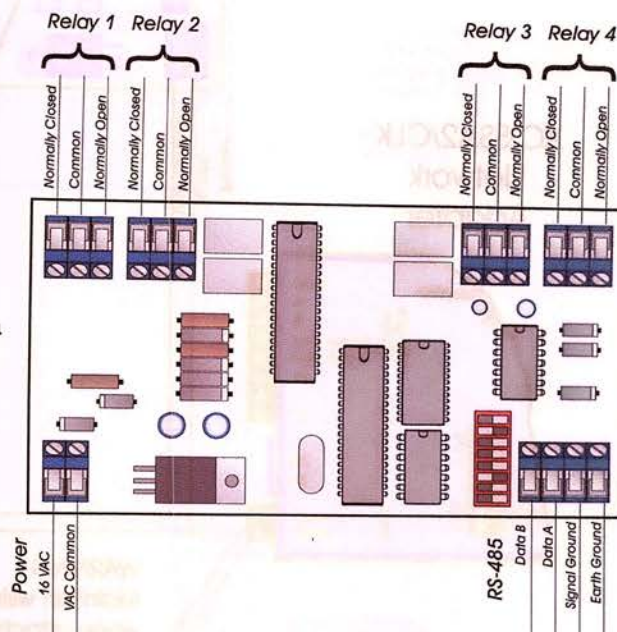


GENERAL DESCRIPTION

The XC-REL communicating relay module is designed for adding scheduling and control to any generic relay application. The relay module represents the latest in communications techniques incorporated into a rugged plastic case. The module contains four (4) independently controllable relays, each with NC, Common and NO connections. The RS-485 communications bus allows simple connection to the XCI network controllers for complete access and control from any location. Each relay may be addressed separately for a possible total of over 1000+ relay modules on a network. Built-in non-volatile memory allows up to 256 schedules to be downloaded from the XCI Command Center software and stored in the relay module.

STANDARD FEATURES

- ✓ Four (4) Independent Relays per module
- ✓ All relays are SPDT type, 1A@30VDC, 0.3A@110VDC, 0.5A@125VAC
- ✓ Power input 16Vac, +/- 20%, 100mA
- ✓ Case dimensions 6 3/16" H x 3 3/4" W x 1 3/8" D
- ✓ Eight (8) way wiring knockouts with cable clamps included
- ✓ Microprocessor controlled solid-state electronics
- ✓ Operates on any two-wire RS-485 network with 9600 baud communications rate
- ✓ Open ASCII protocol allows control software to be written in any language
- ✓ Non-volatile memory for storage of up to 256 schedules
- ✓ No battery needed with power outages of any duration
- ✓ Scheduled events are triggered from relay module
- ✓ Daily time/day clock synchronization from XC-SSA2/CLK network controller
- ✓ Applications include damper control, lighting, setback control, event scheduling



NOTE: Specifications are subject to change without notice.

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P/N 220003-001

SPECIFICATIONS

Rated Voltage :	16VAC nominal, +/- 20 %
Rated A.C. Current :	100 mA maximum
RS-485 Mode :	Slave only
RS-485 Addressing :	1 - 255; DIL switchable
Indicator LEDs :	PWR (power) blinking - normal operation; steady - system interruption occurred
	Relay 1 OFF = Energized; ON = De-Energized
	Relay 2 OFF = Energized; ON = De-Energized
	Relay 3 OFF = Energized; ON = De-Energized
	Relay 4 OFF = Energized; ON = De-Energized
Dimensions :	6 3/16" H x 3 3/4" W x 1 3/8" D
Power Terminations :	AC - power, (c) - power common
Relay Terminations :	NC (normally closed), C (common), NO (normally open)
	common for all 4 relays
RS-485 Terminations :	A (data +), B (data -), SG (signal ground), EG (earth/frame ground)

TYPICAL POWER CONNECTION

