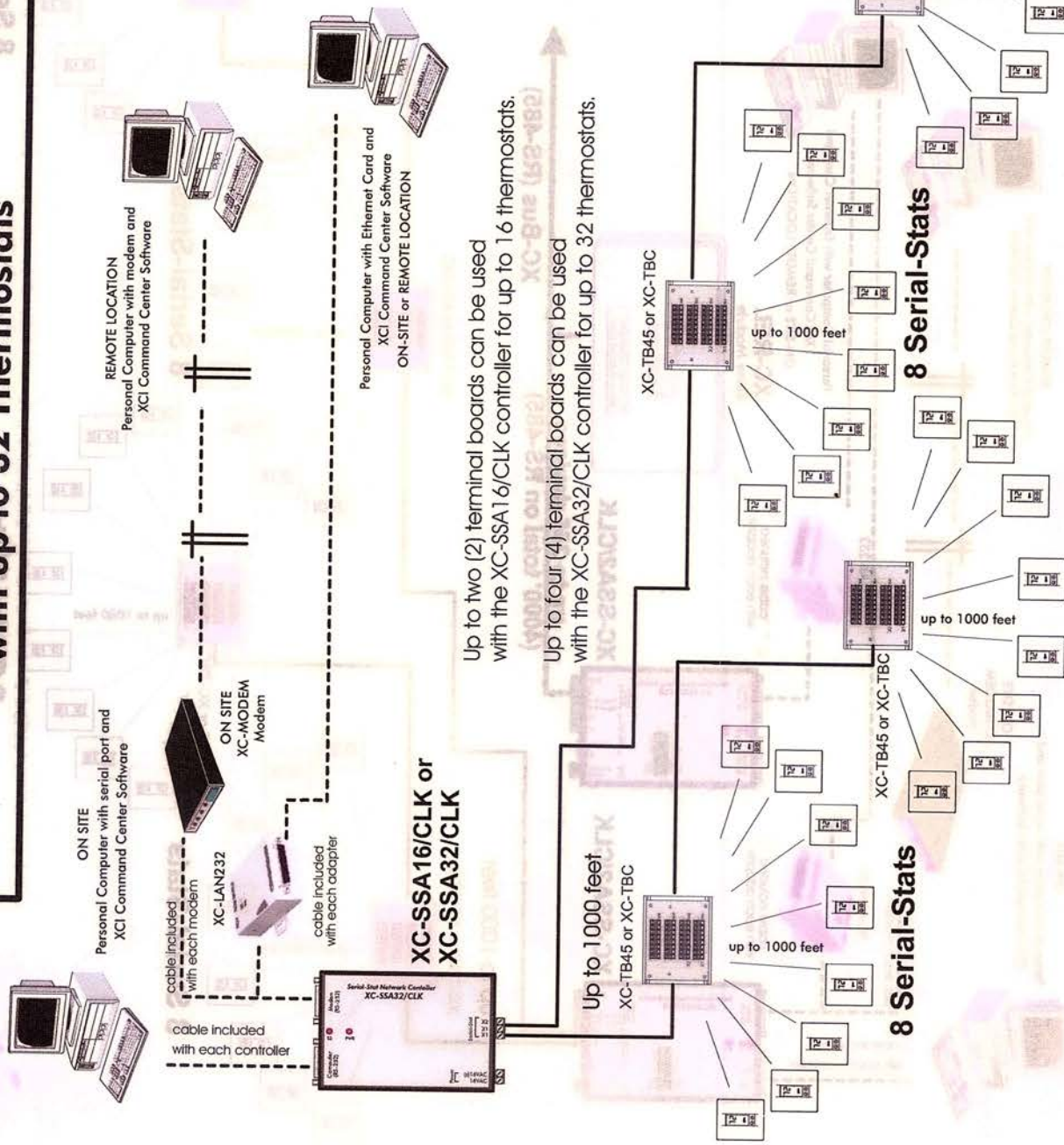




Network Wiring for Small Systems with up to 32 Thermostats



Cable and Wiring Notes
All XCI products follow industry standard data communications wiring practices. Refer to your local building codes for specific requirements

Wiring Guidelines

- A) Any Serial-Stat can be up to 1000 feet away from the Serial-Stat Controller
- B) Total of 3,000 feet of cable on any one controller
- C) ANY combination of home-run, daisy-chain, or multi-drop wiring configuration may be used. See other XCI wiring diagrams for details
- D) XC-TBC or XC-TB45 terminal boards may be placed anywhere within the 3,000 feet

Cable Specifications

- Serial-Stat cable options:
A) Category 5e, 24AWG, 4-pair, or equivalent
B) Category 5e, 24AWG, 4-pair, plenum rated or equivalent

Pair 1 - Serial-Stat Communications Bus

- X2 - Blue with White Stripe
- X1 - White with Blue Stripe

Pair 2 - (Option) Contact Closure Setback

- CLK2 - Orange with White Stripe
- CLK1 - White with Orange Stripe

Pair 3 - Remote Power HOT (TWIST PAIR TOGETHER)

- 24VAC - Green with White Stripe
- 24VAC - White with Green Stripe

Pair 4 - Remote Power COMMON (TWIST PAIR TOGETHER)

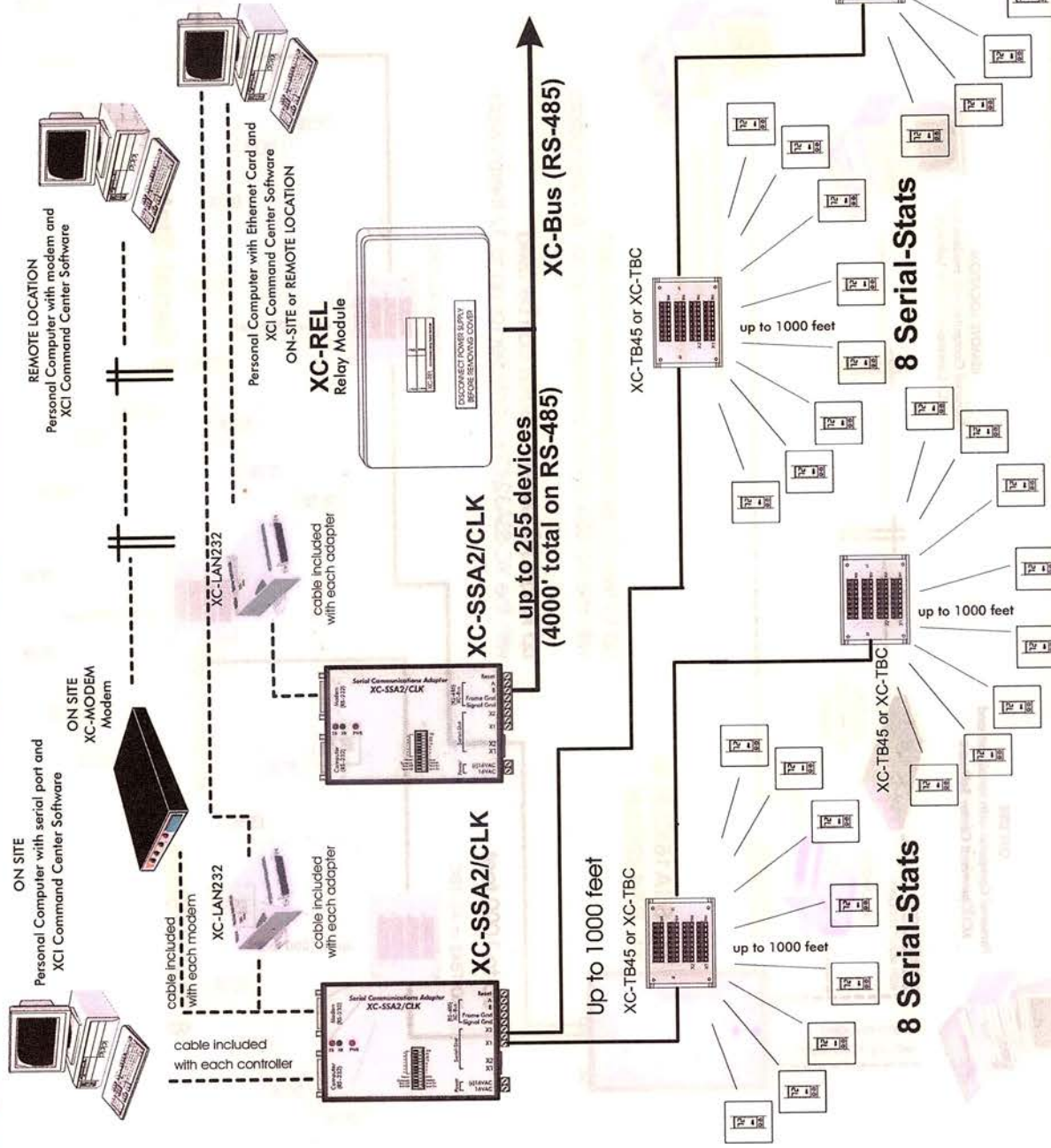
- 24V(c) - Brown with White Stripe
- 24V(c) - White with Brown Stripe

8 Serial-Stats

8 Serial-Stats



Network Wiring for Large Systems with 32+ Thermostats and/or Relay Modules



Cable and Wiring Notes

All XCI products follow industry standard data communications wiring practices. Refer to your local building codes for specific requirements.

Wiring Guidelines

- A) Any Serial-Stat can be up to 1000 feet away from the Serial-Stat Controller
- B) Total of 3,000 feet of cable on any one controller
- C) ANY combination of home-run, daisy-chain, or multi-drop wiring configuration may be used. See other XCI drawings for details

XC-Bus (RS-485) Wiring Guidelines

- A) Multiple Serial-Stat Controllers (XC-SSA2/CLK) can be interconnected
- B) The last Serial-Stat Controller in the chain may be up to 4000 feet away.

Cable Specifications

XC-Bus (RS-485) cable options:

- A) Category 5e, 24AWG, 4-pair cable
- B) Category 5e, 24AWG, 4-pair cable, plenum rated Serial-Stat cable options: Same as XC-Bus (RS-485) cable

Typical Connection for Serial-Stat Bus

See RS-232C Network Diagram

Typical Connection for XC-Bus (RS-485)

Pair 1 - XC-Bus Expansion/Peripheral Bus

- A - Blue with White Stripe
- B - White with Blue Stripe

Pair 2 - (Option) Ground

- Frame Ground - Orange with White Stripe
- Signal Ground - White with Orange Stripe

Pair 3 - (Option) Remote Power

- 16-24VAC (common) - Green with White Stripe
- 16-24VAC - White with Green Stripe

Pair 4 - (Option) Spare Pair

- Spare - Brown with White Stripe

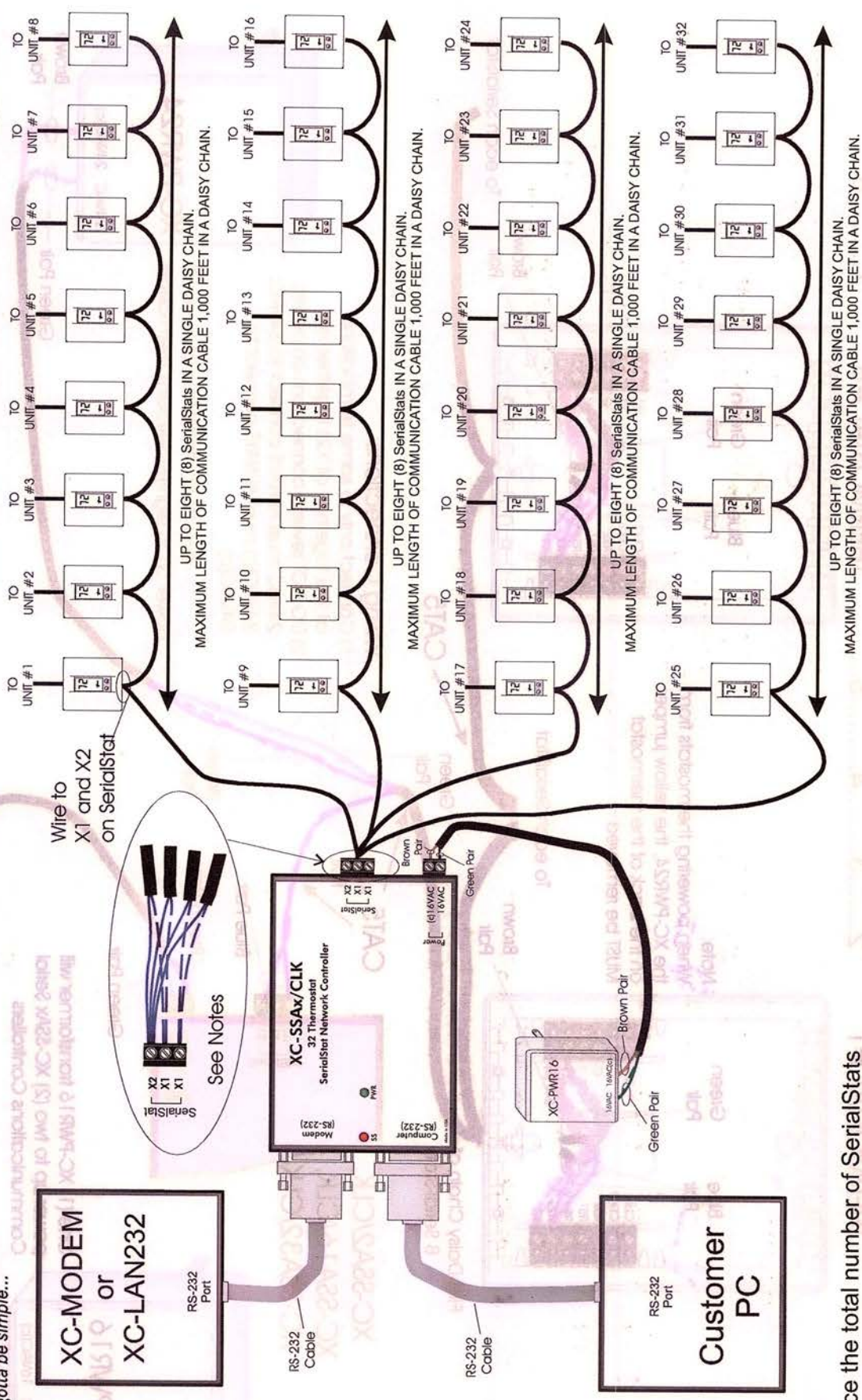
8 Serial-Stats

8 Serial-Stats

8 Serial-Stats

SerialStat Controller Interface

Installation and Wiring for Daisy-Chain Configuration



NOTES:

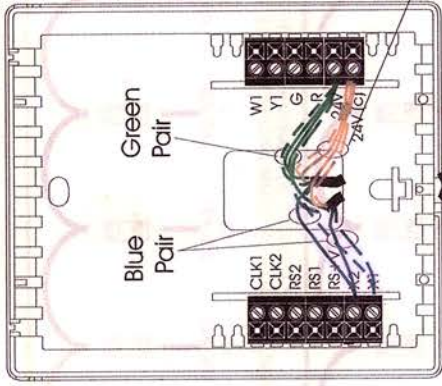
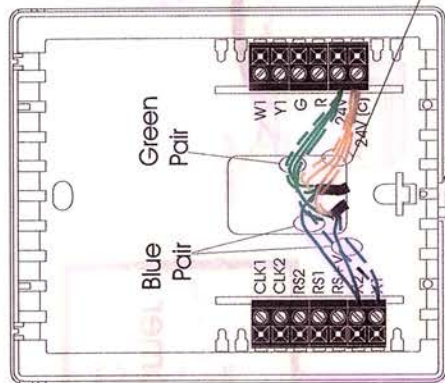
- 1) Balance the total number of SerialStats between the two X1 terminal screws on the XC-SSAx/CLK
- 2) Terminate all X2 wire connections together at the XC-SSAx/CLK; X2 terminal
- 3) No more than 16 SerialStats can be wired to one XC-SSAx/CLK; X1 terminal
- 4) Use a similar quantity of SerialStats on each daisy chain

XCI Corporation
 1304 W. Walnut Hill Lane, Suite 200, Irving, TX 75038
 Voice: 972-580-1166 FAX: 972-580-7774 www.xcorp.com



SerialStat Communications Wiring for use with Daisy Chain Wiring

THERMOSTAT #1 2.....3.....4.....5..... THERMOSTAT #6 78



First Daisy Chain of 8 Serial-Stats

To each SerialStat

To each SerialStat

CAT5

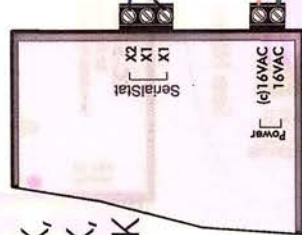
XC-SSA2/CLK,
XC-SSA16/CLK,
XC-SSA32/CLK

Wiring Connections:

- 1) Connect only to same terminations; all X1s together, all X2s together, etc.
- 2) DO NOT reverse connections on power; 24VAC must ALWAYS connect to 24VAC; 24VAC(c) must ALWAYS connect to 24VAC(c)

One (1) XC-PWR24 transformer will power up to eight(8) SerialStat Thermostats

CAT5



One (1) XC-PWR16 transformer will power up to two (2) XC-SSAx Serial Communications Controllers



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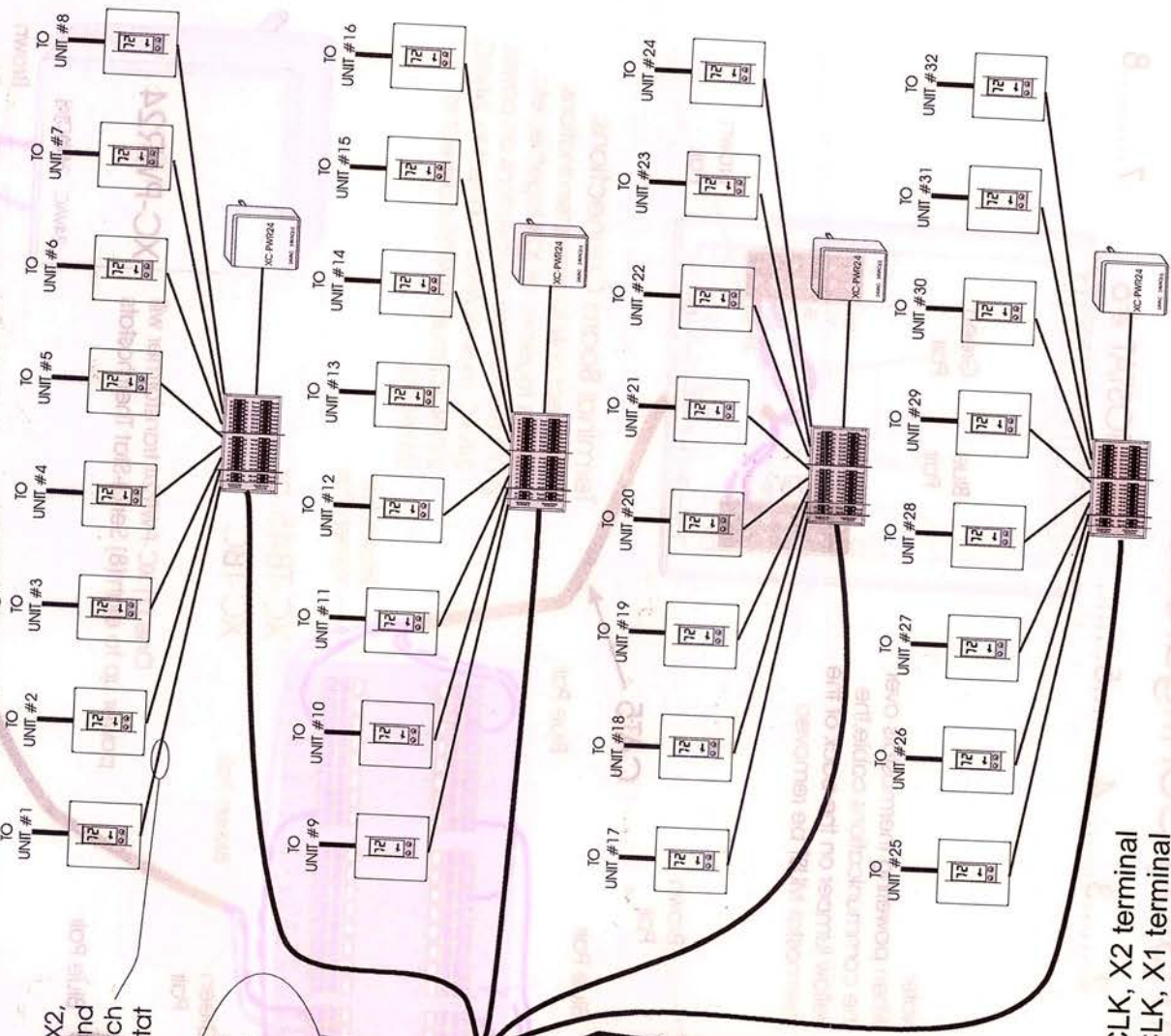
SerialStat Controller Interface

Installation and Wiring for Home-Run (Star) Configuration

It's gotta be simple..



Connect X1, X2, 24Vac, and 24V(c) on each SerialStat



Maximum length of any 8 thermostat cluster = 750 ft
Maximum total length connected to controller = 3,000 ft

NOTES:

- 1) Balance the total number of SerialStats between the two X1 terminal screws on the XC-SSAX/CLK
- 2) Terminate all X2 wire connections together at the XC-SSAX/CLK, X2 terminal
- 3) No more than 16 SerialStats can be wired to one XC-SSAX/CLK, X1 terminal
- 4) No more than 8 SerialStats can be wired to one Home-Run section
- 5) Use a similar quantity of SerialStats on each Home-Run section

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XCI Serial-Stat Communications Wiring Using Home-Run (Star) Configuration

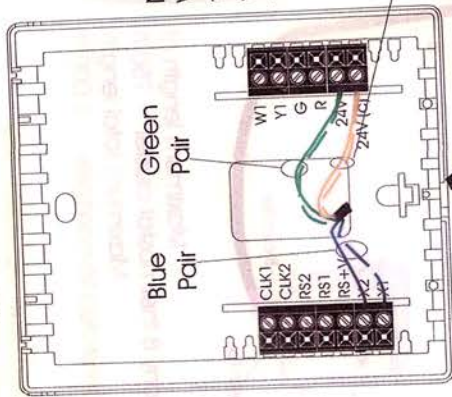
78

THERMOSTAT #6

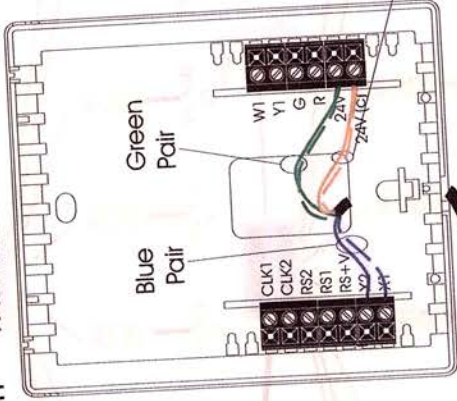
23458

THERMOSTAT #1

23458

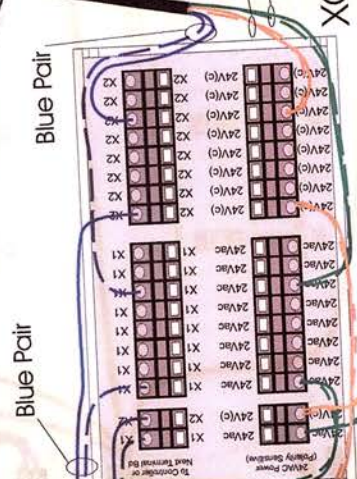


Note:
When powering thermostats over the communications cable, the yellow jumper on the back of the thermostat MUST be removed



Terminal Board Connections:

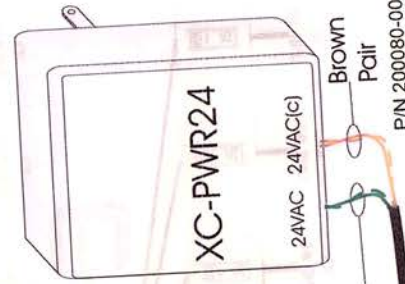
- 1) Connect only to same terminations; all X1s together, all X2s together, etc.
- 2) DO NOT reverse connections on power; 24VAC must ALWAYS connect to 24VAC; 24VAC(c) must ALWAYS connect to 24VAC(c)



XCI-SSA2/CLK
XCI-SSA32/CLK
or XCI-SSA16/CLK



One (1) XC-PWR16 transformer will power up to two (2) Network Controllers



One (1) XC-PWR24 transformer will power up to eight(8) Serial-Stat Thermostats