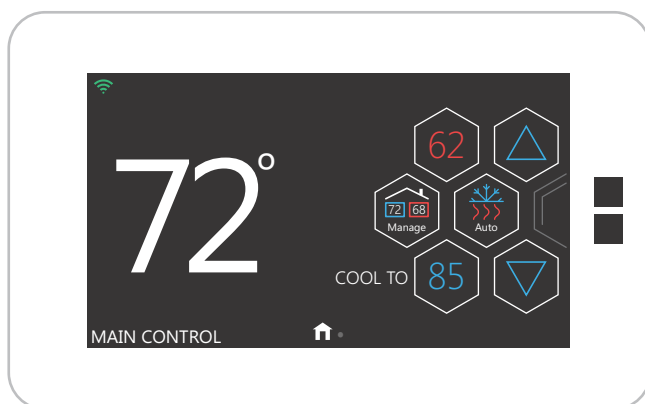


TECHNICAL GUIDE

Hx 3 ZONING SYSTEM

**ZONING COMMUNICATING MODELS:
S1-THXU430W, S1-ZMC401A, S1-ZCC01A,
S1-TCZSN02**



Description

Johnson Controls Ducted Systems specializes in creating customized home comfort systems to meet homeowner needs with our broad selection of residential heating and cooling products. The Hx™3 Zoning System is the ultimate control center for system components. Adding a Hx™3 Touch Screen Thermostat to a compatible modulating or two-stage variable-speed furnace or air handler and a premium air conditioner or heat pump has many benefits, including the following:

- Longer heating and cooling cycles at lower fan speeds for a more consistent temperature throughout the home
- Better humidity control
- Increased energy efficiency

The Hx 3 Zoning System is the optimal zoning system in the industry. It features a full color-capacity touch screen LCD that can also be used as a zoning thermostat sensor to satisfy both temperature and humidity setpoints. The Hx 3 Zoning System does not require use of a bypass damper.

Warranty

Standard 5-year limited parts warranty

Features and benefits

In addition to the listed features of our non-zoning product applications, the Hx 3 Zoning System offers the following:

- Up to four zones of control with a single Hx 3 Zone Control Module
- Up to eight zones of control with two Hx 3 Zone Control Modules
- Intuitive on-screen prompts for easy installation and service
- Fan airflow adjustment by zone to compensate for duct work variability
- Hx 3 Zone Control Module damper/hardware test mode
- Four-wire installation from each component in the system
- Hx 3 Touch Screen Thermostat designed to act as the Main Control for zoning operation and a zone thermostat sensor (Zone Thermostat-Hx)
- Design for optimum comfort based on achieving both temperature and humidity setpoints
- Complete system integration including whole house humidifier, whole house dehumidifier, ventilation system, whole house air cleaners, and UVC lights. All of these components are controlled from the Hx 3 Touch Screen Thermostat acting as the Main Control.
- Programmable fan settings per zone
- Flexible damper timing
- Power open/power close dampers only
- Efficient management of excess airflow
- Optional use of a bypass damper
- Choice of three zone sensor options:
 - Hx 3 Touch Screen Thermostat acting as a zone thermostat sensor: Can be used to manage all zones in the zoning system, and allows temperature and humidity control and editing and copying of the schedule for its designated zone
 - Hx™3 Zone Thermostat: Allows adjustment of temperature and fan mode and interval time for its designated zone
 - Hx™3 Zone Sensor: Senses zone temperature
- Maximum heat and maximum cool functionality available on the Main Control
- Indoor air quality reminders
- Easy to use timed temperature and schedule override

Model number nomenclature**Hx 3 Touch Screen Thermostat - Main Control and Zone Thermostat-Hx****S1 - T H X U 430 W A**

S1	Source 1
T	Thermostat
H	Home
X	Extra premium
U	Universal
430	Model number
W	White
A	Revision A

Hx 3 Zone Thermostat**S1 - ZC C 01 A**

S1	Source 1
ZC	Zone control
C	Communicating
01	First generation
A	Revision A

Product information**Compatible communicating products**

Model description	YORK	Coleman	Luxaire	Fraser-Johnston/Champion
Air conditioning	YXV, YXT	AC21B, AC19B	AL21B, AC19B	AL21B, AC19B
Heat pump	YZV, YZT	HC20B, HC19B	HL20B, HL19	HL20B, HL19
Gas furnace	YP9C, YPLC, TM9V, TM8V	CP9C, CPLC, TM9V, TM8V	LP9C, LPLC, TM9V, TM8V	TP9C, TPLC, TM9V, TM8V
Air handler	AVV, AVC, MVC	AVV, AVC, MVC	AVV, AVC, MVC	AVV, AVC, MVC

Physical characteristics

- Dimensions: see illustration in the Product dimensions section
- Appearance: plastic, white color, textured

Electrical characteristics/communication

Input Volts/Amps 24 VAC: each device in the communicating system has a four-pin connector labeled A+, R, C, B-. It is best practice to use the following color code when wiring each device:

- A+ (Green) = Data A+
- R (Red) = 24 VAC (hot)
- C (Black) = 24 VAC (common)
- B- (White) = Data B-

Environmental requirements

- Operating temperature/relative humidity
User interface and all zone sensors: 32°F to 104°F or 0°C to 40°C, 95% RH non-condensing
- Storage temperature/relative humidity
User interface: -40°F to 134°F or -40°C to 56.7°C, 95% RH non-condensing

Hx 3 Zone Control Module**S1 - ZM C 4 01 A**

S1	Source 1
ZM	Zone module
C	Communicating
4	Possible zones
01	First generation
A	Revision A

Hx 3 Zone Sensor**S1 - T C ZSN 02**

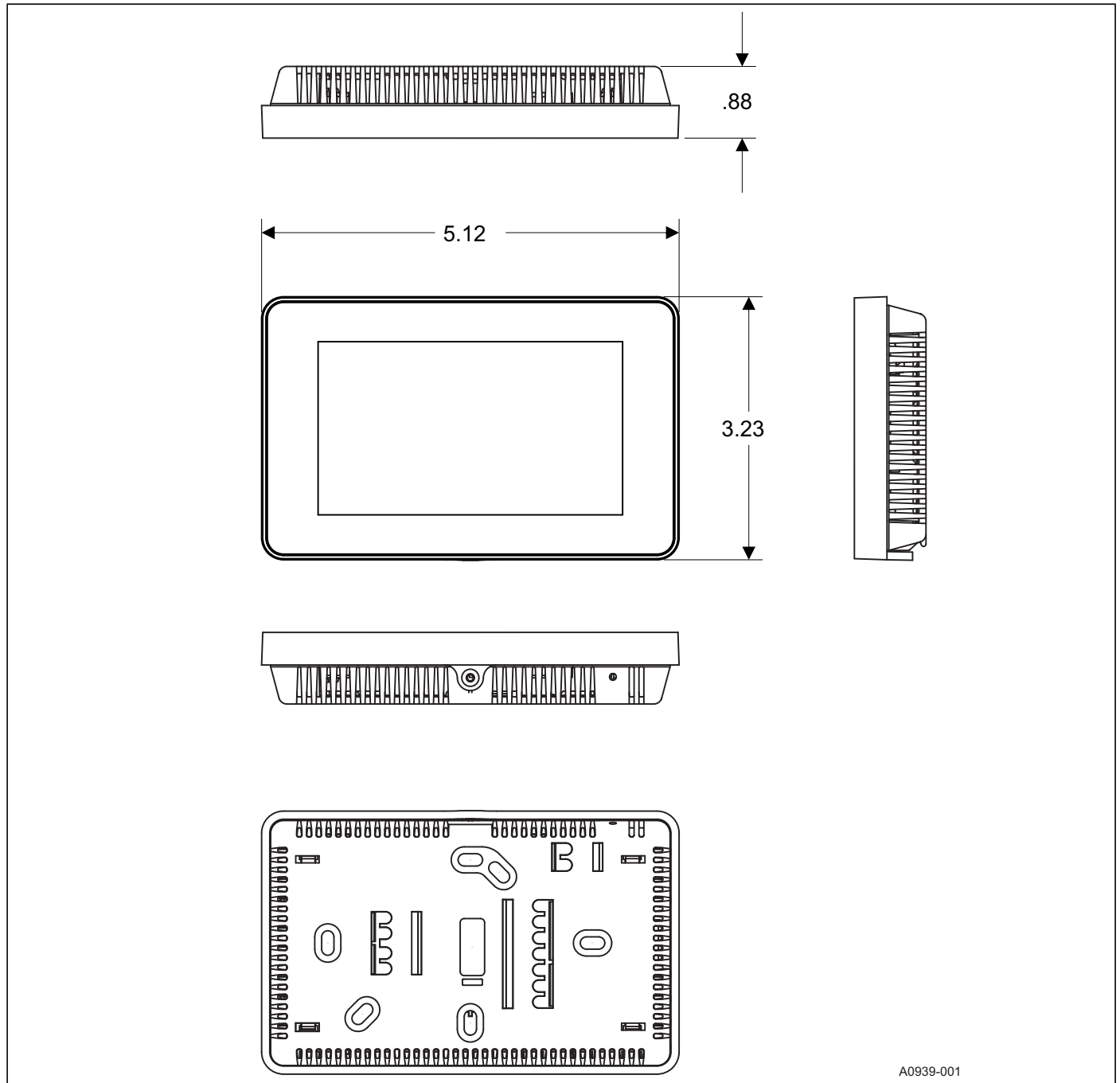
S1	Source 1
T	Temp only
C	Communicating
ZSN	Zone sensor
02	Second generation

Wiring requirements

- Zone controls power supply
Dedicated 24 VAC, 40 VA, 60 Hz through indoor equipment A+, R, C, B- connector. Isolated transformer is field supplied. If a Hx 3 Touch Screen Thermostat is used as the Main Control and as an additional zone sensor, upgrade the indoor equipment transformer to 24 VAC, 75 VA, 60 Hz (field supplied).
- Zone dampers power supply
 - Dedicated 24 VAC, 75 VA, 60 Hz. Isolated transformer is field supplied
 - OEM recommended: 120/208/240 VAC, 24 VAC/75 VA transformer. Source 1 part number is S1-02537492000
- Wiring material
Standard solid thermostat wire 18 gauge

Feature specifications

- Temperature setpoint range: 50°F to 90°F or 10°C to 32.2°C
- Separate heating and cooling setpoints
- Seven programming days
- Programming periods:
 - Two periods: Awake and Leave
 - Four periods: Awake, Leave, Return, and Sleep
- Non-programmable
- Auto changeover (can be disabled)
- Programmable fan
- Humidity sensor offsets
- Smart recovery (in heating and cooling)
- Schedule copy functions: copy day and zone
- Permanent memory
- Humidity display and control
- Temperature sensor offsets (indoor)

Product dimensions**Hx 3 Touch Screen Thermostat - Main Control and Zone Thermostat-Hx**

Equipment

Hx 3 Zoning System components

Part number	Description
S1-THXU430W	Hx 3 Touch Screen Thermostat (Main Control and Zone Thermostat-Hx)
S1-ZMC401A	Hx 3 Zone Control Module
S1-ZCC01A	Hx 3 Zone Thermostat
S1-TCZSN02	Hx 3 Zone Sensor

Optional accessories

Part number	Description
S1-02542694000	Communicating wire harness
S1-02542683000	Outdoor sensor
S1-CVENTDEH01	ERV/HRV ventilation control damper and whole home dehumidifier auxiliary board
S1-02537492000	OEM recommended 120/208/240 VAC, 24 VAC/75 VA transformer