

SmartZonePLUS™



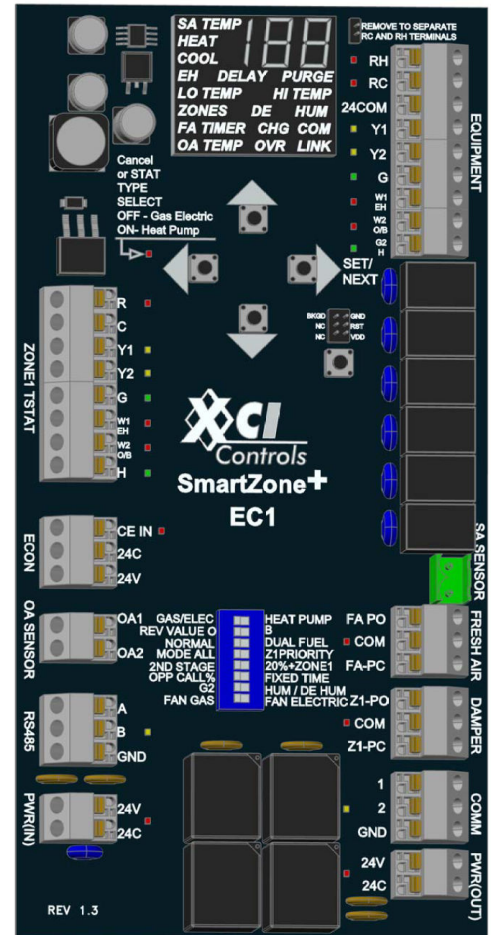
EC1 Networked Zone Control System

For Residential & Light Commercial Applications

- EXPANDABLE TO 33 ZONES
- ELECTRONIC LIMIT CONTROL™ (ELC)
- TIME & TEMP FRESH AIR CONTROL
- USE POWER OPEN/CLOSE DAMPERS
- SYSTEM WIDE ECONOMY MODE
- HUMIDITY OR DE-HUMIDITY CONTROL

General Description

The **SmartZonePLUS™** family of residential and light commercial zone controllers provides reliable control of up to thirty-three (33) zones from a single forced-air HVAC system. All electronic boards include LED displays with full text for status monitoring and diagnosis of the zoning system and equipment. Each thermostat, equipment terminal and zone damper terminal has color-coded LEDs for easy monitoring of all thermostats and system status. A supply air plenum temperature sensor is included with each EC1 controller for constant monitoring of supply temperature. XCI's exclusive Electronic Limit Control™ (ELC) technology protects the system compressor or heat exchanger from potential issues associated with over-cooling and over-heating. Fresh air control is also integrated into the **SmartZonePLUS™** EC1 electronic board. Indoor air quality is improved as pushbuttons allow for quick and easy adjustment of high and low cut-out limit fresh air temperatures as well as fresh air timing.



EC1 Controller

Installation, Operation, Service, Customer Features

- EC1 controller operates heat pump, dual fuel (no DF Kit required), conventional gas/electric, in-floor heating and fan powered box applications
- Controls up to 2-Stage cooling and 3-stage heating including emergency heat and/or auxiliary heat
- Quick-Connect Screwless Terminals
- Innovative enclosure design with multiple wiring & mounting options, for installation in a central location or on the dampers
- New SmartPanel™ wiring enclosure with locking door allows stowaway modular installation
- Color-coded diagnostic LEDs for damper position, thermostat status and equipment status
- Electronic Limit Control™ (ELC) protects equipment from extreme operating temperatures
- Pushbutton ELC™ for adjustable temp cut-outs
- Full text display allows viewing of system operation
- Use standard gas/electric or heat pump thermostats
- Optional outdoor temp sensor allows adjustable heat pump balance points and fresh air temp limit control
- Intelligent staging options, based on supply air temperature or space temperature or both
- Intelligent Automatic Changeover when system calls for heating and cooling at the same time
- Constant supply air temperature monitoring from ELC™ is displayed for servicing contractor
- Contractor can monitor number of cool calls, number of heat calls, total zones calling, number of minutes before dynamic changeover, outdoor air temp, low and high temp cut-out temps for equipment, fresh air and heat pump balance points settings
- Comfort/Economy mode allows each zone to call for equipment (Comfort) or control damper only (Economy)

SPECIFICATIONS

EC1 SmartZonePLUS EC1 in standard clear cover plastic enclosure. Includes Supply Air Temperature sensor.	POWER (EC1 & Thermostat Only)	16VA max (375mA @24VAC)
	POWER (System)	16VA + Damper Power = Transformer Size (VA)
EC1-SP SmartZonePLUS EC1 mounted on SmartPanel* bracket ready for installing directly in the SmartPanel* enclosure. Includes Supply Air Temperature sensor.	PROTECTION	Electronic Auto-Reset Fused Links (Field supplied transformer should also be fused)
	OUTPUTS	- Equipment
Equipment Terminals		Label - Description (LED Indicator Color) Rc - Hot from Cooling Transformer (RED) Rh - Hot from Heating Transformer (RED)* C - Common (N/A) Y1 - 1 st Stage Compressor (YELLOW) Y2 - 2 nd Stage Compressor (YELLOW) W1/EH - 1 st Stage Heat OR Emergency Heat (RED) W2 - 2 nd Stage Heat (RED) H - Humidify/Dehumidify (ORANGE)
*See SmartPanel specification sheet for further details about this time and space-saving option of the SmartZone system To add additional zones see SmartZonePLUS RZ1& RZ4 Expander Module specification sheet	- Dampers	10A @ 24VAC Contact Rating
	DAMPERS	Power-Close / Spring-Open (10VA, 0.25A @ 24VAC) Power-Open / Spring-Close (10VA, 0.25A @ 24VAC) Power-Open / Power-Close (3VA)
INPUTS	- Thermostat Terminals	R - Hot (RED) C - Common (N/A) Y1 - 1 st Stage Compressor (YELLOW) Y2 - 2 nd Stage Compressor (YELLOW) W1/EH - 1 st Stage Heat OR Emergency Heat (RED) W2 - 2 nd Stage Heat (RED) H - Humidify/Dehumidify (ORANGE)
	- Comfort/ECONOMY	CE INPUT - System-Wide Economy Mode (GREEN)
	- Temperature	10K, Type III Thermistor SA Sensor - Supply Air Temp Sensor, Provided w/ EC1 OA Sensor - Outdoor Air Temp Sensor, Optional
CONFIGURATION		
Dip Switches		Display Menu Setup
Gas/Electric or Heat Pump Reversing Valve O or B Normal or Dual Fuel for Heat Pump Priority for All Zones of for Zone One Allow 2 nd Stage Always or Only with 20% Calling Zones Opposing Call Changeover time % or Fixed Time Variable Speed Fan Control or Humidify/Dehumidify Fan Gas (w/ plenum switch) or Fan Electric (w/ EC1)		Thermostat Type Fresh Air Time Hi-Temp Cutout & Lo-Temp Cutout Dual Fuel Balance Points Outdoor Hi & Lo Temp Fresh Air Lockout Humidify or Dehumidify Setup

SmartZonePLUS EC-1

