

# GEN X- Communicating VVT SYSTEM CONTROLLER

## SUBMITTAL



## **GEN X Wi-Fi Mobile APP based VVT System Controller**

### DESCRIPTION

The GEN X is a microcontroller based, auto change-over Universal Gas/Electric or Heat Pump system controller (Part # GEN X). The GEN X controls a zoned 2H/2C Gas/Electric HVAC unit or 3H/2C zoned Heat Pump unit and communicates with and supports up to 20 zones, utilizing pressure dependent, modulating dampers and wireless thermostats. Communications hub is APP based and accessed via mobile phone, tablets or the internet.

The GEN X gathers information every 60 seconds from each damper board while the wireless thermostats communicate with the system over a 3-wire data link directing control based decisions to the HVAC equipment.

The GEN X is powered with one 24 V 40VA transformer, which also powers all dampers in the system. Power from the controller, along with a 3-wire twisted pair communications loop, is daisy chained damper to damper to streamline installation and system communications.

The GEN X is equipped with integrated capacity control and High and Low temperature limits to protect compressors and heat exchanger. Outside air and return Air sensors are also provided. The HVAC unit is staged based on leaving air temperature and time. Auto changeover operation is vote based, predicated on a first call, first served, majority wins on changeover algorithm.

The Gen X is expandable up to 20 additional RTU's or split systems using the add-on GEN X-RM controller that is daisy chained together via the (RS485) communications loop. Each GEN X-RM supports up to 20 zones or stand alone units to support up to 400 thermostats or zones in your system.

### TECHNICAL DATA

#### **Electrical**

**Supply Voltage:** 24vac

**Power consumption:** 0.7 VA

#### **Inputs:**

24vac

3 Temperature Sensing Thermistors

#### **Outputs:**

24vac

5 SPST dry contacts, 1A @ 24vac

**Fuse protection:** Use Fused Transformer

#### **Environmental**

**Operating temperature:** 32 to 160° F (0 to 71° C)

**Operating humidity:** 10-95%, non-condensing

**Storage temperature:** 0 to 160° F (-18 to 71° C)

#### **General**

**Communications:** 3 wire Plenum rated twisted pair Zonex Wire

**Enclosure Dimensions:** 6 ¼" x 4 ¼" x 1"

6/13/17