SUBMITTAL

System 2000 *GEN II-VVT* Controller

DESCRIPTION

The System 2000 *GEN II* is a microcontroller based, auto changeover Universal Gas / Electric or Heat Pump system controller (Part # GENII). The *GEN II* controls a zoned 2H/2C Gas/Electric HVAC unit or 3H/2C zoned Heat Pump unit and communicates with and supports up to 17 zones, utilizing pressure dependent, modulating dampers.

The *GEN II* gathers information every 60 seconds from each thermostat in the system over an unshielded two-wire data link.

The *GEN II* is equipped with integrated capacity control with adjustable High and Low temperature limits to protect compressor and heat exchanger. The HVAC unit is staged based on leaving air temperature and time. The Leaving Air Temperature is also displayed on the system controller. Cooling or Heating management is vote based, predicated upon first called, first served, with majority regulating changeover.

When the current mode callers are satisfied, a four-minute purge cycle is initiated prior to mode change-over.

Additional control strategies, including variance from setpoint, are also selectable features to initiate changeover. The *GEN II* provides a software based feature to assign priority. A priority vote of 1, 2 or 3 votes may be established for every stat in the system at the *GEN II* controller.

The *GEN II* controller is equipped with a lock / unlock feature providing a central point to remotely lock all the ModStats in the system. Locked thermostats will support a +/- 2 degree local adjustment. Each thermostat also supports a two-hour override during unoccupied periods at the touch of a button.

A night / day switch on the controller allows the ability to establish an unoccupied Heat and Cool setpoint to be set on each thermostat. An optional time clock toggles the system from occupied to unoccupied mode of operation.

An on-board diagnostic feature identifies and leads the Installer to wiring errors quickly, if required.

TECHNICAL DATA

Electrical

Supply Voltage: 24vac
Power consumption: 0.7 VA
Inputs:
- 24vac
- 1 Temperature Sensing Thermistor

Outputs:
- 24vac
- 5 SPST dry contacts, 1A @ 24vac

Fuse protection: Use Fused Transformer

Environmental

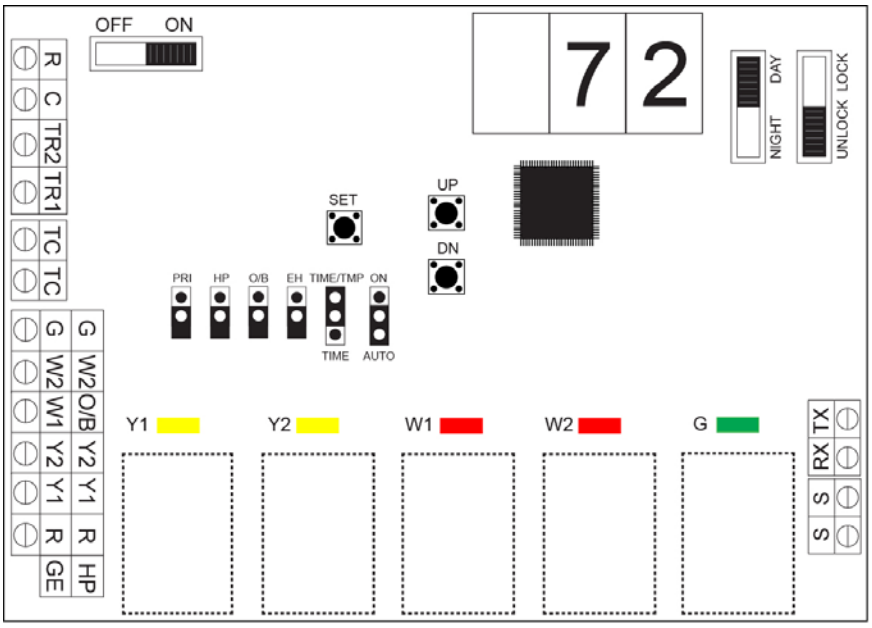
Operating temperature: 32 to 160° F (0 to 71° C)
Operating humidity: 10-95**%,** non-condensing
Storage temperature: 0 to 160° F (-18 to 71° C)

General

Communications: 2 wire twisted pair - Belden 8740
Enclosure Dimensions: 4” H x 6 1/8” W x 1 3/4” D

SYSTEM 2000 *GEN II-VVT* CONTROLLER

TERMINAL FUNCTIONS



TX – Data Transmit
RX – Data Receive

SS – Leaving / supply air sensor input

G – Fan output
W2 – Stage 2 heat output
W1 – Stage 1 heat
O/B – HP Reversing Valve } output
Y2 – Stage 2 cool output
Y1 – Stage 1 cool output
R – 24vac from unit transformer
TC } Time Clock input for Occupied /
TC } Unoccupied operation
TR1 – 24vac power input
TR2 – 24vac power common
R } Thermostat Power – daisy chain
C } stat to stat

ORDERING INFORMATION

Part No.	**Description**
GEN II	Universal Gas / Electric or Heat Pump Controller supports 2-17 zones/unit

Accessories
GCLK 1 channel, 7-day time clock.
For occupied/unoccupied operation

FEATURES

- Universal vote based auto changeover controller
- Fully modulating System
- Support up to 17 zones per unit
- Integrated capacity control to stage up/down equipment and provide low/high limit protection for compressors and heat exchangers.
- Leaving air temperature display
- Automatic purge and ventilation modes
- Auxiliary heat control included for each zone
- Night setback operation included
- Remote Thermostat locking feature
- Two-hour override capability
- Simple Startup Diagnostic
- 2-wire daisy chain - No home run wiring required
- No programming required
- Very easy to install - No computer required for setup or operation

11/21/16