

SUBMITTAL



GEN II-R **System Controller** For Residential or Light Commercial Applications from 2-10 Zones

DESCRIPTION

The *GEN II-R* is a microcontroller based, auto changeover Universal Gas / Electric or Heat Pump system controller (Part # GENII-R). 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 10 zones, utilizing pressure dependent, TRX / TREX *2-position power closed / spring return (12va per damper) or *2-position power open / power closed (2va per damper).

The *GEN II-R* gathers information every 60 seconds from each thermostat in the system over an unshielded two-wire data link. Any standard Gas/Electric or Heat Pump thermostat operates with the *GEN II-R* system.

The *GEN II-R* is equipped with integrated capacity control and High and Low temperature limits to protect compressor and heat exchanger. The HVAC unit is staged 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 five-minute purge cycle is initiated prior to mode changeover.

Additional control strategies, including variance from setpoint, are also selectable features to initiate changeover. The *GEN II-R* 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-R* controller.

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

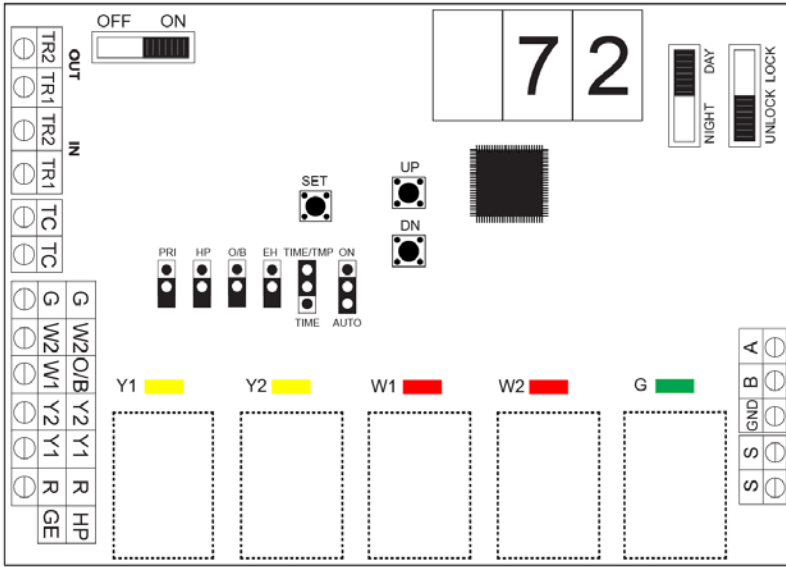
Communications: 2 wire twisted pair - Belden 8740

Enclosure Dimensions: 4" H x 6 1/8" W x 1 3/4" D

*Note: Be sure to size the transformer to the number of dampers and their VA rating.

GEN II-R CONTROLLER

TERMINAL FUNCTIONS



A – Data Transmit
B – Data Receive
GND – Not Used

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

TR1 } Thermostat Power – daisy chain
TR2 } stat to stat

ORDERING INFORMATION

<u>Part No.</u>	<u>Description</u>
GEN II-R	Universal Gas / Electric or Heat Pump Controller supports 2-10 zones

Accessories

Any programmable Gas/Electric thermostat

FEATURES

- Universal vote based auto changeover controller
- Support up to 10 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
- 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
- Use any standard Gas/Electric or Heat pump Thermostat

8/31/18