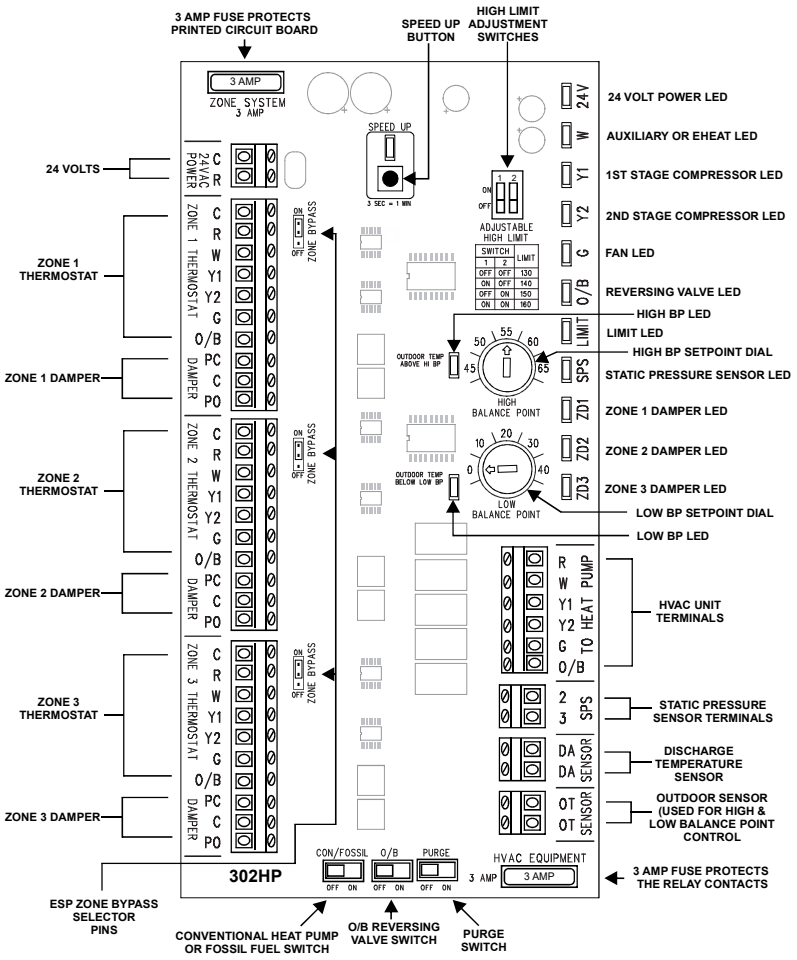
Specification Sheet
Zone Control Panel

SC-Z3-HPS-ESP

For 3 zone heat pump or dual fuel systems



SPECIFICATIONS

DIMENSIONS:
8” H x 6” W x 1.375” D

APPLICATION:
Three zone panel for conventional heat pump or dual fuel systems up to 3 heat / 2 cool

CONSTRUCTION:
Aluminum back plate and cover with Snap-Track mounted PC board.

ELECTRICAL:
24 VAC
Fuse protected inputs and outputs

STANDARD FEATURES:
3 minute compressor short cycle protection
High and low limit protection
20 minute time share
ESP feature eliminates need for bypass damper

OVERVIEW:
The SC-Z3-HPS-ESP shall be a zone control panel that includes integrated ESP static pressure control logic designed to eliminate the need for a conventional bypass damper when used with 3-wire zone dampers.

SEQUENCE OF OPERATION:
The panel shall allow a single HVAC unit to have up to three separate zones. Each zone will be controlled by its own thermostat. When a zone thermostat calls for heating or cooling, the zones not calling will have their dampers powered closed, and the zones calling will have their dampers powered opened. The heating or cooling equipment will also be brought on.
As zone dampers open and close, the ZPA-SPS Static Pressure Sensor shall continuously monitor the system static pressure. If the static pressure goes above the static pressure setpoint, the panel will send a signal to all selected non-calling zone dampers to start to open to a point where the static pressure setpoint is maintained. The SPS LED will come on with the non-calling zone LEDs until the static pressure reaches setpoint and then the LEDs will turn off. The small amount of air allowed to bleed into non-calling zones shall eliminate air noise and assures proper airflow through the HVAC system. When all calls are satisfied, all zone dampers shall go to the full open position provided none of the thermostats are calling for ventilation mode. If opposite calls take place, the first zone to call receives priority. When the first call is satisfied, the system will changeover and take care of the opposite call. If zones being served (heating or cooling) have not been satisfied within 20 minutes while an opposite call is taking place, the system will changeover. When the zone is satisfied or 20 minutes has elapsed, the system will again changeover if an opposite call exists. This shall be referred to as Auto-Changeover - First Call Priority - Time Share. In the event of a tie, cooling shall receive priority. The heat pump reversing valve shall only change position when the mode of operation changes.

HIGH AND LOW LIMIT PROTECTION:
The zone control panel shall have an input for a discharge air sensor to be mounted on the discharge air plenum of the HVAC unit and wired to the DA terminals on the panel. The sensor shall be used for both high (adjustable) and low (fixed) limit protection. The high limit setting shall be adjusted using two slide switches located on the panel. The low limit shall be fixed at 45° F. When the discharge air temperature rises above the high limit setting or falls below the low limit setting, the panel will cycle the equipment off while the fan continues to run. The LIMIT LED shall blink when high or low limit is reached and a 3 minute time delay is activated to prevent short cycling of the equipment.

VENTILATION MODE:
Zone ventilation shall be established by the individual zone thermostat fan setting. When no calls are taking place, any thermostat set in the fan AUTO mode will not receive ventilation air and its zone damper will be closed. Any zone thermostat set in the fan ON mode will receive ventilation air and its zone damper will be opened. Heating or cooling calls take priority over ventilation mode. The ESP function will continue to maintain the system static pressure.

5351 East Thompson Road
Suite 128
Indianapolis, IN 46237
888.359.0365
www.specifiedcontrols.com

SC-08-1299-082520