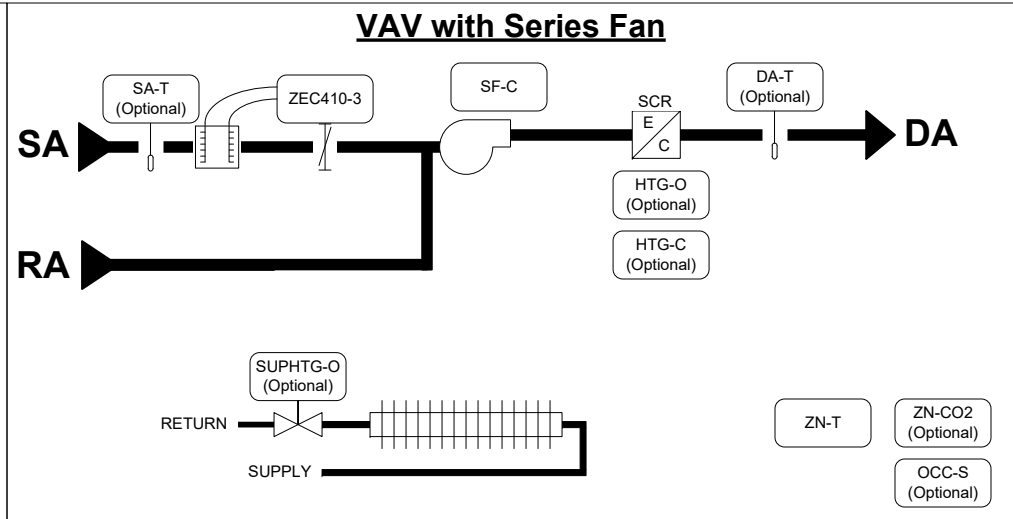
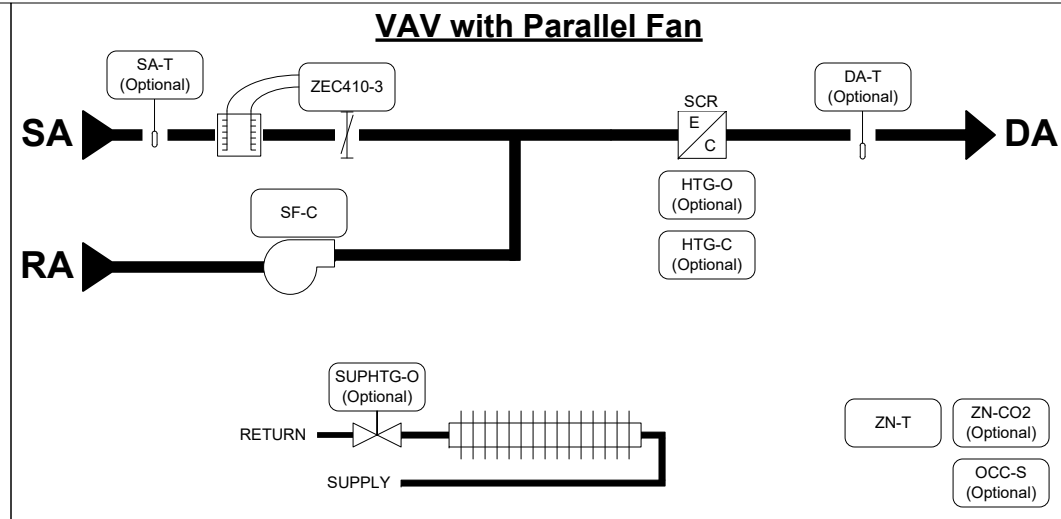
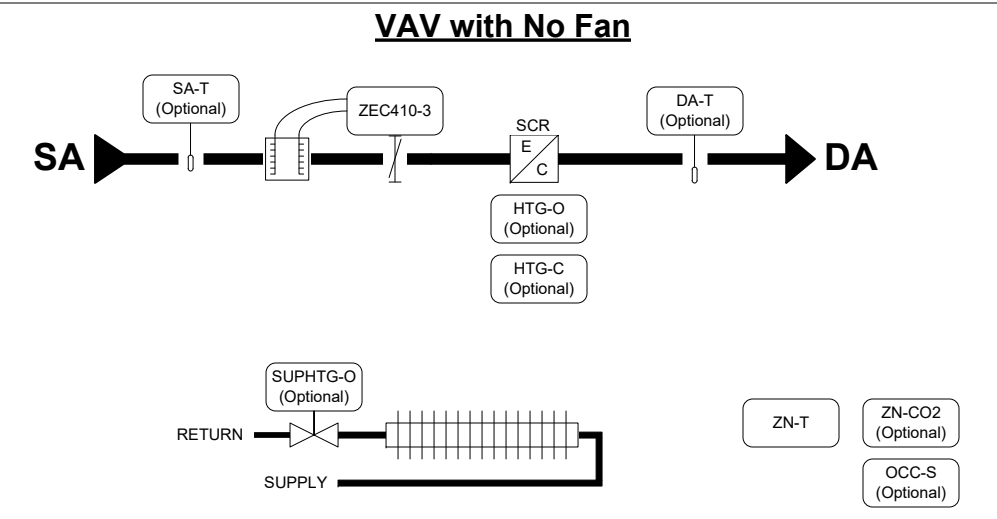
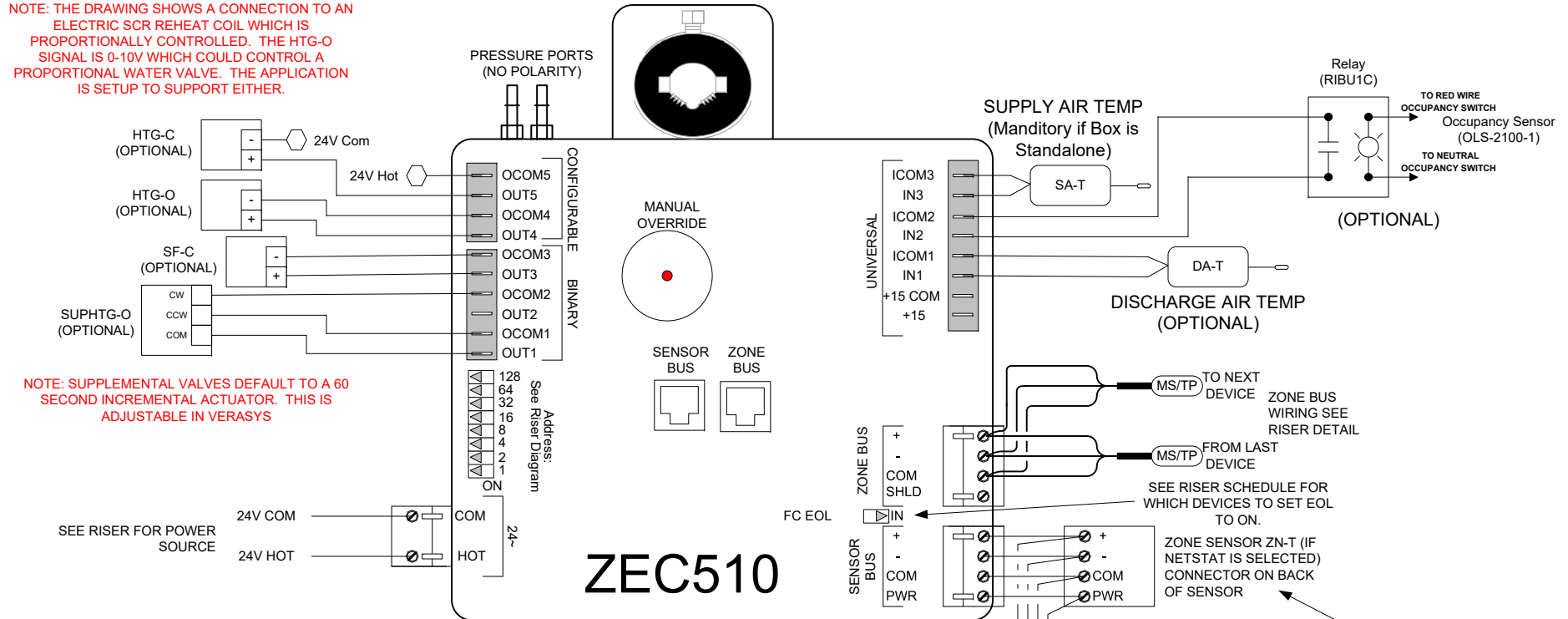


## Multizone Unit - VAV with Proportional Reheat Control



NOTE: THE DRAWING SHOWS A CONNECTION TO AN ELECTRIC SCR REHEAT COIL WHICH IS PROPORTIONALLY CONTROLLED. THE HTG-O SIGNAL IS 0-10V WHICH COULD CONTROL A PROPORTIONAL WATER VALVE. THE APPLICATION IS SETUP TO SUPPORT EITHER.



NOTE: SUPPLEMENTAL VALVES DEFAULT TO A 60 SECOND INCREMENTAL ACTUATOR. THIS IS ADJUSTABLE IN VERASYS

#### OCCUPIED MODE:

When the zone temperature is between the occupied heating and cooling setpoints (inside of the bias), the primary air damper will be at the minimum cfm and there will be no mechanical heating. On a rise in zone temperature above the cooling setpoint, the primary air damper will increase the cfm and there will be no mechanical heating. On a drop in zone temperature below the heating setpoint, the supplemental heating coil will be fully utilized before the reheat heat coil is enabled, the damper will be at the minimum cfm. Note: the box reheat and supplemental reheat is an option to have on the box. If neither is selected you have a cooling only box.

#### UNOCCUPIED MODE:

When in this mode, while the zone temperature is between the unoccupied heating and cooling setpoints (inside of the bias), the primary air damper will be at the minimum cfm, there will be no mechanical heating. On a rise in zone temperature above the unoccupied cooling setpoint, the primary air damper will increase the cfm (if available), and there will be no mechanical heating. On a drop in zone temperature below the unoccupied heating setpoint, the supplemental heating coil will be fully utilized before the reheat heat coil is enabled, the damper will be at the minimum cfm.

#### UNIT ENABLE:

A network unit enable signal will control the mode of the box.

#### FAN CONTROL (OPTIONAL):

Parallel fan - upon a call for heat the fan will cycle on. All other states it will be off. Series fan - during the occupied mode the fan will run continuously. During the unoccupied mode it will cycle on with a call for heating or cooling.

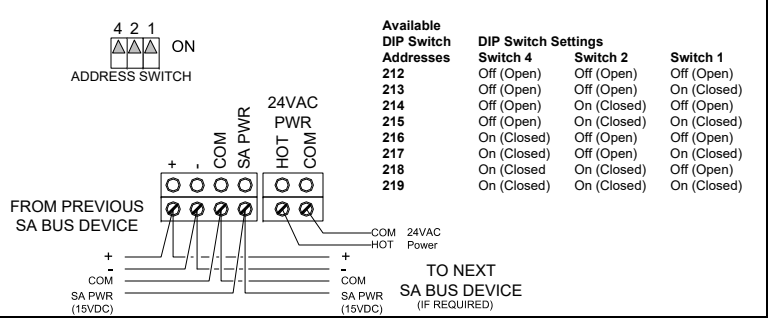
#### OCCUPANCY LIGHTING SWITCH (OPTIONAL):

An occupancy lighting switch can be added to the box, temporarily setting the vav box to standby mode when the occupancy is not being sensed. When the box senses occupancy, the zone will switch back to occupied. Standby mode uses standby temperature setpoints that are slightly higher or lower than the occupied cooling or heating setpoints respectively. The vav box will also use unoccupied flow setpoints in addition to the low temperatures.

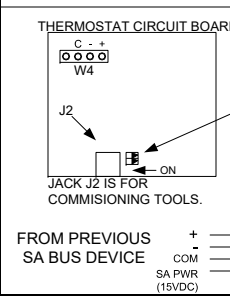
#### DEMAND CONTROL VENTILATION (OPTIONAL):

When zone CO2 sensor(s) are wired to the boxes to sense the air quality in the zone, the minimum damper flows are proportionally reset based on an air quality (CO2) setpoint. The reset of the damper minimum flows do not exceed the maximum value that the user sets. The CO2 sensor with the highest value will determine the reset if more than one are wired up.

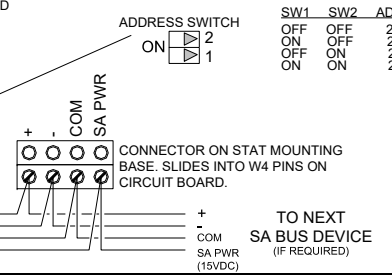
### CO2 NET STAT WITH TERMINALS ADDRESSABLE



### DETAIL NS102



### NET STAT WITH TERMINALS ADDRESSABLE



Up to 5 NS Sensors can be averaged, Daisy chain the NS sensors and address according to detail NS102. For the fifth sensor use the sensor that has fixed address 199.

Drawing Title									
Project Title									
REFERENCE DRAWING		NO.		REVISION-LOCATION		ECN		DATE	
Sales Engineer		Project Manager		Application Engineer		DRAWN		APPROVED	
BY		DATE		BY		DATE		CONTRACT NUMBER	
		Branch Information						DRAWING NUMBER	