

## Dehumidification options for T7350D, M and H models

### The following options REQUIRE the use of the AUX relay.

**Simple Dehumid** - Energizes the AUX relay when the room relative humidity goes above the humidity **High Limit** set point (call for dehumidification). The AUX relay will be de-energized when the room relative humidity drops below the humidity set point. (Note, there is hysteresis and a minimum timer used to make sure this output will not short cycle.) Note: unlike *Dehumid Hot Gas BP* the AUX relay will stay energized if more the one stage of cooling is called for.

**Dehumid Hot Gas BP** - Energizes the AUX relay when the room relative humidity goes above the humidity **High Limit** set point (call for dehumidification). The AUX relay is de-energized if more than one stage of cooling is called for. This is done for two reasons, it is assumed that the dehumidification process is utilizing some of the equipment's cooling capacity to provide the dehumidification, so when multiple stages of cooling are needed they will be available, and when multiple stages of cooling are used they will probably provide the necessary dehumidification. The AUX relay will also be de-energized when the room relative humidity drops below the humidity set point. (Note, there is hysteresis and a minimum timer used to make sure this output will not short cycle.)

### The following options do NOT require the use of the AUX relay.

**Min ON Time** - This option will reset the cooling stage minimum on time (normally 3 minutes) by a programmable amount. If the room relative humidity is above the humidity **High Limit** set point, this will keep the equipment running for a specified period of time ensuring that the cooling coils will reach the steady state operational mode required to dehumidify the air. (Some equipment may take up to 3 minutes before the dehumidification effect of the cooling stage takes place, and this will allow for it.) Under light cooling conditions this may cause the actual cycles/hr to be less than configured, and depending on the length of the min on reset may cause slight over cooling of the space. (Note, there is hysteresis and a minimum timer used to make sure this behavior will not change with every equipment cycle.)

**Reheat** – If configured for Reheat, the Thermostat will go into a Reheat mode when the Cooling mode is active and the room relative humidity is above the humidity **High Limit** set point. In the Reheat mode, the normal Cooling control cycling pattern causes the following to happen. When the cooling control calls for the first stage of cooling to be off, both stage 1 heating and stage 1 cooling will be turned on. This will have minimal temperature impact (depending on the relative sizing of the stages) and maximum dehumidification effect. When the cooling control calls for the first stage to be turned on, the heating stage is turned off and only the cool stage is on to provide the desired single stage of cooling in the zone. The heating stage is never energized during Reheat mode if more than 1 stage of cooling is on. (Note: Reheat mode will not occur during heating).

**Reset Temp SetPt** - When the room relative humidity goes above the humidity **High Limit** set point the room temperature set point will be reset to a specified number of degrees below the actual set point. This may not technically reduce the *relative* humidity in the room but will reduce the dew point and provide the customer with a sense of comfort due to a lower temperature setting in the room. This set point will be maintained as long as the room relative humidity stays above the humidity **High Limit** set point. (Note, there is humidity hysteresis and a minimum timer used to make sure the set point will not change back and forth over short intervals.)