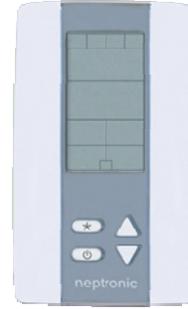# New Features and Improvements

Fully configurable PID on all ramps

AI1 and AI2 fully configurable

External humidity sensor averaging

External demand low signal selector

And more...

HRO and HROB

Hardware

- Added another fully configurable analog input (AI2) on pin 13
- Temperature sensor input is now a dedicated input on pin 3

PID

- Independently configure integral and derivative time on humidify and dehumidify ramps. Previously only the proportional ramp was configurable.
- Independently configure PID for new Duct Supply Ramp

Models

Previous Model #	Replacement Model #	Notes
HRO20	**HRO20**	HRO20 now includes all new features including LSS
HRO20LSS		
HROB20LSS	**HROB20**	Same as HRO20 with BACnet capability.

Compatibility

- The HRO conserves its compatibility with other products, however if you perform a replacement, please note that the temperature sensor input has changed from pin 13 to pin 3.

Ramps

All the following new and/or improved ramps are available on both models HRO20 and HROB20

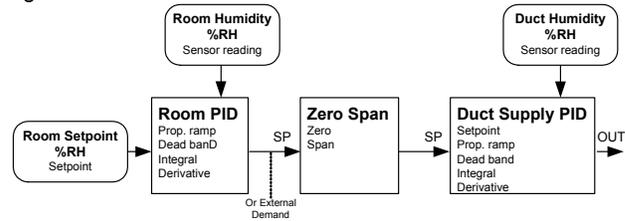### LSS: External Demand Low Signal Selector

- LSS is now available on both inputs (AI1 and AI2)
- The controller now performs a comparison on one of the following combinations to select the lowest signal:
  - AI1 and internal demand
  - AI1 and AI2
  - AI1, AI2 and internal demand

AER: External Humidity Sensor Averaging

- New feature that is available on both inputs (AI1 and AI2), to perform an averaging of one of the following combinations:
  - AI1 and internal sensor's reading
  - AI1 and AI2
  - AI1, AI2 and internal sensor's reading

DUC: Duct Supply Input

- New feature that is on AI2, to sequentially pass the demand through two PID loops and a zero and span to smooth out the signal

DED: External Demand Signal

- New feature is available on both inputs (AI1 and AI2) to control using an external demand of 0-10Vdc or 2-10Vdc