

tekmar tN4 / Honeywell AQ2000 Comparison

The following bulletin outlines some of the differences between the tekmar tN4 and Honeywell AQ2000 series controls. It should be used to make an educated decision when selecting a control system. This bulletin covers the features of the tekmar tN4 and Honeywell AQ2000 product lines as of September, 2007. In the future, it is expected that the features and capabilities of both product lines will be expanded.

Feature	tekmar tN4	Honeywell AQ2000
Outdoor Reset	Characterized heating curve matches reset curve to type of heating terminal, optimizing comfort.	Reset ratio assumes linear heating curve and does not differentiate between different types of heating terminals.
Number of water temperatures and zones.	Up to four water temperatures and 96 zones (24 zones per water temperature).	Single water temperature with 16 zones.
Boiler operation	Up to 9 on/off boilers or 3 modulating boilers (0-10 V, 4-20 mA, or 0-135 Ω)	Single on/off boiler.
Boiler short-cycle prevention	Auto Differential feature calculates optimum boiler differential based on current heating load.	Two minute minimum on time, two minute minimum off time.
Boiler Minimum Protection	Reduce mixing output to low temperature zones or Zone load shedding of high temperature zones.	On/off boiler by-pass pump operating on a fixed differential. Not recommended for use during start up. Can result in temperature fluctuations and equipment cycling.
DHW Priority Override	DHW priority time depends on outdoor temperature.	DHW priority time fixed at 30 minutes.
Mixing Methods	Variable speed injection, floating action mixing valve, or 0-10V, 2-10V, 0-20mA, or 4-20mA mixing device.	None

Two-Stage heating	Yes	No
Cooling	Up to Two-Stage cooling. Cooling Group feature with selectable heat/cool priority ensures heating and cooling do not occur simultaneously.	None
Fan / Ventilation	Up to two relays per zone for fan and HRV control.	None
Auxiliary Sensors	Up to 3 auxiliary temperature sensor inputs per zone. Inputs can be programmed as room, floor, outdoor, coil, duct, or remote sensors.	Optional floor temperature sensor.
Scheduling / Setback	Individual zone setback schedules. Up to four system wide master schedules. Scheduled heating, cooling, floor warming, and ventilation.	One system wide master schedule.
Scenes	Up to five programmable and three preset scenes.	Three preset scenes.
Freeze Protection	Upon communication failure, thermostats operate in stand-alone mode.	Upon Communication failure, boiler and zones are operated for 4 minutes, once per hour.
Pump and Valve Exercising	Pumps and valves are exercised once every 72 hours.	Pumps and valves are exercised once every 2 weeks.
System Cycle Length	Based on feedback from all zones to best match the system.	Fixed cycle length.

For more information on these two control systems, go to www.tekmarcontrols.com and www.honeywell.com.