

3 Memory Map

Primary Data Tables

Table	Data Type	Read / Write
Discrete Inputs	Single Bit	Read Only
Coils	Single Bit	Read / Write
Input Registers	16-Bit Word	Read Only
Holding Registers	16 Bit Word	Read / Write

Crest Boiler Memory Map

Coils						
Address	Description	Default	Unit	Min.	Max.	Resolution
00001	Boiler Enable	0	1=ON / 0=OFF	0	1	1
00005	Tank Thermostat	0	1=ON / 0=OFF	0	1	1
Discrete Inputs						
10001	Manual Reset High Limit	0	1=ON / 0=OFF	0	1	1
10002	Flow Switch	0	1=ON / 0=OFF	0	1	1
10003	Gas Pressure Switch	0	1=ON / 0=OFF	0	1	1
10004	Louver Proving Switch	0	1=ON / 0=OFF	0	1	1
10005	Blower Proving Switch 1	0	1=ON / 0=OFF	0	1	1
10006	Blocked Drain Switch	0	1=ON / 0=OFF	0	1	1
10008	Flame 1	0	1=ON / 0=OFF	0	1	1
10009	Enable	0	1=ON / 0=OFF	0	1	1
10010	Tank Thermostat	0	1=ON / 0=OFF	0	1	1
10011	Blocked Flue	0	1=ON / 0=OFF	0	1	1
10013	Blower Proving Switch 2	0	1=ON / 0=OFF	0	1	1
10021	Flue Damper Proving Switch	0	1=ON / 0=OFF	0	1	1
10023	Flame 2	0	1=ON / 0=OFF	0	1	1
10033	Run-time Contacts	0	1=ON / 0=OFF	0	1	1
10034	Alarm Contacts	0	1=ON / 0=OFF	0	1	1
10035	SH Pump	0	1=ON / 0=OFF	0	1	1
10036	HWG Pump	0	1=ON / 0=OFF	0	1	1
10037	Louver Relay	0	1=ON / 0=OFF	0	1	1
10038	Gas Valve 1	0	1=ON / 0=OFF	0	1	1
10039	System Pump	0	1=ON / 0=OFF	0	1	1
10044	Vent Damper Relay	0	1=ON / 0=OFF	0	1	1
10046	Gas Valve 2	0	1=ON / 0=OFF	0	1	1
10049	Blower #1 Power	0	1=ON / 0=OFF	0	1	1
10050	Blower #2 Power	0	1=ON / 0=OFF	0	1	1
10051	Spark Igniter	0	1=ON / 0=OFF	0	1	1

3 Memory Map

Crest Boiler Memory Map

Input Registers						
Address	Description	Default	Unit	Min.	Max.	Resolution
30001	Discrete Inputs 1 - 16	0	NA	0	65535	1
30002	Discrete Inputs 17 - 32	0	NA	0	65535	1
30003	Discrete Inputs 33 - 48	0	NA	0	65535	1
30004	System / Cascade Setpoint	0	Degrees Celsius	0	130	0,5
30005	System Pump Speed In	0	%	0	100	1
30006	Cascade Total Power	0	%	100	800	1
30007	Cascade Current Power	0	%	0	800	1
30008	Outlet Setpoint	0	Degrees Celsius	0	130	0,5
30009	Outlet Temperature	0	Degrees Celsius	0	130	0,1
30010	Inlet Temperature	0	Degrees Celsius	-20	130	0,1
30011	Flue Temperature	0	Degrees Celsius	-20	130	0,1
30012	Firing Rate	0	%	0	100	1
30013	Boiler Pump Speed Out	0	%	0	100	1
30014	Boiler Status Code	0	NA	0	65535	1
30015	Boiler Blocking Code	0	NA	0	65535	1
30016	Boiler Lockout Code	0	NA	0	65535	1
30026	Discrete Inputs 49 - 64	0	NA	0	65535	1
Holding Registers						
40001	Configuration	0	NA	0	65535	1
40002	Coils	0	NA	0	65535	1
40003	0-10 Volt Input / Rate Command / Setpoint Command	0	%	0	100	1
40004	Tank Setpoint	0	Degrees Celsius	0	87,5	0,5
40005	Tank Temperature	0	Degrees Celsius	-20	130	0,1
40006	Outdoor Temperature	0	Degrees Celsius	-40	60	0,1
40007	System Supply Temperature	0	Degrees Celsius	-20	130	0,1
40008	System Return Temperature	0	Degrees Celsius	-20	130	0,1

Configuration Bits

Address 40001 contains configuration bits sent from the BAS to the boiler. These bits tell the boiler to use its own internal inputs, or inputs from the BAS. When a bit is set to 1, the boiler will ignore the corresponding value contained internally, and expect the BAS to write that value into the Holding Registers. The configuration bits are as follows:

Bit 0 (LSB): Boiler Enable

Bit 1: Tank Thermostat

Bit 2: Rate Command / 10 - 10V Input / Setpoint Command

Bit 3: Tank Setpoint

Bit 4: System Supply Temperature

Bit 5: Outdoor Temperature

Bit 6: Tank Temperature

Bit 7: System Return Temperature

Bit 8 - 15: Not Used (Default = 0)