



**neptronic®**

# SKG4 Gas Fired Humidifier

## Modbus Communication Module User Guide



## Introduction

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The SKG4 Modbus Communication Module User Guide provides information for using Neptronic<sup>®</sup> communication feature. The controller uses Modbus communication protocol over serial line in the RTU mode and provides a Modbus network interface between client devices and Neptronic SKG4 devices.

The SKG4 Modbus Guide assumes that you are familiar with Modbus terminology.

The following are the requirements for Modbus:

- **Data Model.** The SKG4 Gas Fired Humidifier Modbus server data model uses only the Modbus Registers table.
- **Register Address:**
  - As per protocol base (base 0); for PLC add 1 to protocol base.
  - As per holding register (base 400001).



*Note: Ensure that the Modbus communication software used does not have a limit on the range of the register addresses that can be viewed and supports 6-digit holding registers.*

- **Function Codes.** The SKG4 Gas Fired Humidifier Modbus server supports a limited function codes subset comprising:
  - Read Holding Registers (0x03)
  - Write Single Register (0x06)
  - Write Multiple Registers (0x10)
- **Exception Responses.** The SKG4 Gas Fired Humidifier Modbus server supports the following exception codes:
  - Illegal data address
  - Illegal data value
  - Slave device busy
- **Serial Line.** The SKG4 Gas Fired Humidifier Modbus over serial line uses RTU transmission mode over a two-wire configuration RS485 (EIA/TIA-485 standard) physical layer.
  - The physical layer can use fixed baud rate selection or automatic baud rate detection (default) as per the **Modbus Auto Baud Rate** device menu item or holding register index 1.
  - The supported baud rates are 9600, 19200, 38400, and 57600.
  - The physical layer also supports variable parity control and stop bit configuration as per the **Modbus Comport Config** device menu item or holding register index 2.
  - In auto baud rate configuration, if the device detects only consecutive bad frames (2 or more) for one second with any given baud rate, it will reinitialize itself to the next baud rate.
- **Addressing.** The SKG4 Gas Fired Humidifier device only answers at the following address:
  - The device's unique address (1 to 246) that can be set through the device menu or through holding register index 0.

# Modbus Registers

## Table Glossary

Name	Description	Name	Description
W	Writable Register	ASCII	For registers containing ASCII (8-bit) characters
RO	Read Only Register	MSB	Most Significant Byte
Unsigned	For range of values from 0 to 65,535, unless otherwise specified	LSB	Least Significant Byte
Signed	For range of values from -32,768 to 32,767, unless otherwise specified	MSW	Most Significant Word
Bit String	For registers with multiple values using bit mask (example, flags)	LSW	Least Significant Word

## Modbus Registers Table

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
0	400001	Modbus Address and Product Type	Unsigned	MSB = Product type, not writable LSB = Modbus Address (1 to 247), writable	W	
1	400002	Device Baud Rate	Unsigned <i>Scale 100</i>	0, 9600, 19200, 38400, and 57600, 0 = Auto Baud <i>Rate Detection Value/100 (e.g. 38400 baud = 384)</i>	W	19200
2	400003	Modbus Slave Communication Port Configuration	Unsigned	0 = No parity, 2 Stop bits 1 = Even parity, 1 Stop bit 2 = Odd parity, 1 Stop bit	W	No parity, 2 Stops bits
3	400004	Product Name (characters 8 & 7)	ASCII	MSB = char 6, LSB = char 7	W	
4	400005	Product Name (characters 6 & 5)	ASCII	MSB = char 4, LSB = char 5	W	
5	400006	Product Name (characters 4 & 3)	ASCII	MSB = char 2, LSB = char 3	W	
6	400007	Product Name (characters 2 & 1)	ASCII	MSB = char 0, LSB = char 1	W	

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
7	400008	Product Actual Firmware Version (in Integer x100)	Unsigned Scale 100	1 to 65535 (e.g. 100)	RO	
8	400009	Product Actual EEPROM Version (in Integer x100)	Unsigned Scale 100	1 to 65535 (e.g. 100)	RO	
2000	402001	Supply RH Signal (0)	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 15V Value x 1000 (e.g. 1V = 1000)	RO	0V
2001	402002	Supply RH Signal (1)		Units: Volt (V), Range: 0V to 15V		
2002	402003	Room RH Signal (0)	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 15V Value x 1000 (e.g. 1V = 1000)	RO	0V
2003	402004	Room RH Signal (1)		Units: Volt (V), Range: 0V to 15V		
2004	402005	Control Signal (0)	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 15V Value x 1000 (e.g. 1V = 1000)	RO	0V
2005	402006	Control Signal (1)		Units: Volt (V), Range: 0V to 15V		
2006	402007	Cabinet Temperature Signal	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 1V = 1000)	RO	0V
2007	402008	Main Power Supply (0)	Unsigned Scale 10	Unit: Volt (V), Range: 0V to 40V Value x 10 (e.g. 1V = 10)	RO	0V
2008	402009	Main Power Supply (1)		Unit: Volt (V), Range: 0V to 40V		
4000	404001	Steam Output Feedback Signal (0)	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 1V = 1000)	RO	0V
4001	404002	Steam Output Feedback Signal (1)		Unit: Volt (V), Range: 0V to 10V		
6000	406001	Supply High Limit RH (0)	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6001	406002	Supply High Limit RH (1)		Unit: % RH, Range: 0% RH to 100% RH		
6002	406003	Room RH (0)	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6003	406004	Room RH (1)		Unit: % RH, Range: 0% RH to 100% RH		
6004	406005	Control Input (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6005	406006	Control Input (1)		Unit: %, Range: 0% to 100%		
6006	406007	Board Temperature (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 100°C or 32°F to 212°F Value x 100 (e.g. 5°C = 500 or 32°F = 3200)	RO	0°C or 32°F
6007	406008	Board Temperature (1)		Unit: °C/°F, Range: 0°C to 100°C or 32°F to 212°F		
6008	406009	Power Output Feedback (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6009	406010	Power Output Feedback (1)		Unit: %, Range: 0% to 100%		
6010	406011	Module 1 Water Level	Unsigned Scale 10	Unit: %, Range: 0% to 120% Value x 100 (e.g. 10% = 1000)	RO	78%
6011	406012	Module 1 Water Probe Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6012	406013	Module 1 Water Probe High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6013	406014	Module 1 Water Probe Abs Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6014	406015	Module 1 Water Probe Abs High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6015	406016	Module 2 Water Level	Unsigned Scale 10	Unit: %, Range: 0% to 120% Value x 100 (e.g. 10% = 1000)	RO	78%
6016	406017	Module 2 Water Probe Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6017	406018	Module 2 Water Probe High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6018	406019	Module 2 Water Probe Abs Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6019	406020	Module 2 Water Probe Abs High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6020	406021	Module 3 Water Level	Unsigned Scale 10	Unit: %, Range: 0% to 120% Value x 100 (e.g. 10% = 1000)	RO	78%
6021	406022	Module 3 Water Probe Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6022	406023	Module 3 Water Probe High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6023	406024	Module 3 Water Probe Abs Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6024	406025	Module 3 Water Probe Abs High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6025	406026	Module 4 Water Level	Unsigned Scale 10	Unit: %, Range: 0% to 120% Value x 100 (e.g. 10% = 1000)	RO	78%
6026	406027	Module 4 Water Probe Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6027	406028	Module 4 Water Probe High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6028	406029	Module 4 Water Probe Abs Low Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000Hz
6029	406030	Module 4 Water Probe Abs High Pos Reading	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	30000HZ
6030	406031	Room RH Network Reading	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6031	406032	Room RH Setpoint	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	40% RH

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6032	406033	Room RH Unoccupied Setpoint	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	30% RH
6033	406034	Room RH Vacant Setpoint	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	20% RH
6034	406035	Room Demand	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6035	406036	Supply High Limit Network Reading	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6036	406037	Supply High Limit Setpoint	Unsigned Scale 100	Unit: %, RH Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	80% RH
6037	406038	Supply High Limit Demand	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6038	406039	Humidity Control Network Demand	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6039	406040	Humidity Control Network High Limit	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	100% RH
6040	406041	Humidity Demand	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 1% RH = 100)	RO	0% RH
6041	406042	Network Timeout (0)	Unsigned Scale 1	Unit: Seconds (sec), Range: 1 to 900 sec Value x 1 (e.g. 10sec = 10)	W	900 sec
6042	406043	Network Timeout (1)		Unit: Seconds (sec), Range: 1 to 900 sec		
6043	406044	Humidity Demand Low Dead Band (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	1%
6044	406045	Humidity Demand Low Dead Band (1)		Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)		
6045	406046	System Power Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6046	406047	System Steam Capacity	Unsigned Scale 10	Unit: kg/hr or lb/hr, Range: 0 to 3000 kg/hr or 0 to 6614 lb/hr Value x 10 (e.g. 10 kg/hr = 100 or 10 lb/hr = 100)	RO	0 kg/hr or 0 lb/hr
6047	406048	Module 1 Chimney Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6048	406049	Module 1 Chimney Temp (1)		Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F		
6049	406050	Module 1 Water Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6050	406051	Module 1 Water Temp (1)		Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F		
6051	406052	Module 1 Water Frequency (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6052	406053	Module 1 Water Frequency (1)		Unit: Hz, Range: 0 to 30000 Hz		
6053	406054	Module 1 Ambient Temp (0)	Signed Scale 100	Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6054	406055	Module 1 Ambient Temp (1)		Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F		
6055	406056	Module 1 Fan Feedback (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 2000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6056	406057	Module 1 Fan Feedback (1)		Unit: Hz, Range: 0 to 2000 Hz		
6057	406058	Module 1 Fan PWM (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	RO	0%
6058	406059	Module 1 Fan PWM (1)		Unit: %, Range: 0% to 100%		
6059	406060	Module 1 Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6060	406061	Module 1 Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6061	406062	Module 1 Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6062	406063	Module 1 Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		



Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6063	406064	Module 1 Service On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6064	406065	Module 1 Service On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6065	406066	Module 1 Service On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6066	406067	Module 1 Service On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6067	406068	Module 1 Service Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6068	406069	Module 1 Service Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6069	406070	Module 1 Service Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6070	406071	Module 1 Service Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6071	406072	Module 1 On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6072	406073	Module 1 On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6073	406074	Module 1 On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6074	406075	Module 1 On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6075	406076	Module 1 Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	0%
6076	406077	Module 1 Max Steam Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	100%
6077	406078	Module 1 Ignition Count (0)	Unsigned Scale 1	No unit, 0 to 214748364 Value x 1 (e.g. 1 = 1)	RO	0
6078	406079	Module 1 Ignition Count (1)		No unit, 0 to 214748364		
6079	406080	Module 1 Ignition Count (2)		No unit, 0 to 214748364		
6080	406081	Module 1 Ignition Count (3)		No unit, 0 to 214748364		

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6081	406082	Module 2 Chimney Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6082	406083	Module 2 Chimney Temp (1)		Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F		
6083	406084	Module 2 Water Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6084	406085	Module 2 Water Temp (1)		Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F		
6085	406086	Module 2 Water Frequency (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6086	406087	Module 2 Water Frequency (1)		Unit: Hz, Range: 0 to 30000 Hz		
6087	406088	Module 2 Ambient Temp (0)	Signed Scale 100	Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6088	406089	Module 2 Ambient Temp (1)		Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F		
6089	406090	Module 2 Fan Feedback (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 2000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6090	406091	Module 2 Fan Feedback (1)		Unit: Hz, Range: 0 to 2000 Hz		
6091	406092	Module 2 Fan PWM (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	RO	0%
6092	406093	Module 2 Fan PWM (1)		Unit: %, Range: 0% to 100%		
6093	406094	Module 2 Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6094	406095	Module 2 Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6095	406096	Module 2 Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6096	406097	Module 2 Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6097	406098	Module 2 Service On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6098	406099	Module 2 Service On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6099	406100	Module 2 Service On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6100	406101	Module 2 Service On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6101	406102	Module 2 Service Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6102	406103	Module 2 Service Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6103	406104	Module 2 Service Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6104	406105	Module 2 Service Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6105	406106	Module 2 On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6106	406107	Module 2 On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6107	406108	Module 2 On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6108	406109	Module 2 On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6109	406110	Module 2 Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	0%
6110	406111	Module 2 Max Steam Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	100%
6111	406112	Module 2 Ignition Count (0)	Unsigned Scale 1	No unit, 0 to 214748364 Value x 1 (e.g. 1 = 1)	RO	0
6112	406113	Module 2 Ignition Count (1)		No unit, 0 to 214748364		
6113	406114	Module 2 Ignition Count (2)		No unit, 0 to 214748364		
6114	406115	Module 2 Ignition Count (3)		No unit, 0 to 214748364		
6115	406116	Module 3 Chimney Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6116	406117	Module 3 Chimney Temp (1)		Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)		
6117	406118	Module 3 Water Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6118	406119	Module 3 Water Temp (1)		Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F		
6119	406120	Module 3 Water Frequency (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6120	406121	Module 3 Water Frequency (1)		Unit: Hz, Range: 0 to 30000 Hz		
6121	406122	Module 3 Ambient Temp (0)	Signed Scale 100	Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6122	406123	Module 3 Ambient Temp (1)		Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F		
6123	406124	Module 3 Fan Feedback (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 2000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6124	406125	Module 3 Fan Feedback (1)		Unit: Hz, Range: 0 to 2000 Hz		
6125	406126	Module 3 Fan PWM (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	RO	0%
6126	406127	Module 3 Fan PWM (1)		Unit: %, Range: 0% to 100%		
6127	406128	Module 3 Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6128	406129	Module 3 Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6129	406130	Module 3 Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6130	406131	Module 3 Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6131	406132	Module 3 Service On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6132	406133	Module 3 Service On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6133	406134	Module 3 Service On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6134	406135	Module 3 Service On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6135	406136	Module 3 Service Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6136	406137	Module 3 Service Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6137	406138	Module 3 Service Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6138	406139	Module 3 Service Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6139	406140	Module 3 On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6140	406141	Module 3 On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6141	406142	Module 3 On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6142	406143	Module 3 On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6143	406144	Module 3 Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	0%
6144	406145	Module 3 Max Steam Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	100%
6145	406146	Module 3 Ignition Count (0)	Unsigned Scale 1	No unit, 0 to 214748364 Value x 1 (e.g. 1 = 1)	RO	0
6146	406147	Module 3 Ignition Count (1)		No unit, 0 to 214748364		
6147	406148	Module 3 Ignition Count (2)		No unit, 0 to 214748364		
6148	406149	Module 3 Ignition Count (3)		No unit, 0 to 214748364		
6149	406150	Module 4 Chimney Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6150	406151	Module 4 Chimney Temp (1)		Unit: °C/°F, Range: 0°C to 260°C or 32°F to 500°F		
6151	406152	Module 4 Water Temp (0)	Unsigned Scale 100	Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6152	406153	Module 4 Water Temp (1)		Unit: °C/°F, Range: 0°C to 125°C or 32°F to 257°F		
6153	406154	Module 4 Water Frequency (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 30000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6154	406155	Module 4 Water Frequency (1)		Unit: Hz, Range: 0 to 30000 Hz		

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6155	406156	Module 4 Ambient Temp (0)	Signed Scale 100	Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6156	406157	Module 4 Ambient Temp (1)		Unit: °C/°F, Range: -40°C to 100°C or -40°F to 212°F		
6157	406158	Module 4 Fan Feedback (0)	Unsigned Scale 1	Unit: Hz, Range: 0 to 2000 Hz Value x 1 (e.g. 1 Hz = 1)	RO	0Hz
6158	406159	Module 4 Fan Feedback (1)		Unit: Hz, Range: 0 to 2000 Hz		
6159	406160	Module 4 Fan PWM (0)	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	RO	0%
6160	406161	Module 4 Fan PWM (1)		Unit: %, Range: 0% to 100%		
6161	406162	Module 4 Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6162	406163	Module 4 Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6163	406164	Module 4 Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6164	406165	Module 4 Run Time (4)		Units: Hours (h), Range: 0 to 2147483647 h		
6165	406166	Module 4 Service On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6166	406167	Module 4 Service On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6167	406168	Module 4 Service On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6168	406169	Module 4 Service On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6169	406170	Module 4 Service Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6170	406171	Module 4 Service Run Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6171	406172	Module 4 Service Run Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6172	406173	Module 4 Service Run Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6173	406174	Module 4 On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147483647 h Value x 100 (e.g. 1h = 100)	RO	0h
6174	406175	Module 4 On Time (1)		Units: Hours (h), Range: 0 to 2147483647 h		
6175	406176	Module 4 On Time (2)		Units: Hours (h), Range: 0 to 2147483647 h		
6176	406177	Module 4 On Time (3)		Units: Hours (h), Range: 0 to 2147483647 h		
6177	406178	Module 4 Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	0%
6178	406179	Module 4 Max Steam Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 1% = 100)	W	100%
6179	406180	Module 4 Ignition Count (0)	Unsigned Scale 1	No unit, 0 to 214748364 Value x 1 (e.g. 1 = 1)	RO	0
6180	406181	Module 4 Ignition Count (1)		No unit, 0 to 214748364		
6181	406182	Module 4 Ignition Count (2)		No unit, 0 to 214748364		
6182	406183	Module 4 Ignition Count (3)		No unit, 0 to 214748364		
6183	406184	Water Level Replace Interval (0)	Unsigned Scale 1	Unit: Days, Range: 0 day to 7 days Value x 1 (e.g. 1 day = 1)	W	7 days
6184	406185	Water Level Replace Interval (1)		Unit: Days, Range: 0 day to 7 days		
6185	406186	Boiler Blowdown Rate	Unsigned Scale 1	Unit: %, Range: 0% to 100% Value x 1 (e.g. 1% = 1)	W	0%
6186	406187	Boiler Drain Interval	Unsigned Scale 1	Units: Hours (h), Range: 0 to 24 h Value x 1 (e.g. 1 h = 1)	W	6h
6187	406188	Boiler Idle Temperature Setpoint (0)	Unsigned Scale 1	Unit: °C/°F, Range: 0°C to 60°C or 32°F or 140°F Value x 1 (e.g. 5°C = 500 or 32°F = 3200)	W	0°C or 32°F
6188	406189	Boiler Idle Temperature Setpoint (1)		Unit: °C/°F, Range: 0°C to 60°C or 32°F or 140°F		
6189	406190	Boiler Idle Time Drain	Unsigned Scale 1	Unit: Hours (h), Range: 0 to 72 h Value x 1 (e.g. 1 h = 1)	W	24h

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
6190	406191	Boiler Service Interval	Unsigned Scale 1	Unit: Hours (h), Range: 1000 to 3000 h Value x 1 (e.g. 1500 h = 1500)	W	1000h
6191	406192	Boiler Idle Tank Rinse Interval	Unsigned Scale 1	Unit: Days, Range: 1 to 7 days Value x 1 (e.g. 1 day = 1)	W	3 day
6192	406193	Boiler Minimum Steam Output	Unsigned Scale 1	Unit: %, Range: 0 to 25% Value x 1 (e.g. 1% = 1)	W	0%
6193	406194	Boiler Drain Volume	Unsigned Scale 1	Unit: %, Range: 25 to 100% Value x 1 (e.g. 30% = 30)	W	100%
6194	406195	HRL Temperature	Signed Scale 100	Unit: °C/°F, Range: -40°C to 260°C or -40°F to 500°F Value x 100 (e.g. 5°C = 500 or 40°F = 4000)	RO	0°C or 32°F
6195	406196	HRL Humidity	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 1% RH = 100)	RO	0% RH
6196	406197	Modbus TCP IP Keep Alive Time Out (0)	Unsigned Scale 1	Unit: Minutes (min), Range: 1 to 1440 mins Value x 1 (e.g. 5 mins = 5)	W	5 min
6197	406198	Modbus TCP IP Keep Alive Time Out (1)		Unit: Minutes (min), Range: 1 to 1440 mins		
10000	410001	Water Leak Detection	Unsigned Scale 1	0 = Ok 1 = Leak	RO	Ok
10001	410002	Binary External Demand	Unsigned Scale 1	0 = 0% 1 = 100%	RO	0%
10002	410003	Interlock	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10003	410004	Supply High Limit	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10004	410005	Air Flow	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10005	410006	RS485 Interface	Unsigned Scale 1	0 = No 1 = Yes	RO	No



Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
10006	410007	Ethernet Interface	Unsigned Scale 1	0 = No 1 = Yes	RO	No
11000	411001	Service Warning Relay	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11001	411002	Alarm Warning Relay	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11002	411003	Alarm LED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11003	411004	Power LED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11004	411005	Buzzer	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12000	412001	System Production Test Done	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12001	412002	Network Control State	Unsigned Scale 1	0 = Normal 1 = Fault	W	Normal
12002	412003	Inhibit Resistive Probe	Unsigned Scale 1	0 = No 1 = Yes	W	No
12003	412004	Inhibit Resistive Probe	Unsigned Scale 1	0 = No 1 = Yes	W	No
12004	412005	Inhibit Resistive Probe	Unsigned Scale 1	0 = No 1 = Yes	W	No
12005	412006	Inhibit Resistive Probe	Unsigned Scale 1	0 = No 1 = Yes	W	No
12006	412007	Module 1 Burner Inlet Pressure	Unsigned Scale 1	0 = Normal 1 = Blocked	RO	Normal

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
12007	412008	Module 1 Water Level Low	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12008	412009	Module 1 Water Level High	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12009	412010	Module 1 Foam Sensor	Unsigned Scale 1	0 = NoFoam 1 = Foam	RO	NoFoam
12010	412011	Module 1 Gas Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12011	412012	Module 1 Tank Water Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12012	412013	Module 1 Water Level Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12013	412014	Module 1 Drain Cooler Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12014	412015	Module 1 Drain Pump	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12015	412016	Module 1 Ignition Control	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12016	412017	Module 1 AlarmLED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12017	412018	Module 1 Foam State	Unsigned Scale 1	0 = Ok 1 = Detected	RO	Ok
12018	412019	Module 1 Service Due	Unsigned Scale 1	0 = Off 1 = Module1	RO	Off
12019	412020	Module 1 Drain Valve	Unsigned Scale 1	0 = On 1 = Off	RO	On
12020	412021	Module 1 Water Level Probe Alarm	Unsigned Scale 1	0= Ok 1= Defect	RO	Ok

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
12021	412022	Module 2 Burner Inlet Pressure	Unsigned Scale 1	0 = Normal 1 = Blocked	RO	Normal
12022	412023	Module 2 Water Level Low	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12023	412024	Module 2 Water Level High	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12024	412025	Module 2 Foam Sensor	Unsigned Scale 1	0 = NoFoam 1 = Foam	RO	NoFoam
12025	412026	Module 2 Gas Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12026	412027	Module 2 Tank Water Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12027	412028	Module 2 Water Level Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12028	412029	Module 2 Drain Cooler Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12029	412030	Module 2 Drain Pump	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12030	412031	Module 2 Ignition Control	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12031	412032	Module 2 AlarmLED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12032	412033	Module 2 Service Due	Unsigned Scale 1	0 = Off 1 = Module2	RO	Off
12033	412034	Module 2 Foam State	Unsigned Scale 1	0 = Ok 1 = Detected	RO	Ok
12034	412035	Module 2 Drain Valve	Unsigned Scale 1	0 = On 1 = Off	RO	On

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
12035	412036	Module 2 Water Level Probe Alarm	Unsigned Scale 1	0= Ok 1= Defect	RO	Ok
12036	412037	Module 3 Burner Inlet Pressure	Unsigned Scale 1	0 = Normal 1 = Blocked	RO	Normal
12037	412038	Module 3 Water Level Low	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12038	412039	Module 3 Water Level High	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12039	412040	Module 3 Foam Sensor	Unsigned Scale 1	0 = NoFoam 1 = Foam	RO	NoFoam
12040	412041	Module 3 Gas Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12041	412042	Module 3 Tank Water Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12042	412043	Module 3 Water Level Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12043	412044	Module 3 Drain Cooler Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12044	412045	Module 3 Drain Pump	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12045	412046	Module 3 Ignition Control	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12046	412047	Module 3 AlarmLED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12047	412048	Module 3 Service Due	Unsigned Scale 1	0 = Off 1 = Module3	RO	Off
12048	412049	Module 3 Foam State	Unsigned Scale 1	0 = Ok 1 = Detected	RO	Ok

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
12049	412050	Module 3 Drain Valve	Unsigned Scale 1	0 = On 1 = Off	RO	On
12050	412051	Module 3 Water Level Probe Alarm	Unsigned Scale 1	0= Ok 1= Defect	RO	Ok
12051	412052	Module 4 Burner Inlet Pressure	Unsigned Scale 1	0 = Normal 1 = Blocked	RO	Normal
12052	412053	Module 4 Water Level Low	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12053	412054	Module 4 Water Level High	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12054	412055	Module 4 Foam Sensor	Unsigned Scale 1	0 = NoFoam 1 = Foam	RO	NoFoam
12055	412056	Module 4 Gas Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12056	412057	Module 4 Tank Water Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12057	412058	Module 4 Water Level Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12058	412059	Module 4 Drain Cooler Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12059	412060	Module 4 Drain Pump	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12060	412061	Module 4 Ignition Control	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12061	412062	Module 4 AlarmLED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12062	412063	Module 4 Service Due	Unsigned Scale 1	0 = Off 1 = Module4	RO	Off

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
12063	412064	Module 4 Foam State	Unsigned Scale 1	0 = Ok 1 = Detected	RO	Ok
12064	412065	Module 4 Drain Valve	Unsigned Scale 1	0 = On 1 = Off	RO	On
12065	412066	Module 4 Water Level Probe Alarm	Unsigned Scale 1	0= Ok 1= Defect	RO	Ok
12066	412067	Boiler Service Operation	Unsigned Scale 1	0 = NotAllowed 1 = Allowed	W	Allowed
12067	412068	HRL Lock Setpoint	Unsigned Scale 1	0 = Unlock 1 = Lock	W	Unlock
12068	412069	Notify Alarm	Unsigned Scale 1	0 = Off 1 = On	W	Off
12069	412070	Notify Warning	Unsigned Scale 1	0 = Off 1 = On	W	Off
12070	412071	Notify App Msg	Unsigned Scale 1	0 = Off 1 = On	W	Off
15000	415001	System Power State	Unsigned Scale 1	0 = Off 1 = On	W	Off
15001	415002	Modbus Server Units	Unsigned Scale 1	0 = Metric 1 = Imperial	W	Metric
15002	415003	Control Profile	Unsigned Scale 1	0 = ExternAnalog 1 = ExternNetwork 2 = InternAnalog 3 = InternNetwork 4 = HRL 5 = Custom	W	ExternAnalog
15003	415004	Modulating High Limit Profile	Unsigned Scale 1	0 = Disabled 1 = ExternAnalog 2 = ExternNetwork 3 = InternAnalog 4 = InternNetwork 5 = Custom	W	Disabled
15004	415005	Occupancy State	Unsigned Scale 1	0 = Occupied 1 = Unoccupied 2 = Vacant 3 = Off	RO	Occupied

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
15005	415006	Room RH Source	Unsigned Scale 1	0 = None 1 = RoomRH 2 = Network	W	None
15006	415007	Room RH Setpoint Source	Unsigned Scale 1	0 = None 1 = Internal 2 = ControllInput	W	None
15007	415008	Supply High Limit Reading Source	Unsigned Scale 1	0 = None 1 = Supply HLRH 2 = Network	W	None
15008	415009	Supply High Limit Setpoint Source.	Unsigned Scale 1	0 = None 1 = Internal 2 = ControllInput	W	None
15009	415010	Humidity Control Demand Source.	Unsigned Scale 1	0 = None 1 = ControllInput 2 = RoomDemand 3 = Network	W	ControllInput
15010	415011	Humidity Control High Limit Source.	Unsigned Scale 1	0 = None 1 = ControllInput 2 = SupplyHLDemand 3 = Network	W	None
15011	415012	Humidity Control Cutout State.	Unsigned Scale 1	0 = Off 1 = Normal 2 = LowLimit 3 = HighLimit 4 = AirFlow 5 = Interlock	RO	Off
15012	415013	Module 1 State	Unsigned Scale 1	0 = Off 1 = Idle 2 = LineRinse 3 = TankRinse 4 = Filling 5 = Draining 6 = Heating 7 = Boiling 8 = Alarm 9 = PurgeAir	RO	Off
15013	415014	Module 1 Request	Unsigned Scale 1	0 = None 1 = Reset Alarms 2 = Drain 3 = Reset Counters 4 = Filling 5 = WaterCalib 6 = PurgeAir	W	None

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
15014	415015	Module 1 Alarm	Unsigned Scale 1	0 = Normal 1 = FailedPump 2 = FillTimeout 3 = BlockedPiping 4 = HeatTimeout 5 = OverHeat 6 = WaterLeak 7 = Service 8 = Foaming 9 = BurnerLocked 10 = FanDefect 11 = FailedComm 12 = ChimTempHi 13 = RefillTimeout 14 = FanBlocked 15 = SystBlck 16 = TankBlocked 17 = RefillDelay	RO	Normal
15015	415016	Water Probe 1 Auto Calib	Unsigned Scale 1	0 = None 1 = Once 2 = Always	W	Always
15016	415017	Module 1 Water Level Probe Warning	Unsigned Scale 1	0 = Ok 1 = Calib 2 = Replace	RO	Ok
15017	415018	Water Level 1 Probe Failure	Unsigned Scale 1	0 = None 1 = Capacitive 2 = Resistive 3 = Both	RO	None
15018	415019	Module 2 State	Unsigned Scale 1	0 = Off 1 = Idle 2 = LineRinse 3 = TankRinse 4 = Filling 5 = Draining 6 = Heating 7 = Boiling 8 = Alarm 9 = PurgeAir	RO	Off
15019	415020	Module 2 Request	Unsigned Scale 1	0 = None 1 = Reset Alarms 2 = Drain 3 = Reset Counters 4 = Filling 5 = WaterCalib 6 = PurgeAir	W	None
15020	415021	Module 2 Alarm	Unsigned Scale 1	0 = Normal 1 = FailedPump 2 = FillTimeout 3 = BlockedPiping 4 = HeatTimeout 5 = OverHeat 6 = WaterLeak 7 = Service 8 = Foaming 9 = BurnerLocked 10 = FanDefect 11 = FailedComm 12 = ChimTempHi 13 = RefillTimeout 14 = FanBlocked 15 = SystBlck 16 = TankBlocked 17 = RefillDelay	RO	Normal



Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
15021	415022	Water Probe 2 Auto Calib	Unsigned Scale 1	0 = None 1 = Once 2 = Always	W	Always
15022	415023	Module 2 Water Level Probe Warning	Unsigned Scale 1	0= Ok 1= Calib 2= Replace	RO	Ok
15023	415024	Water Level 2 Probe Failure	Unsigned Scale 1	0 = None 1 = Capacitive 2 = Resistive 3 = Both	RO	None
15024	415025	Module 3 State	Unsigned Scale 1	0 = Off 1 = Idle 2 = LineRinse 3 = TankRinse 4 = Filling 5 = Draining 6 = Heating 7 = Boiling 8 = Alarm 9 = PurgeAir	RO	Off
15025	415026	Module 3 Request	Unsigned Scale 1	0 = None 1 = Reset Alarms 2 = Drain 3 = Reset Counters 4 = Filling 5 = WaterCalib 6 = PurgeAir	W	None
15026	415027	Module 3 Alarm	Unsigned Scale 1	0 = Normal 1 = FailedPump 2 = FillTimeout 3 = BlockedPiping 4 = HeatTimeout 5 = OverHeat 6 = WaterLeak 7 = Service 8 = Foaming 9 = BurnerLocked 10 = FanDefect 11 = FailedComm 12 = ChimTempHi 13 = RefillTimeout 14 = FanBlocked 15 = SystBlck 16 = TankBlocked 17 = RefillDelay	RO	Normal
15027	415028	Water Probe 3 Auto Calib	Unsigned Scale 1	0 = None 1 = Once 2 = Always	W	Always
15028	415029	Module 3 Water Level Probe Warning	Unsigned Scale 1	0= Ok 1= Calib 2= Replace	RO	Ok
15029	415030	Water Level 3 Probe Failure	Unsigned Scale 1	0 = None 1 = Capacitive 2 = Resistive 3 = Both	RO	None

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
15030	415031	Module 4 State	Unsigned Scale 1	0 = Off 1 = Idle 2 = LineRinse 3 = TankRinse 4 = Filling 5 = Draining 6 = Heating 7 = Boiling 8 = Alarm 9 = PurgeAir	RO	Off
15031	415032	Module 4 Request	Unsigned Scale 1	0 = None 1 = Reset Alarms 2 = Drain 3 = Reset Counters 4 = Filling 5 = WaterCalib 6 = PurgeAir	W	None
15032	415033	Module 4 Alarm	Unsigned Scale 1	0 = Normal 1 = FailedPump 2 = FillTimeout 3 = BlockedPiping 4 = HeatTimeout 5 = OverHeat 6 = WaterLeak 7 = Service 8 = Foaming 9 = BurnerLocked 10 = FanDefect 11 = FailedComm 12 = ChimTempHi 13 = RefillTimeout 14 = FanBlocked 15 = SystBlck 16 = TankBlocked 17 = RefillDelay	RO	Normal
15033	415034	Water Probe 4 Auto Calib	Unsigned Scale 1	0 = None 1 = Once 2 = Always	W	Always
15034	415035	Module 4 Water Level Probe Warning	Unsigned Scale 1	0 = Ok 1 = Calib 2 = Replace	RO	Ok
15035	415036	Water Level 4 Probe Failure	Unsigned Scale 1	0 = None 1 = Capacitive 2 = Resistive 3 = Both	RO	None
15036	415037	Boiler Fill Mode	Unsigned Scale 1	0 = OneShot 1 = Pulsed	W	Pulsed
15037	415038	Boiler Idle Tank Rinse Off	Unsigned Scale 1	0 = Off 1 = On	W	Off
15038	415039	Boiler Idle Tank Rinse On	Unsigned Scale 1	0 = Off 1 = On	W	Off

Protocol Base	Holding Register	Description	Data Type	Units, Limits, State Texts	Writable	Default Value
15039	<b>415040</b>	System Mode	Unsigned <i>Scale 1</i>	0 = Parallel 1 = Sequential 2 = Hybrid	W	Sequential
15040	<b>415041</b>	Boiler Startup Tank Rinse	Unsigned <i>Scale 1</i>	0 = Off 1 = On	W	Off



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