neptronic SKE4 Steam Humidifier Modbus Communication Module User Guide

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Contents

Introduction

The SKE4 Modbus Communication Module User Guide provides information for using Neptronic® 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 SKE4 devices.

The SKE4 Modbus Guide assumes that you are familiar with Modbus terminology.

The following are the requirements for Modbus:

- Data Model. The SKE4 Steam 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 SKE4 Steam 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 SKE4 Steam Humidifier Modbus server supports the following exception codes:
  - Illegal data address
  - Illegal data value
  - Slave device busy
- Serial Line. The SKE4 Steam 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 SKE4 Steam 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 *Scale 100*	0, 9600, 19200, 38400, and 57600, 0 = Auto Baud *Rate Detection Value/100 (e.g. 38400 baud = 384)*	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	
7	40008	Product Actual Firmware Version (in Integer x100)	Unsigned Scale 100	1 to 65535 (e.g. 100)	RO	
8	40009	Product Actual EEPROM Version (in Integer x100)	Unsigned Scale 100	1 to 65535 (e.g. 100)	RO	

2000	402001	Control Signal	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 15V Value x 1000 (e.g. 2V = 2000)	RO	0V
2001	402002	Room RH Signal	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 15V Value x 1000 (e.g. 2V = 2000)	RO	0V
2002	402003	Supply RH Signal	Unsigned Scale 1000	Units: Volt (V), Range: 0V to 15V Value x 1000 (e.g. 2V = 2000)	RO	0V
2003	402004	Water Level Signal	Unsigned Scale 1	Units: Hz, Range: 0 to 30000Hz Value x 1 (e.g. 10Hz = 10)	RO	0Hz
2004	402005	Water Level Low Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2005	402006	Water Level High Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2006	402007	Water Temperature Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2007	402008	Foam Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2008	402009	SSR Temperature Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2009	402010	Cabinet Temperature Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2010	402011	Current Sensor 1 Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 3.30V Value x 1000 (e.g. 1V = 1000)	RO	0V
2011	402012	Current Sensor 2 Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 3.30V Vale x 1000 (e.g. 1V = 1000)	RO	0V

2012	402013	Board Temperature Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
2013	402014	Main Power Supply	Unsigned Scale 10	Unit: Volt (V), Range: 0V to 40V Value x 10 (e.g. 2V = 20)	RO	0V
4000	404001	Power Output Feedback Signal	Unsigned Scale 1000	Unit: Volt (V), Range: 0V to 10V Value x 1000 (e.g. 2V = 2000)	RO	0V
4001	404002	Heater SSR Stage	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6000	406001	Control Input	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6001	406002	Control Min	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	0%
6002	406003	Control Max	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	0%
6003	406004	Control Bias	Signed Scale 100	Unit: %, Range: -10% to 10% Value x 100 (e.g. 10% = 1000)	W	0%
6004	406005	Room RH	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6005	406006	Room RH Min	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6006	406007	Room RH Max	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH

6007	406008	Room RH Bias	Unsigned Scale 100	Unit: % RH, Range: -10% RH to 10% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6008	406009	Supply High Limit RH	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6009	406010	Supply High Limit RH Min	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6010	406011	Supply High Limit RH Max	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6011	406012	Supply High Limit RH Bias	Signed Scale 100	Unit: %, Range: -10% RH to 10% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6012	406013	Water Temperature	Unsigned Scale 100	Unit: ºC/ºF, Range: 0°C to 125°C or 32°F to 257°F Value x 100 (e.g. 5°C = 500 or 10ºF = 1000)	RO	50°C or 122°F
6013	406014	Water Temperature Bias	Signed Scale 100	Unit: ºC/ºF, Range: -10°C to 10°C or -18°F to 18°F Value x 100 (e.g. 5°C = 500 or 14ºF = 1400)	RO	0°C or 32°F
6014	406015	SSR Temperature	Signed Scale 100	Unit: ºC/ºF, Range: -20°C to 100°C or -4°F to 212°F, Value x 100 (e.g. 5°C = 500 or 10ºF = 1000)	RO	0°C or 32°F
6015	406016	Cabinet Temperature	Signed Scale 100	Unit: ºC/ºF, Range: -20°C to 100°C or -4°F to 212°F Value x 100 (e.g. 5°C = 500 or 10ºF = 1000)	RO	0°C or 32°F
6016	406017	Current Sensor 1	Unsigned Scale 100	Unit: Amps (A), Range: 0A to 150 A Value x 100 (e.g. 10A = 1000)	RO	0A
6017	406018	Current Sensor 2	Unsigned Scale 100	Unit: Amps (A), Range: 0A to 150 A Value x 100 (e.g. 10A = 1000)	RO	0A
6018	406019	Board Temperature	Unsigned Scale 100	Unit: ºC/ºF, Range: 0°C to 100°C or 32°F to 212°F Value x 100 (e.g. 5°C = 500 or 32ºF = 3200)	RO	0°C or 32°F

6019	406020	Power Output Feedback Bias	Unsigned Scale 1000	Unit: V, Range: -1V to 1V Value x 100 (e.g. 10V = 1000)	W	0V
6020	406021	Power Output Feedback Min	Unsigned Scale 1000	Unit: V, Range: 0V to 10V Value x 100 (e.g. 10V = 1000)	W	0V
6021	406022	Power Output Feedback Max	Unsigned Scale 1000	Unit: V, Range: 0V to 10V Value x 100 (e.g. 10V = 1000)	W	0V
6022	406023	Power Output Feedback	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6023	406024	Water Level	Unsigned Scale 10	Unit: %, Range: 0% to 120% Value x 10 (e.g. 10% = 100)	RO	78%
6024	406025	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
6025	406026	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
6026	406027	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
6027	406028	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
6028	406029	Room RH Network Reading	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	W	0% RH
6029	406030	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
6030	406031	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
6031	406032	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

6032	406033	Room Demand Proportional Gain	Unsigned Scale 10	No Unit, Range: 1 to 200 Value x 10 (e.g. 10 = 100)	W	20
6033	406034	Room Demand Integral Time	Unsigned Scale 10	Unit: Seconds (sec), Range: 0 to 900 sec Value x 10 (e.g. 10 sec = 100)	W	0 sec
6034	406035	Room Demand Derivative Time	Unsigned Scale 10	Unit: Seconds (sec), Range: 0 to 60 sec Value x 10 (e.g. 10 sec = 100)	W	0 sec
6035	406036	Room Demand	Unsigned Scale 100	Unit: % RH, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6036	406037	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
6037	406038	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
6038	406039	Supply High Limit Proportional Gain	Unsigned Scale 10	No Unit, Range: 1 to 200 Value x 10 (e.g. 10 = 100)	W	10
6039	406040	Supply High Limit Integral Time	Unsigned Scale 10	Unit: Seconds (sec), Range: 0 to 900 sec Value x 10 (e.g. 10 sec = 100)	W	0 sec
6040	406041	Supply High Limit Derivative Time	Unsigned Scale 10	Unit: Seconds (sec), Range: 0 to 60 sec Value x 10 (e.g. 10 sec = 100)	W	0 sec
6041	406042	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
6042	406043	Humidity Control Network Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	0%
6043	406044	Humidity Control Network High Limit	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	100%

6044	406045	Humidity Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6045	406046	SDU Fan Off Delay	Unsigned Scale 1	Unit: Minutes (min), Range: 5 to 20 mins Value x 1 (e.g. 5 mins = 5)	W	5 min
6046	406047	System Power Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6047	406048	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. 10kg/hr = 100 or 10lb/hr = 100)	RO	0 kg/hr or 0 lb/hr
6048	406049	Boiler Demand	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	0%
6049	406050	Boiler 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. 10kg/hr = 100 or 10lb/hr = 100)	RO	0 kg/hr or 0 lb/hr
6050	406051	Boiler Power Output	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	RO	0%
6051	406052	Boiler Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147 483647 h Value x 100 (e.g. 10 h = 1000)	RO	0h
6052	406053	Boiler Run Time (1)		Units: Hours (h), Range: 0 to 2147 483647 h		
6053	406054	Boiler Run Time (2)		Units: Hours (h), Range: 0 to 2147 483647 h		
6054	406055	Boiler Run Time (3)		Units: Hours (h), Range: 0 to 2147 483647 h		
6055	406056	Boiler On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147 483647 h Value x 100 (e.g. 10 h = 1000)	RO	0h
6056	406057	Boiler On Time (1)		Units: Hours (h), Range: 0 to 2147 483647 h		
6057	406058	Boiler On Time (2)		Units: Hours (h), Range: 0 to 2147 483647 h		

6058	406059	Boiler On Time (3)		Units: Hours (h), Range: 0 to 2147 483647 h		
6059	406060	Boiler Service Run Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147 483647 h Value x 100 (e.g. 10 h = 1000)	RO	0h
6060	406061	Boiler Service Run Time (1)		Units: Hours (h), Range: 0 to 2147 483647 h		
6061	406062	Boiler Service Run Time (2)		Units: Hours (h), Range: 0 to 2147 483647 h		
6062	406063	Boiler Service Run Time (3)		Units: Hours (h), Range: 0 to 2147 483647 h		
6063	406064	Boiler Service On Time (0)	Unsigned Scale 100	Units: Hours (h), Range: 0 to 2147 483647 h Value x 100 (e.g. 10 h = 1000)	RO	0h
6064	406065	Boiler Service On Time (1)		Units: Hours (h), Range: 0 to 2147 483647 h		
6065	406066	Boiler Service On Time (2)		Units: Hours (h), Range: 0 to 2147 483647 h		
6066	406067	Boiler Service On Time (3)		Units: Hours (h), Range: 0 to 2147 483647 h		
6067	406068	Boiler Minimum Steam Output	Unsigned Scale 1	Unit: %, Range: 1 to 25% Value x 1 (e.g. 1% = 1)	W	5%
6068	406069	Boiler Drain Interval	Unsigned Scale 1	Units: Hours (h), Range: 0 to 24 h Value x 1 (e.g. 1 h = 1)	W	6h
6069	406070	Boiler Drain Volume	Unsigned Scale 1	Unit: %, Range: 25 to 100% Value x 1 (e.g. 30% = 30)	W	100%
6070	406071	Boiler Max Steam Output	Unsigned Scale 1	Unit: %, Range: 0 to 100% Value x 1 (e.g. 1% = 1)	W	100%
6071	40672	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
6072	406073	Boiler Idle Temperature Set point	Unsigned Scale 1	Unit: ºC/ºF, Range: 0°C to 60°C or 32°F or 140°F Value x 1 (e.g. 5°C = 500 or 10ºF = 1000)	W	0°C or 32°F
6073	406074	Boiler Blowdown Rate	Unsigned Scale 1	Unit: %, Range: 0% to 100% Value x 1 (e.g. 10% = 10)	W	0%

6074	406075	Boiler Service Interval	Unsigned Scale 1	Unit: Hours (h), Range: 1000 to 3000 h Value x 1 (e.g. 1500 h = 1500)	W	1000h
6075	406076	Room Demand Proportional Band	Unsigned Scale 10	Unit: %, Range: 1% to 100% Value x 100 (e.g. 10% = 100)	RO	5%
6076	406077	HRL Temperature	Signed Scale 100	Unit: ºC/ºF, Range: -40°C to 260°C or-40°F to 500°F, Value x 100 (e.g. 5°C = 500 or 10ºF = 1000)	RO	0°C or 32°F
6077	406078	Supply High Limit Proportional Band	Unsigned Scale 10	Unit: %, Range: 1% to 100% Value x 100 (e.g. 10% = 100)	RO	10%
6078	406079	HRL Humidity	Unsigned Scale 100	Unit: %, Range: 0% RH to 100% RH Value x 100 (e.g. 10% RH = 1000)	RO	0% RH
6079	406080	Modbus TCP IP Keep Alive Time Out	Unsigned Scale 1	Unit: Minutes (min), Range: 1 to 1440 mins Value x 1 (e.g. 5 mins = 5)	W	5 min
6080	406081	Humidity Demand Low Dead Band	Unsigned Scale 100	Unit: %, Range: 0% to 100% Value x 100 (e.g. 10% = 1000)	W	1%
6081	406082	Network Timeout	Unsigned Scale 1	Unit: Seconds (sec), Range: 1 to 900 sec Value x 1 (e.g. 10sec = 10)	W	900 sec
6082	406083	Water Level Replace Interval	Unsigned Scale 1	Unit: Days, Range: 1 to 7 days Value x 1 (e.g. 1 day = 1)	W	3day
6083	406084	Boiler Manual Calibration Time (0)	Unsigned Scale 1	Unit: Hours (h), Range: 0 to 21474836.47 h Value x 1 (e.g. 1 h = 1)	RO	0h
6084	406085	Boiler Manual Calibration Time (1)		Unit: Hours (h), Range: 0 to 21474836.47 h		
6085	406086	Boiler Manual Calibration Time (2)		Unit: Hours (h), Range: 0 to 21474836.47 h		
6086	406087	Boiler Manual Calibration Time (3)		Unit: Hours (h), Range: 0 to 21474836.47 h		
6087	406088	HRL Temperature Bas	Signed Scale 10	Unit: ºC/ºF, Range: -10°C to 10°C or -18°F to 18°F Value x 10 (e.g. 5°C = 50 or 14ºF = 140)	W	0°C or 32°F
6088	406089	HRL Humidity Bias	Signed Scale 10	Unit: %RH, Range: -10%RH to 10%RH Value x 10 (e.g. 5%RH = 50)	W	0%RH

6089	406090	Fill Delay	Unsigned Scale 1	Unit: Minutes (min), Range: 1 to 15 mins Value x 1 (e.g. 5 mins = 5)	RO	0 min
6090	406091	Clean Valve Delay	Unsigned Scale 1	Unit: %, Range: 0% to 80% Value x 1 (e.g. 10% = 10)	W	50%
10000	410001	Air Flow	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10001	410002	Supply High Limit	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10002	410003	Interlock	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10003	410004	Binary External Demand	Unsigned Scale 1	0 = 0% 1 = 100%	RO	0%
10004	410005	Water Leak Detection	Unsigned Scale 1	0 = Ok 1 = Leak	RO	Ok
10005	410006	Thermal Cutout	Unsigned Scale 1	0 = Closed 1 = Open	RO	Closed
10006	410007	RS485 Interface	Unsigned Scale 1	0 = No 1 = Yes	RO	No
10007	410008	Ethernet Interface	Unsigned Scale 1	0 = No 1 = Yes	RO	No
10008	410009	Contactors PCB Fuse	Unsigned Scale 1	0 = Normal 1 = Blown Fuse	RO	Normal
10009	410010	Control PCB Fuse	Unsigned Scale 1	0 = Normal 1 = Open Fuse	RO	Normal
11000	411001	Alarm Warning Relay	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11001	411002	Service Warning Relay	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11002	411003	Water Level Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off

11003	411004	Tank Water Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11004	411005	Drain Cooler Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11005	411006	Drain Pump	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11006	411007	Drain Valve	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11007	411008	Main Contactor	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11008	411009	Heater Stage 1	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11009	411010	Heater Stage2	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11010	411011	Heater Stage 3	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11011	411012	SDU Fan	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11012	411013	Alarm LED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11013	411014	Power LED	Unsigned Scale 1	0 = Off 1 = On	RO	Off
11014	411015	Buzzer	Unsigned Scale 1	0 = Off 1 = On	RO	Off
12000	12001	Manual Water Calibration State	Unsigned Scale 1	0 = Ok 1 = Required	RO	Ok
12001	412002	Water Level Low	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive
12002	412003	Water Level High	Unsigned Scale 1	0 = Inactive 1 = Active	RO	Inactive

12003	412004	Foam Sensor	Unsigned Scale 1	0 = No Foam 1 = Foam		RO	No Foam
12004	412005	SDU Fan Fault	Unsigned Scale 1	0 = Off 1 = On		RO	Off
12005	412006	Boiler Service Operation	Unsigned Scale 1	0 = Not Allowed 1 = Allowed		W	Allowed
12006	412007	Boiler Service Due	Unsigned Scale 1	0 = No 1 = Yes		RO	No
12007	412008	Foam	Unsigned Scale 1	0 = Ok 1 = Detected		RO	Ok
12008	412009	HRL Lock Setpoint	Unsigned Scale 1	0 = Unlock 1 = Lock		W	Unlock
12009	412010	Network Control State	Unsigned Scale 1	0 = Normal 1 = Fault		W	Normal
12010	412011	Inhibit Resistive Probe	Unsigned Scale 1	0 = No 1 = Yes		W	No
12011	412012	Notify Alarm	Unsigned Scale 1	0 = Off 1 = On		W	Off
12012	412013	Notify Warning	Unsigned Scale 1	0 = Off 1 = On		W	Off
12013	412014	Notify App Msg	Unsigned Scale 1	0 = Off 1 = On		W	Off
12014	412015	Boiler Line Rinse	Unsigned Scale 1	0 = Off 1 = On		W	On
12015	412016	Anti Freeze Warning	Unsigned Scale 1	0 = Inactive 1 = Drain		RO	Inactive
15000	415001	System Log Verbose Level	Unsigned *Scale 1*	0 = None 1 = Emergency 2 = Alert 3 = Critical 4 = Error	5 = Warning 6 = Notice 7 = Info 8 = Debug	W	Debug

15001	415002	Modbus Server Units	Unsigned *Scale 1*	0 = Metric 1 = Imperial		W	Metric
15002	4**15003**	Control Signal Type	Unsigned *Scale 1*	0 = 0-10Vdc 1 = 2-10Vdc 2 = 4-20mA 3 = 0-20mA		W	0-10Vdc
15003	4**15004**	Room RH Signal Type	Unsigned *Scale 1*	0 = 0-10Vdc 1 = 2-10Vdc 2 = 4-20mA 3 = 0-20mA		W	0-10Vdc
15004	4**15005**	Supply RH Signal Type	Unsigned *Scale 1*	0 = 0-10Vdc 1 = 2-10Vdc 2 = 4-20mA 3 = 0-20mA		W	0-10Vdc
15005	4**15006**	Control Profile	Unsigned *Scale 1*	0 = Extern Analog 1 = Extern Network 2 = Intern Analog	3 = Intern Network 4 = HRL 5 = Custom	W	Extern Analog
15006	4**15007**	Modulating High Limit Profile	Unsigned *Scale 1*	0 = Disabled 1 = Extern Analog 2 = Extern Network	3 = Intern Analog 4 = Intern Network 5 = Custom	W	Disabled
15007	4**15008**	Occupancy State	Unsigned *Scale 1*	0 = Occupied 1 = Unoccupied	2 = Vacant 3 = Off	RO	Occupied
15008	415009	Room RH Source	Unsigned Scale 1	0 = None 1 = RoomRH	2 = Network 3 = HRL	W	None
15009	415010	Room RH Setpoint Source	Unsigned Scale 1	0 = None 1 = Internal	2 = Control Input	W	None
15010	415011	Supply High Limit Reading Source	Unsigned Scale 1	0 = None 1 = SuppyHLRH	2 = Network	W	None
15011	415012	Supply High Limit Setpoint Source	Unsigned Scale 1	0 = None 1 = Internal	2 = Control Input	W	None
15012	415013	Humidity Control Demand Source	Unsigned Scale 1	0 = None 1 = Control Input	2 = Room Demand 3 = Network	W	Control Input

15013	415014	Humidity Control High Limit Source	Unsigned Scale 1	0 = None 1 = Control Input	2 = SupplyHLDemand 3 = Network	W	None
15014	415015	Humidity Control Cutout State	Unsigned Scale 1	0 = Off 1 = Normal 2 = Low Limit	3 = HighLimit 4 = No Air Flow 5 = Interlock	RO	Off
15015	**415016**	SDU Fan Target	Unsigned *Scale 1*	0 = None 1 = SDU Fan		W	None
15016	**415017**	Boiler Request	Unsigned *Scale 1*	0 = None 1 = Reset Alarms 2 = Drain	3 = Reset Counters 4 = Filling 5 = WaterCalib	W	None
15017	**415018**	Boiler State	Unsigned *Scale 1*	0 = Off 1 = Idle 2 = Line Rinse 3 = Tank Rinse 4 = Filling	5 = Draining 6 = Heating 7 = Boiling 8 = Alarm	RO	Off
15018	**415019**	Boiler Fill Mode	Unsigned *Scale 1*	0 = One Shot 1 = Pulsed		W	Pulsed
15019	**415020**	Boiler Alarm	Unsigned *Scale 1*	0 = Normal 1 = Failed ump 2 = Fill Timeout 3 = Blocked Piping 4 = Heat Timeout 5 = Overheat	6 = WaterLeak 7 = Service *8 is Reserved* 9 = Tank Blocked 10 = Refill Delay	RO	Normal
15020	**415021**	Boiler Idle Tank Rinse On	Unsigned *Scale 1*	0 = Off 1 = On		W	Off
15021	**415022**	Boiler Idle Tank Rinse Off	Unsigned *Scale 1*	0 = Off 1 = On		W	Off
15022	**415023**	Water Probe Auto Calib.	Unsigned *Scale 1*	0 = Off 1 = On		W	On
15023	**415024**	System Power State	Unsigned *Scale 1*	0 = Off 1 = On		W	Off
15024	**415025**	Water Level Probe Warning	Unsigned *Scale 1*	0 = Ok 1 = Replace		RO	Ok

15025	41502 6	Water Level Probe Failure	Unsigned *Scale 1*	0 = None 1 = Capacitive	2 = Resistive 3 = Both	RO	None
15026	41502 7	Water Level Probe Alarm	Unsigned *Scale 1*	0 = Ok 1 = Defect	2 = No Calib	RO	Ok
15027	41502 8	Boiler Startup Tank Rinse	Unsigned *Scale 1*	0 = Off 1 = On		W	Off

CUSTOMER SUPPORT

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Documents / Resources

	neptronic SKE4 Steam Humidifier Modbus Communication Module [pdf] User Guide SKE4 Steam Humidifier Modbus Communication Module, SKE4, Steam Humidifier Modbus Communication Module, Humidifier Modbus Communication Module, Modbus Communication Module, Communication Module, Module

References

- Neptronic | Home - Humidifier Distributor & HVAC Products
- Neptronic | Home - Humidifier Distributor & HVAC Products
- User Manual