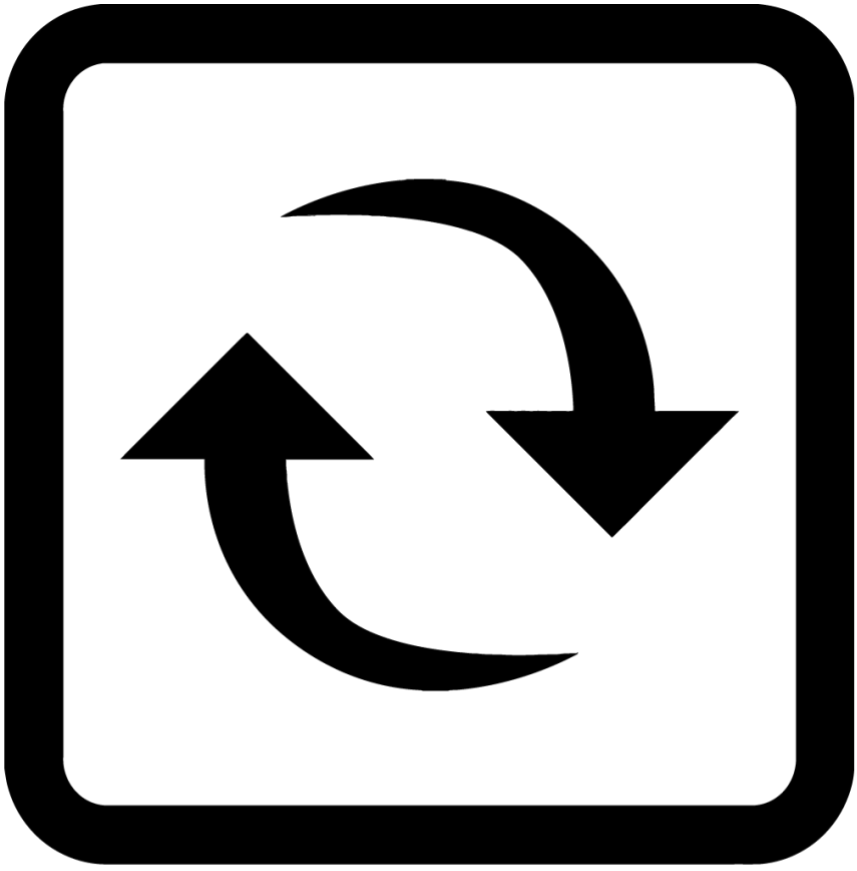

INFRASENSING

Modbus User Manual

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OPENING SENSORGATEWAY, ADDON, EXPANSION HUB, SENSOR OR ANY OTHER HARDWARE VOIDS THE WARRANTY

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1. ServersCheck Sensors Compatibility

1.1 Connectivity to Serverscheck Sensorgateway Using Modbus TCP

This document describes the Modbus information which includes implementation basics, supported types, frame format, function code and similar subjects.

1.2 How to Use this Manual

This information is organized based on the module that you connect to the SensorGateway.

Every SensorGateway has a built-in Temperature probe, Modbus pt for Node 0 will always be the Internal Temperature of the Gateway either for Wired or Wireless.

Starting **Firmware 7.41**, it includes the Internal Ping. So Node 1 will always be for the Internal Ping.

All offered units are Modular, so this Reference guide will provide all Modbus list depending on the modules and combination of sensors that a customer will connect.

1.3 SensorGateway Compatibility

The Modbus TCP capability is available on **Firmware Version 6.21** and higher.

2 Getting Started

2.1 Implementation

Modbus TCP is an open standard protocol which uses regular Ethernet cable and switches to communicate within each other. It provides data acquisition and control, through query and response within the IP network.

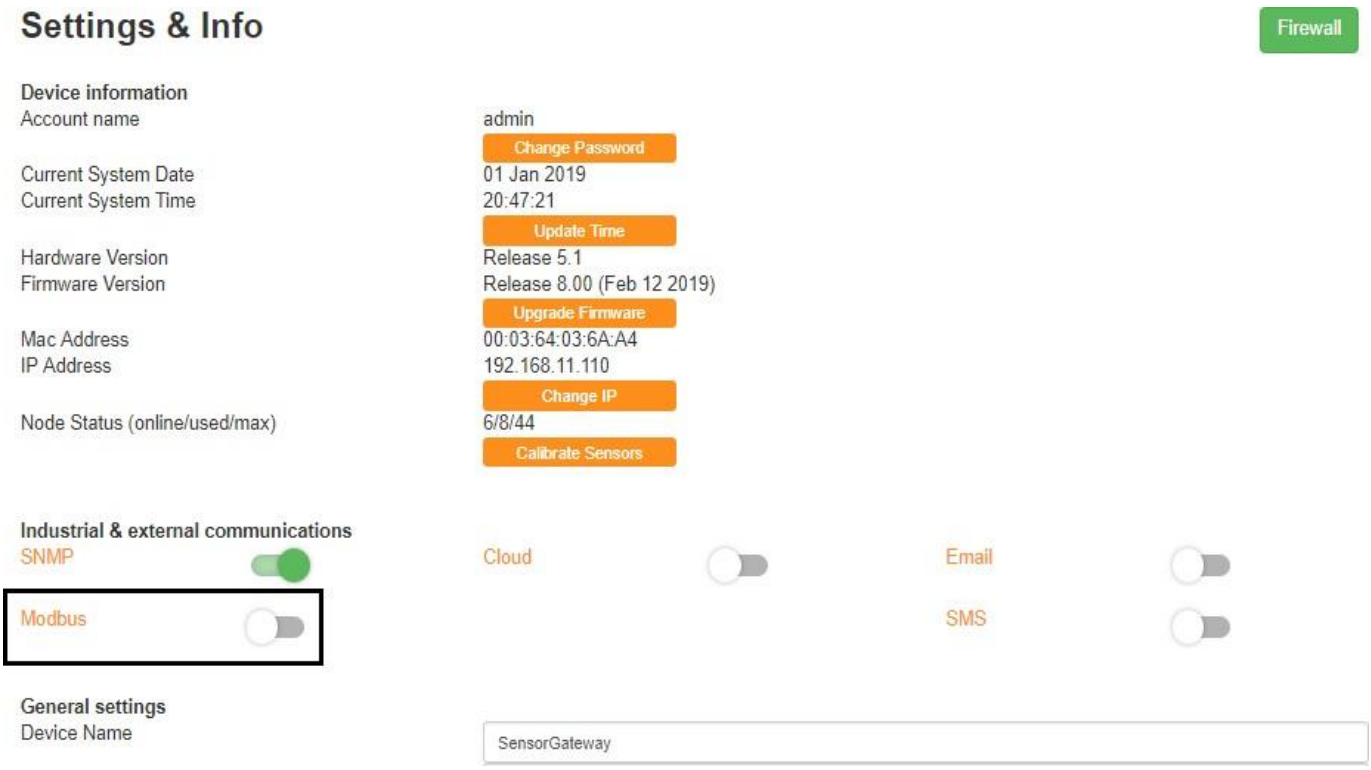
Default Modbus Port – 502
Supports 1 Modbus TCP Master

2.2 Enabling Modbus TCP

Modbus TCP is disabled by default.

We invite you to watch the unboxing video before unpacking, installing and configuring your ServersCheck sensors: https://serverscheck.com/sensors/sensorgateway_unboxing_video.asp

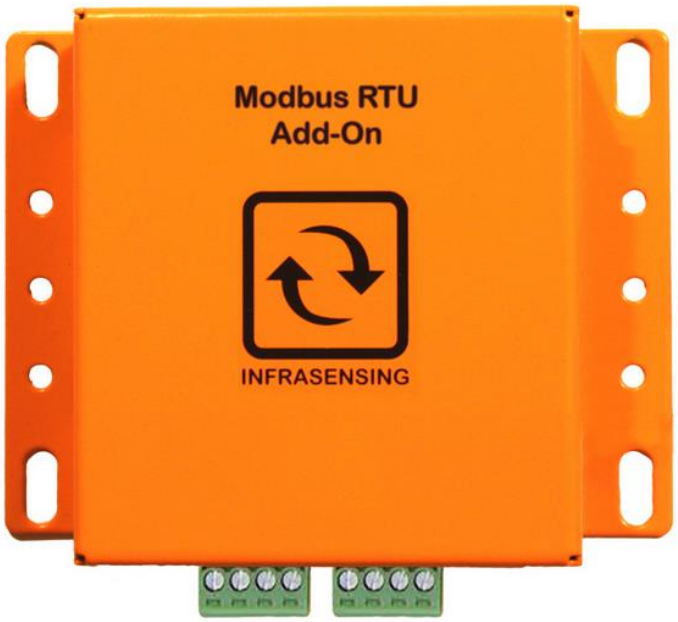
Once you set up the web interface, you should see the Modbus Tab under the Settings option. (For Firmware 8.0 and above)



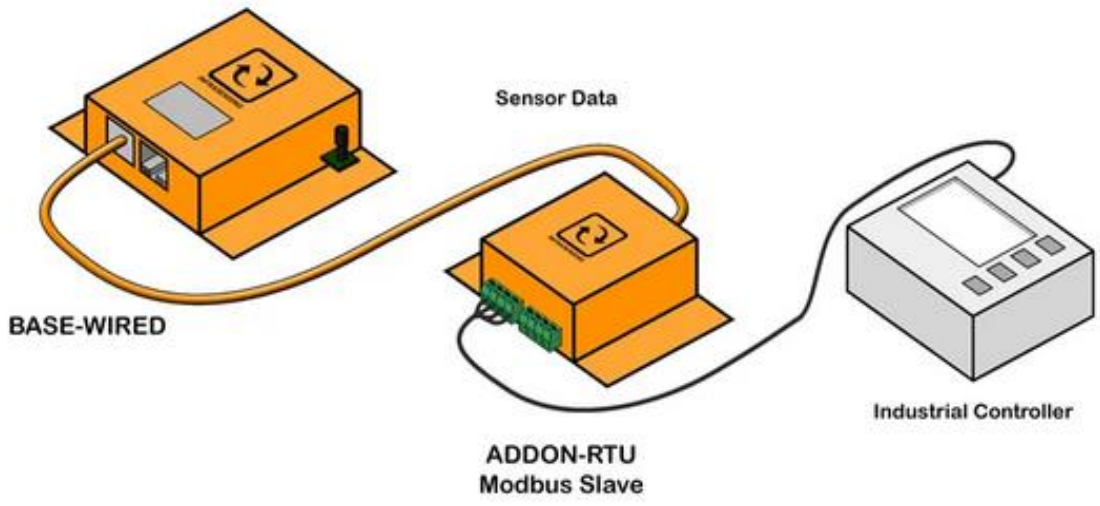
Enable Modbus Server, set up the Server Port (Default is 502) and set Modbus ID (default is 1).

2.3 Optional Modbus RTU

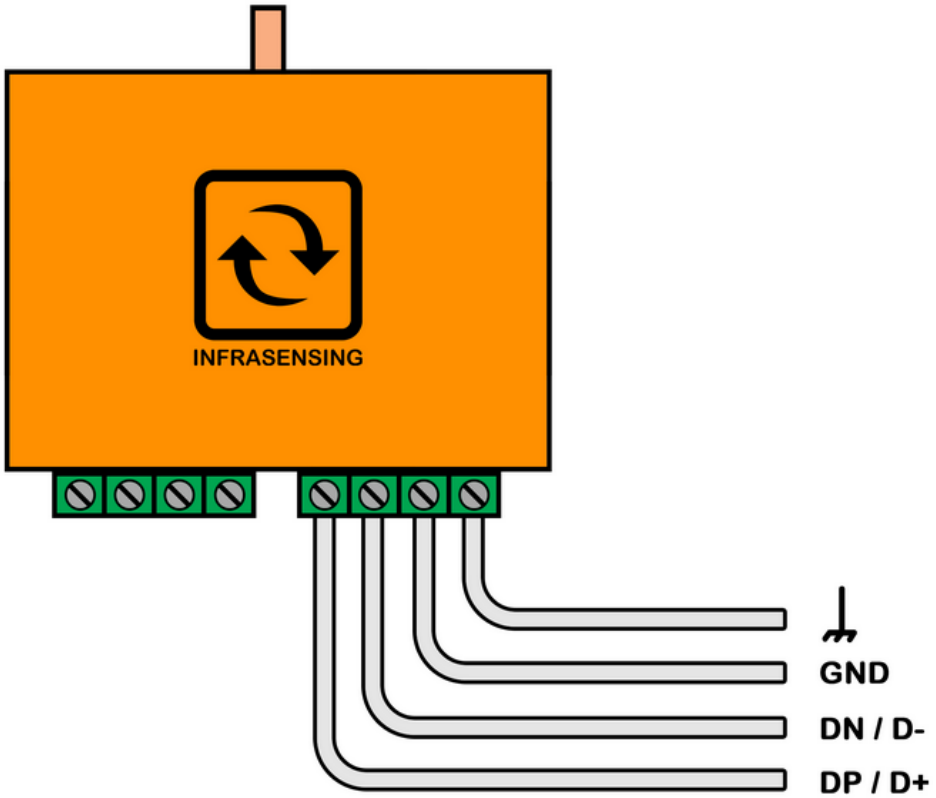
The Modbus RTU enables integration of RS-485 industrial control systems, which expands our solutions compatibility further.



The Add-On connects like a typical sensor to any of the external sensor ports of our SensorGateway (BASE-WIRED) or our Expansion hubs (EXP-8HUB/EXP-4HUB) and then your controller is connected to the RTU Add-On via RS-485



Below is an image of the wiring diagram for us to connect our control



Just match the connection from your RS-485 going to our Modbus RTU Add-On

2.4 Enabling your Modbus RTU

We would first need to be in firmware 8.6 or above for the Modbus RTU addon to work, then once we access the settings page on our SensorGateway we would see an additional option called Modbus Slave Add-On

After clicking on the link , you would then see the page as seen on the image below

Set the Parameters for your Modbus RTU connection

Slave ID – Identification of your device
Baud Rate – Multiple options for Baud rate with default 9600
Stop Bits – 1 or 2
Parity – Odd or Even

The Industrial controller should have the same set up as your Modbus RTU so they can establish connection.

3 Supported Registers

Coils (Discrete Outputs) - 00001 to 09999 (Read/Write)

Input Status - 10001 to 19999 (Read)

Input Registers - 30001 to 39999 (Read)

Holding Registers - 40001 to 49999 (Read/Write)

Code	Function	Description
01	Read Coils	Read from1 to 2000 contiguous status of coils managed by the server. Coils in the response message are packed as one per bitof a byte, 1=On and 0=Off. If the requested quantity of coils is not a multiple of 8, zeros are padded in the final byte.
02	Read Input Status	Read from 1 to 2000 contiguous input status managed by the serv- er. Discrete inputs in the response message are packed as one per bit of a byte, 1=On and 0=Off. If the requested number of inputs is not a multiple of 8, zeros are padded in the final byte.
03	Read Holding Registers	Read the contents of the continuous block of 1 to 127 holding registers. Data are packed as two bytes per register; the first byte contains the high order bits.

04	Read InputRegisters	Read the contents of contiguous block of 1 to 127 Input registers. Data are packed as two bytes per register; the first byte contains the high order bits.
16	Set Multiple Registers	Write values into a block of contiguous registers (1 to 120)

4 Function Codes Supported

Exception Code	Name	Meaning
1 (01 hex)	Illegal Function	The function code received in the query is not an allowable action for the slave. This may be because the function code is only applicable to newer devices, and was not implemented in the unit selected. It could also indicate that the slave is in the wrong state to process a request of this type, for example because it is unconfigured and is being asked to return register values. If a Poll Program Complete command was issued, this code indicates that no program function preceded it.
2 (02 hex)	Illegal Data Address	The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid. For a controller with 100 registers, a request with offset 96 and length 4 would succeed, a request with offset 96 and length 5 will generate exception 02.

3 (03 hex)	Illegal Data Value	A value contained in the query data field is not an allowable value for the slave. This indicates a fault in the structure of remainder of a com- plex request, such as that the im- plied length is incorrect. It specifical- ly does NOT mean that a data item submitted for storage in a register has a value outside the expectation of the application program, since the MODBUS protocol is unaware of the significance of any particular value of any particular register.
4 (04 hex)	Slave DeviceFailure	An unrecoverable error occurred while the slave was attempting to perform the requested action.

5 Error codes supported

5 (05 hex)	Acknowledge	Specialized use in conjunction with programming commands. The slave has accepted the request and is processing it, but a long duration of time will be required to do so. This response is returned to prevent a timeout error from occurring in the master. The master can next issue a Poll Program Complete message to determine if processing is completed
6 (06 hex)	Slave Device Busy	Specialized use in conjunction with programming commands. The slave is engaged in processing a long duration program command. The master should retransmit the message later when the slave is free.
7 (07 hex)	Negative Acknowledge	The slave cannot perform the program function received in the query. This code is returned for an unsuccessful programming request using function code 13 or 14 decimal. The master should request diagnostic or error information from the slave.
8 (08 hex)	Memory Parity Error	Specialized use in conjunction with function codes 20 and 21 and reference type 6, to indicate that the extended file area failed to pass a consistency check. The slave attempted to read extended memory or record file, but detected a parity error in memory. The master can retry the request, but service may be required on the slave device.
10 (0A hex)	Gateway Path Unavailable	Specialized use in conjunction with gateways, indicates that the gateway was unable to allocate an internal communication path from the input port to the output port for processing the request. Usually means the gateway is misconfigured or overloaded.

11 (0B hex)	Gateway Target Device Failed to Respond	Specialized use in conjunction with gateways, indicates that no response was obtained from the target device. Usually means that the device is not present on the network.

6 Modbus Register List

6.1 SensorGateway with Sensorhub Register List

Things to remember:

* The built-in Temperature Sensor of the SensorGateway is always on Node 0.

* For Firmware 7.41 and above, Internal Ping is always on Node 1. Even if the Ping is disabled, it still picks the last value before you disabled it.

Wired Temperature and Humidity Sensor Probe has 3 node values which appear as follows:
1st node value - Temperature
2nd node value - Humidity
3rd node value - Dewpoint

Node numbers follows as to what Sensor is plugged first on the Sensor Ports or what is shown first on the web interface.

If a particular sensor connected has an alarm on the Warning and Down Range, it will trigger the register either for Alarm Warning or Alarm Down respectively regardless of either the value is less than (<) or the value is greater than (>) than the threshold.

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 0 Value			30200-30201		
Length = 3, Unsigned	Node 0 State	10200				0 - Offline, 1 - Online

Length = 4, Unsigned	Node 0 Type			30202		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 0 Connection			30203		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 0 in Alarm Down	10201				
Length = 3, Unsigned	Node 0 in Alarm Warning	10202				
Length = 8, Floating	Node 0 Threshold High Down				40200-40201	
Length = 8, Floating	Node 0 Threshold High Warning				40202-40203	
Length = 8, Floating	Node 0 Threshold Low Down				40204-40205	
Length = 8, Floating	Node 0 Threshold Low Warning				40206-40207	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 1 Value			30232-30233		
Length = 3, Unsigned	Node 1 State	10232				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 1 Type			30234		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2

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Length = 4, Unsigned	Node 1 Connection			30235		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 1 in Alarm Down	10233				
Length = 3, Unsigned	Node 1 in Alarm Warning	10234				

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 8, Floating	Node 1 Threshold High Down				40232-40233	
Length = 8, Floating	Node 1 Threshold High Warning				40234-40235	
Length = 8, Floating	Node 1 Threshold Low Down				40236-40237	
Length = 8, Floating	Node 1 Threshold Low Warning				40238-40239	

Length = 4, Floating	Node 2 Value			30264-30265		
Length = 3, Unsigned	Node 2 State	10264				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 2 Type			30266		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 2 Connection			30267		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 2 in Alarm Down	10265				
Length = 3, Unsigned	Node 2 in Alarm Warning	10266				
Length = 8, Floating	Node 2 Threshold High Down				40264-40265	
Length = 8, Floating	Node 2 Threshold High Warning				40266-40267	
Length = 8, Floating	Node 2 Threshold Low Down				40268-40269	
Length = 8, Floating	Node 2 Threshold Low Warning				40270-40271	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:

Length = 4, Floating	Node 3 Value			30296-30297		
Length = 3, Unsigned	Node 3 State	10296				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 3 Type			30298		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 3 Connection			30299		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 3 in Alarm Down	10297				
Length = 3, Unsigned	Node 3 in Alarm Warning	10298				
Length = 8, Floating	Node 3 Threshold High Down				40296-40297	
Length = 8, Floating	Node 3 Threshold High Warning				40298-40299	
Length = 8, Floating	Node 3 Threshold Low Down				40300-40301	
Length = 8, Floating	Node 3 Threshold Low Warning				40302-40303	

Length = 4, Floating	Node 4 Value			30328-30329		
Length = 3, Unsigned	Node 4 State	10328				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 4 Type			30330		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
						30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 4 Connection			30331		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 4 in Alarm Down	10329				
Length = 3, Unsigned	Node 4 in Alarm Warning	10230				
Length = 8, Floating	Node 4 Threshold High Down				40328-40329	
Length = 8, Floating	Node 4 Threshold High Warning				40330-40331	
Length = 8, Floating	Node 4 Threshold Low Down				40332-40333	
Length = 8, Floating	Node 4 Threshold Low Warning				40334-40335	

Length = 4, Floating	Node 5 Value			30360-30361		
Length = 3, Unsigned	Node 5 State	10360				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 5 Type			30362		- Temperature - Humidity - Airflow - Shock - Dust - Sound Pressure - Power Failure nsor - Leak) - CO - Air Pressure - Door Contact curity - Dewpoint - Fuel Level (Fuel vel Sensor) - Flow Rate (Fuel vel Sensor) - Resistance - TVOC - CO2 - Motion - Smoke - Light - Volt (AC/DC wer Sensor) - Amp (AC/DC wer Sensor) - Watt (AC/DC wer Sensor) - WattHour C/DC Power nsor) - Ping - H2 - Voltage Status - THD - Frequency - Location and stance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 5 Connection			30363		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 5 in Alarm Down	10361				
Length = 3, Unsigned	Node 5 in Alarm Warning	10362				
Length = 8, Floating	Node 5 Threshold High Down				40360-40361	
Length = 8, Floating	Node 5 Threshold High Warning				40362-40363	
Length = 8, Floating	Node 5 Threshold Low Down				40364-40365	
Length = 8, Floating	Node 5 Threshold Low Warning				40366-40367	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:

Length = 4, Floating	Node 6 Value			30392-30393		
Length = 3, Unsigned	Node 6 State	10392				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 6 Type			30394		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

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Length = 4, Unsigned	Node 6 Connection			30395		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 6 in Alarm Down	10393				
Length = 3, Unsigned	Node 6 in Alarm Warning	10394				
Length = 8, Floating	Node 6 Threshold High Down				40392-40393	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 8, Floating	Node 6 Threshold High Warning				40394-40395	
Length = 8, Floating	Node 6 Threshold Low Down				40396-40397	
Length = 8, Floating	Node 6 Threshold Low Warning				40398-40399	

Length = 4, Floating	Node 7 Value			30424-30425		
Length = 3, Unsigned	Node 7 State	10424				0 - Offline, 1 - Online

Length = 4, Unsigned	Node 7 Type			30426		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 7 Connection			30427		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 7 in Alarm Down	10425				
Length = 3, Unsigned	Node 7 in Alarm Warning	10426				
Length = 8, Floating	Node 7 Threshold High Down				40424-40425	
Length = 8, Floating	Node 7 Threshold High Warning				40426-40427	
Length = 8, Floating	Node 7 Threshold Low Down				40428-40429	
Length = 8, Floating	Node 7 Threshold Low Warning				40430-40431	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:

Length = 4, Floating	Node 8 Value			30456-30457		
Length = 3, Unsigned	Node 8 State	10456				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 8 Type			30458		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length = 4, Unsigned	Node 8 Connection			30459		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 8 in Alarm Down	10457				
Length = 3, Unsigned	Node 8 in Alarm Warning	10458				
Length = 8, Floating	Node 8 Threshold High Down				40456-40457	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 8, Floating	Node 8 Threshold High Warning				40458-40459	
Length = 8, Floating	Node 8 Threshold Low Down				40460-40461	
Length = 8, Floating	Node 8 Threshold Low Warning				40462-40463	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 9 Value			30488-30489		
Length = 3, Unsigned	Node 9 State	10488				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 9 Type			30490		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

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Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 9 Connection			30491		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 9 in Alarm Down	10489				
Length = 3, Unsigned	Node 9 in Alarm Warning	10490				
Length = 8, Floating	Node 9 Threshold High Down				40488-40489	
Length = 8, Floating	Node 9 Threshold High Warning				40490-40491	
Length = 8, Floating	Node 9 Threshold Low Down				40492-40493	
Length = 8, Floating	Node 9 Threshold Low Warning				40494-40495	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 10 Value			30520-30521		
Length = 3, Unsigned	Node 10 State	10520				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 10 Type			30522		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

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Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 10 Connection			30523		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 10 in Alarm Down	10521				
Length = 3, Unsigned	Node 10 in Alarm Warning	10522				
Length = 8, Floating	Node 10 Threshold High Down				40520-40521	
Length = 8, Floating	Node 10 Threshold High Warning				40522-40523	
Length = 8, Floating	Node 10 Threshold Low Down				40524-40525	
Length = 8, Floating	Node 10 Threshold Low Warning				40526-40527	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 11 Value			30552-30553		
Length = 3, Unsigned	Node 11 State	10552				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 11 Type			30554		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 11 Connection			30555		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 11 in Alarm Down	10553				
Length = 3, Unsigned	Node 11 in Alarm Warning	10554				
Length = 8, Floating	Node 11 Threshold High Down				40552-40553	
Length = 8, Floating	Node 11 Threshold High Warning				40554-40555	
Length = 8, Floating	Node 11 Threshold Low Down				40556-40557	
Length = 8, Floating	Node 11 Threshold Low Warning				40558-40559	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 12 Value			30584-30585		
Length = 3, Unsigned	Node 12 State	10584				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 12 Type			30586		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 12 Connection			30587		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 12 in Alarm Down	10585				
Length = 3, Unsigned	Node 12 in Alarm Warning	10586				
Length = 8, Floating	Node 12 Threshold High Down				40584-40585	
Length = 8, Floating	Node 12 Threshold High Warning				40586-40587	
Length = 8, Floating	Node 12 Threshold Low Down				40588-40589	
Length = 8, Floating	Node 12 Threshold Low Warning				40590-40591	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 13 Value			30616-30617		
Length = 3, Unsigned	Node 13 State	10616				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 13 Type			30618		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 13 Connection			30619		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 13 in Alarm Down	10617				
Length = 3, Unsigned	Node 13 in Alarm Warning	10618				
Length = 8, Floating	Node 13 Threshold High Down				40616-40617	
Length = 8, Floating	Node 13 Threshold High Warning				40618-40619	
Length = 8, Floating	Node 13 Threshold Low Down				40620-40621	
Length = 8, Floating	Node 13 Threshold Low Warning				40622-40623	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 14 Value			30648-30649		
Length = 3, Unsigned	Node 14 State	10648				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 14 Type			30650		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 14 Connection			30651		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 14 in Alarm Down	10649				
Length = 3, Unsigned	Node 14 in Alarm Warning	10650				
Length = 8, Floating	Node 14 Threshold High Down				40648-40649	
Length = 8, Floating	Node 14 Threshold High Warning				40650-40651	
Length = 8, Floating	Node 14 Threshold Low Down				40652-40653	
Length = 8, Floating	Node 14 Threshold Low Warning				40654-40655	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 15 Value			30680-30681		
Length = 3, Unsigned	Node 15 State	10680				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 15 Type			30682		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 15 Connection			30683		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 15 in Alarm Down	10681				
Length = 3, Unsigned	Node 15 in Alarm Warning	10682				
Length = 8, Floating	Node 15 Threshold High Down				40680-40681	
Length = 8, Floating	Node 15 Threshold High Warning				40682-40683	
Length = 8, Floating	Node 15 Threshold Low Down				40684-40685	
Length = 8, Floating	Node 15 Threshold Low Warning				40686-40687	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 16 Value			30712-30713		
Length = 3, Unsigned	Node 16 State	10712				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 16 Type			30714		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 16 Connection			30715		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 16 in Alarm Down	10713				
Length = 3, Unsigned	Node 16 in Alarm Warning	10714				
Length = 8, Floating	Node 16 Threshold High Down				40712-40713	
Length = 8, Floating	Node 16 Threshold High Warning				40714-40715	
Length = 8, Floating	Node 16 Threshold Low Down				40716-40717	
Length = 8, Floating	Node 16 Threshold Low Warning				40718-40719	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 17 Value			30744-30745		
Length = 3, Unsigned	Node 17 State	10744				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 17 Type			30746		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
						33- Location and Distance

Length = 4, Unsigned	Node 17 Connection			30747		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 17 in Alarm Down	10745				

Length = 3, Unsigned	Node 17 in Alarm Warning	10746				
Length = 8, Floating	Node 17 Threshold High Down				40744-40745	
Length = 8, Floating	Node 17 Threshold High Warning				40746-40747	
Length = 8, Floating	Node 17 Threshold Low Down				40748-40749	
Length = 8, Floating	Node 17 Threshold Low Warning				40750-40751	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 18 Value			30776-30777		
Length = 3, Unsigned	Node 18 State	10776				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 18 Type			30778		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 18 Connection			30779		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 18 in Alarm Down	10777				
Length = 3, Unsigned	Node 18 in Alarm Warning	10778				
Length = 8, Floating	Node 18 Threshold High Down				40776-40777	
Length = 8, Floating	Node 18 Threshold High Warning				40778-40779	
Length = 8, Floating	Node 18 Threshold Low Down				40780-40781	
Length = 8, Floating	Node 18 Threshold Low Warning				40782-40783	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 19 Value			30808-30809		
Length = 3, Unsigned	Node 19 State	10808				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 19 Type			30810		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 19 Connection			30811		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 19 in Alarm Down	10809				
Length = 3, Unsigned	Node 19 in Alarm Warning	10810				
Length = 8, Floating	Node 19 Threshold High Down				40808-40809	
Length = 8, Floating	Node 19 Threshold High Warning				40810-40811	
Length = 8, Floating	Node 19 Threshold Low Down				40812-40813	
Length = 8, Floating	Node 19 Threshold Low Warning				40814-40815	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 20 Value			30840-30841		
Length = 3, Unsigned	Node 20 State	10840				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 20 Type			30842		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 20 Connection			30843		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 20 in Alarm Down	10841				
Length = 3, Unsigned	Node 20 in Alarm Warning	10842				
Length = 8, Floating	Node 20 Threshold High Down				40840-40841	
Length = 8, Floating	Node 20 Threshold High Warning				40842-40843	
Length = 8, Floating	Node 20 Threshold Low Down				40844-40845	
Length = 8, Floating	Node 20 Threshold Low Warning				40846-40847	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 21 Value			30872-30873		
Length = 3, Unsigned	Node 21 State	10872				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 21 Type			30874		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 21 Connection			30875		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 21 in Alarm Down	10873				
Length = 3, Unsigned	Node 21 in Alarm Warning	10874				
Length = 8, Floating	Node 21 Threshold High Down				40872-40873	
Length = 8, Floating	Node 21 Threshold High Warning				40874-40875	
Length = 8, Floating	Node 21 Threshold Low Down				40876-40877	
Length = 8, Floating	Node 21 Threshold Low Warning				40878-40879	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:

Length = 4, Floating	Node 22 Value			30904-30905		
Length = 3, Unsigned	Node 22 State	10904				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 22 Type			30906		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 22 Connection			30907		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 22 in Alarm Down	10905				
Length = 3, Unsigned	Node 22 in Alarm Warning	10906				
Length = 8, Floating	Node 22 Threshold High Down				40904-40905	
Length = 8, Floating	Node 22 Threshold High Warning				40906-40907	
Length = 8, Floating	Node 22 Threshold Low Down				40908-40909	
Length = 8, Floating	Node 22 Threshold Low Warning				40910-40911	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 23 Value			30936-30937		
Length = 3, Unsigned	Node 23 State	10936				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 23 Type			30938		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
						Status 31 - THD 32 - Frequency 33- Location and Distance

Length = 4, Unsigned	Node 23 Connection			30939		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 23 in Alarm Down	10937				
Length = 3, Unsigned	Node 23 in Alarm Warning	10938				
Length = 8, Floating	Node 23 Threshold High Down				40936-40937	
Length = 8, Floating	Node 23 Threshold High Warning				40938-40939	
Length = 8, Floating	Node 23 Threshold Low Down				40940-40941	
Length = 8, Floating	Node 23 Threshold Low Warning				40942-40943	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 24 Value			30968-30969		
Length = 3, Unsigned	Node 24 State	10968				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 24 Type			30970		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance 26

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 24 Connection			30971		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 24 in Alarm Down	10969				
Length = 3, Unsigned	Node 24 in Alarm Warning	10970				
Length = 8, Floating	Node 24 Threshold High Down				40968-40969	
Length = 8, Floating	Node 24 Threshold High Warning				40970-40971	
Length = 8, Floating	Node 24 Threshold Low Down				40972-40973	
Length = 8, Floating	Node 24 Threshold Low Warning				40974-40975	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 25 Value			31000-31001		
Length = 3, Unsigned	Node 25 State	11000				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 25 Type			31002		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 25 Connection			31003		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 25 in Alarm Down	11001				
Length = 3, Unsigned	Node 25 in Alarm Warning	11002				
Length = 8, Floating	Node 25 Threshold High Down				41000-41001	
Length = 8, Floating	Node 25 Threshold High Warning				41002-41003	
Length = 8, Floating	Node 25 Threshold Low Down				41004-41005	
Length = 8, Floating	Node 25 Threshold Low Warning				41006-41007	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 26 Value			31032-31033		
Length = 3, Unsigned	Node 26 State	11032				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 26 Type			31034		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 26 Connection			31035		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 26 in Alarm Down	11033				
Length = 3, Unsigned	Node 26 in Alarm Warning	11034				
Length = 8, Floating	Node 26 Threshold High Down				41032-41033	
Length = 8, Floating	Node 26 Threshold High Warning				41034-41035	
Length = 8, Floating	Node 26 Threshold Low Down				41036-41037	
Length = 8, Floating	Node 26 Threshold Low Warning				41038-41039	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 27 Value			31064-31065		
Length = 3, Unsigned	Node 27 State	11064				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 27 Type			31066		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 27 Connection			31067		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 27 in Alarm Down	11065				
Length = 3, Unsigned	Node 27 in Alarm Warning	11066				
Length = 8, Floating	Node 27 Threshold High Down				41064-41065	
Length = 8, Floating	Node 27 Threshold High Warning				41066-41067	
Length = 8, Floating	Node 27 Threshold Low Down				41068-41069	
Length = 8, Floating	Node 27 Threshold Low Warning				41070-41071	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:

Length = 4, Floating	Node 28 Value			31096-31097		
Length = 3, Unsigned	Node 28 State	11096				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 28 Type			31098		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 28 Connection			31099		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 28 in Alarm Down	11097				
Length = 3, Unsigned	Node 28 in Alarm Warning	11098				
Length = 8, Floating	Node 28 Threshold High Down				41096-41097	
Length = 8, Floating	Node 28 Threshold High Warning				41098-41099	
Length = 8, Floating	Node 28 Threshold Low Down				41100-41101	
Length = 8, Floating	Node 28 Threshold Low Warning				41102-41103	

Length = 4, Floating	Node 29 Value			31128-31129		
Length = 3, Unsigned	Node 29 State	11128				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 29 Type			31130		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 29 Connection			31131		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 29 in Alarm Down	11129				
Length = 3, Unsigned	Node 29 in Alarm Warning	11130				
Length = 8, Floating	Node 29 Threshold High Down				41128-41129	
Length = 8, Floating	Node 29 Threshold High Warning				41130-41131	
Length = 8, Floating	Node 29 Threshold Low Down				41132-41133	
Length = 8, Floating	Node 29 Threshold Low Warning				41134-41135	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 30 Value			31160-31161		
Length = 3, Unsigned	Node 30 State	11160				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 30 Type			31162		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 30 Connection			31163		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 30 in Alarm Down	11161				
Length = 3, Unsigned	Node 30 in Alarm Warning	11162				
Length = 8, Floating	Node 30 Threshold High Down				41160-41161	
Length = 8, Floating	Node 30 Threshold High Warning				41162-41163	
Length = 8, Floating	Node 30 Threshold Low Down				41164-41165	
Length = 8, Floating	Node 30 Threshold Low Warning				41166-41167	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 31 Value			31192-31193		
Length = 3, Unsigned	Node 31 State	11192				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 31 Type			31194		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 30 Connection			31163		2 - Gateway, 3 - Sensor Hub
Length = 3, Unsigned	Node 30 in Alarm Down	11161				
Length = 3, Unsigned	Node 30 in Alarm Warning	11162				
Length = 8, Floating	Node 30 Threshold High Down				41160-41161	
Length = 8, Floating	Node 30 Threshold High Warning				41162-41163	
Length = 8, Floating	Node 30 Threshold Low Down				41164-41165	
Length = 8, Floating	Node 30 Threshold Low Warning				41166-41167	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 31 Value			31192-31193		
Length = 3, Unsigned	Node 31 State	11192				2 - Offline, 3 - Online
Length = 4, Unsigned	Node 31 Type			31194		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency

						33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 31 Connection			31195		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 31 in Alarm Down	11193				
Length = 3, Unsigned	Node 31 in Alarm Warning	11194				
Length = 8, Floating	Node 31 Threshold High Down				41192-41193	
Length = 8, Floating	Node 31 Threshold High Warning				41194-41195	
Length = 8, Floating	Node 31 Threshold Low Down				41196-41197	
Length = 8, Floating	Node 31 Threshold Low Warning				41198-41199	

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 32 Value			31224-31225		
Length = 3, Unsigned	Node 32 State	11224				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 32 Type			31226		1 - Temperature 2 - Humidity 3 - Airflow 4 - Shock 5 - Dust 7 - Sound Pressure 8 - Power Failure Sensor 9 - Leak 10 - CO 11 - Air Pressure 12 - Door Contact Security 13 - Dewpoint 14 - Fuel Level (Fuel Level Sensor) 15 - Flow Rate (Fuel Level Sensor) 16 - Resistance 17 - TVOC 18 - CO2 19 - Motion 20 - Smoke 21 - Light 24 - Volt (AC/DC Power Sensor) 25 - Amp (AC/DC Power Sensor) 26 - Watt (AC/DC Power Sensor) 27 - WattHour (AC/DC Power Sensor) 28 - Ping 29 - H2 30- Voltage Status 31 - THD 32 - Frequency 33- Location and Distance

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Node 32 Connection			31227		0 - Gateway, 1 - Sensor Hub
Length = 3, Unsigned	Node 32 in Alarm Down	11225				
Length = 3, Unsigned	Node 32 in Alarm Warning	11226				
Length = 8, Floating	Node 32 Threshold High Down				41224-41225	
Length = 8, Floating	Node 32 Threshold High Warning				41226-41227	
Length = 8, Floating	Node 32 Threshold Low Down				41228-41229	
Length = 8, Floating	Node 32 Threshold Low Warning				41230-41231	

7 SensorHub Input Register List

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Input 1 State			30001		
Length = 4, Unsigned	Input 1 in Alarm	10001				
Length = 4, Unsigned	Input 1 Control		1			
Length = 4, Unsigned	Input 2 State			30002		
Length = 4, Unsigned	Input 2 in Alarm	10002				
Length = 4, Unsigned	Input 2 Control		2			
Length = 4, Unsigned	Input 3 State			30003		
Length = 4, Unsigned	Input 3 in Alarm	10003				
Length = 4, Unsigned	Input 3 Control		3			
Length = 4, Unsigned	Input 4 State			30004		
Length = 4, Unsigned	Input 4 in Alarm	10004				
Length = 4, Unsigned	Input 4 Control		4			

8 SensorHub Output Register List

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Output 1 State			30100		0 - Off, 1 - On
Length = 4, Unsigned	Output 1 in Alarm	10100				0 - Off, 1 - On
Length = 4, Unsigned	Output 1 Control		100			0 - Off, 1 - On
Length = 4, Unsigned	Output 2 State			30101		0 - Off, 1 - On
Length = 4, Unsigned	Output 2 in Alarm	10101				0 - Off, 1 - On
Length = 4, Unsigned	Output 2 Control		101			0 - Off, 1 - On
Length = 4, Unsigned	Output 3 State			30102		0 - Off, 1 - On
Length = 4, Unsigned	Output 3 in Alarm	10102				0 - Off, 1 - On
Length = 4, Unsigned	Output 3 Control		102			0 - Off, 1 - On
Length = 4, Unsigned	Output 4 State			30103		0 - Off, 1 - On
Length = 4, Unsigned	Output 4 in Alarm	10103				0 - Off, 1 - On
Length = 4, Unsigned	Output 4 Control		103			0 - Off, 1 - On

9 Sensorhub Relay Register List

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 2, Unsigned	Relay 1 State			30150		0 - Off, 1 - On
Length = 2, Unsigned	Relay 1 in Alarm	10150				0 - Off, 1 - On
Length = 2, Unsigned	Relay 1 Control		150			0 - Off, 1 - On
Length = 2, Unsigned	Relay 2 State			30151		0 - Off, 1 - On
Length = 2, Unsigned	Relay 2 in Alarm	10151				0 - Off, 1 - On
Length = 2, Unsigned	Relay 2 Control		151			0 - Off, 1 - On

10 I/O Sensor Probe Input Register List

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 16, Unsigned	Input 1 State			30001		0 - Open, 1 - Close
Length = 16, Unsigned	Input 1 in Alarm	10001				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 2 State			30002		0 - Open, 1 - Close
Length = 16, Unsigned	Input 2 in Alarm	10002				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 3 State			30003		0 - Open, 1 - Close
Length = 16, Unsigned	Input 3 in Alarm	10003				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 4 State			30004		0 - Open, 1 - Close
Length = 16, Unsigned	Input 4 in Alarm	10004				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 5 State			30005		0 - Open, 1 - Close
Length = 16, Unsigned	Input 5 in Alarm	10005				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 6 State			30006		0 - Open, 1 - Close
Length = 16, Unsigned	Input 6 in Alarm	10006				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 7 State			30007		0 - Open, 1 - Close
Length = 16, Unsigned	Input 7 in Alarm	10007				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 8 State			30008		0 - Open, 1 - Close
Length = 16, Unsigned	Input 8 in Alarm	10008				0 - Ok, 1 - Triggered

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 16, Unsigned	Input 9 State			30009		0 - Open, 1 - Close
Length = 16, Unsigned	Input 9 in Alarm	10009				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 10 State			30010		0 - Open, 1 - Close
Length = 16, Unsigned	Input 10 in Alarm	10010				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 11 State			30011		0 - Open, 1 - Close
Length = 16, Unsigned	Input 11 in Alarm	10011				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 12 State			30012		0 - Open, 1 - Close
Length = 16, Unsigned	Input 12 in Alarm	10012				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 13 State			30013		0 - Open, 1 - Close
Length = 16, Unsigned	Input 13 in Alarm	10013				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 14 State			30014		0 - Open, 1 - Close
Length = 16, Unsigned	Input 14 in Alarm	10014				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 15 State			30015		0 - Open, 1 - Close
Length = 16, Unsigned	Input 15 in Alarm	10015				0 - Ok, 1 - Triggered
Length = 16, Unsigned	Input 16 State			30016		0 - Open, 1 - Close
Length = 16, Unsigned	Input 16 in Alarm	10016				0 - Ok, 1 - Triggered

11 I/O Sensor Probe Output Register List

Length and Type	DataLabel	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Unsigned	Output 1 State			30100		0 - off, 1 - on
Length = 4, Unsigned	Output 1 in Alarm	10100				0 - off, 1 - on
Length = 4, Unsigned	Output 1 Control		100			0 - off, 1 - on
Length = 4, Unsigned	Output 2 State			30101		0 - off, 1 - on
Length = 4, Unsigned	Output 2 in Alarm	10101				0 - off, 1 - on
Length = 4, Unsigned	Output 2 Control		101			0 - off, 1 - on
Length = 4, Unsigned	Output 3 State			30102		0 - off, 1 - on
Length = 4, Unsigned	Output 3 in Alarm	10102				0 - off, 1 - on
Length = 4, Unsigned	Output 3 Control		102			0 - off, 1 - on
Length = 4, Unsigned	Output 4 State			30103		0 - off, 1 - on
Length = 4, Unsigned	Output 4 in Alarm	10103				0 - off, 1 - on
Length = 4, Unsigned	Output 4 Control		103			0 - off, 1 - on