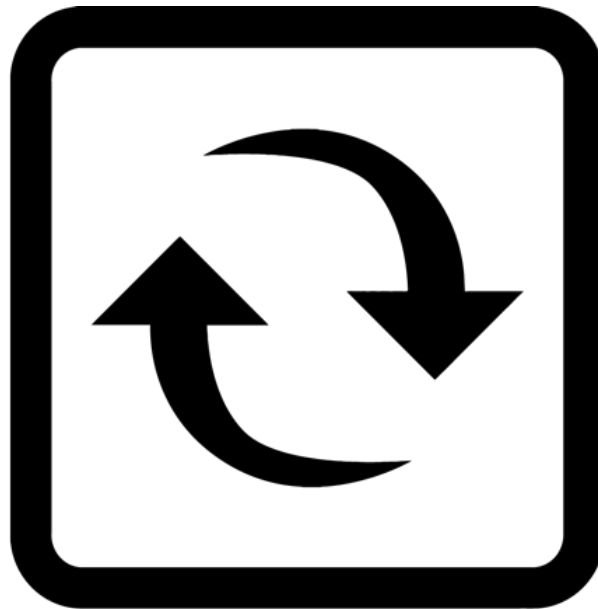# MODBUS
USER MANUAL

INFRASENSING

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Table of Contents

1 InfraSensing Sensors Compatibility

1.1 Connectivity to InfraSensing Base Unit 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 Base Unit.

Every Base Unit has a built-in Temperature probe, Modbus point 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.

Node 41, 42, 43 and 44 is dedicated to Fault sensors.

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 Base Unit Compatibility

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

2 Getting Started

2.1 Connectivity to InfraSensing Base Unit using Modbus TCP

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

Default Modbus Port – 502
With the firmware 9.2 and above, Base Unit Modbus TCP can now be polled by 4 Modbus masters.

2.2 Connectivity to InfraSensing Base Unit using Modbus TCP

Modbus TCP is disabled by default.

We invite you to watch the unboxing video before unpacking, installing and configuring your InfraSensing sensors: https://serverscheck.infrasensing.com/sensors/how-it-works.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 Base Unit (BASE-XX) or our Expansion hubs (EXP-8HUB/EXP-4HUB) and then your controller is connected to the RTU Add-On via RS-485
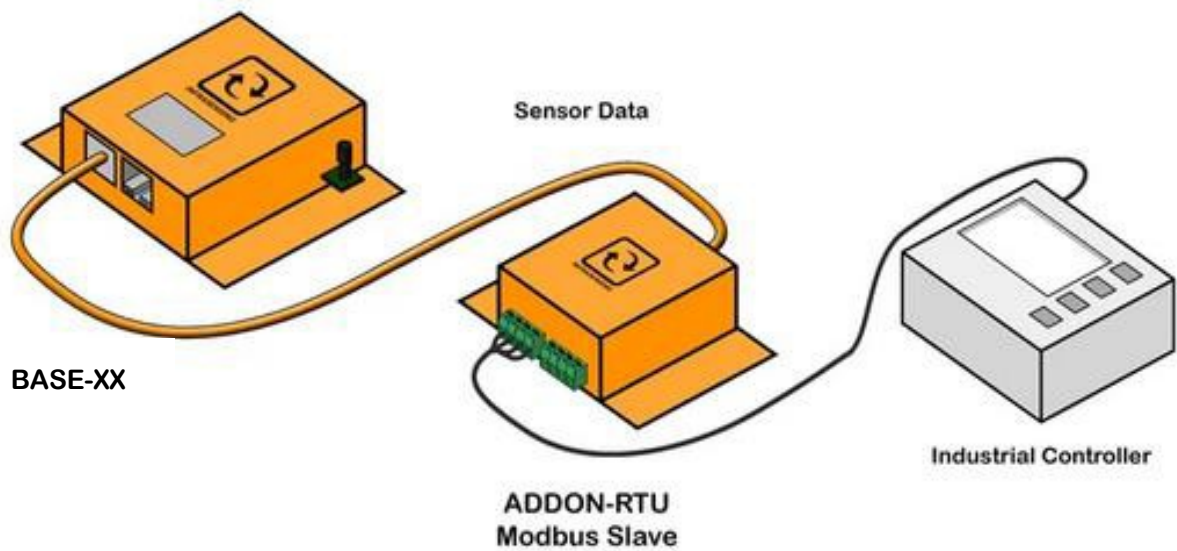
Below is an image of the wiring diagram for us to connect our control
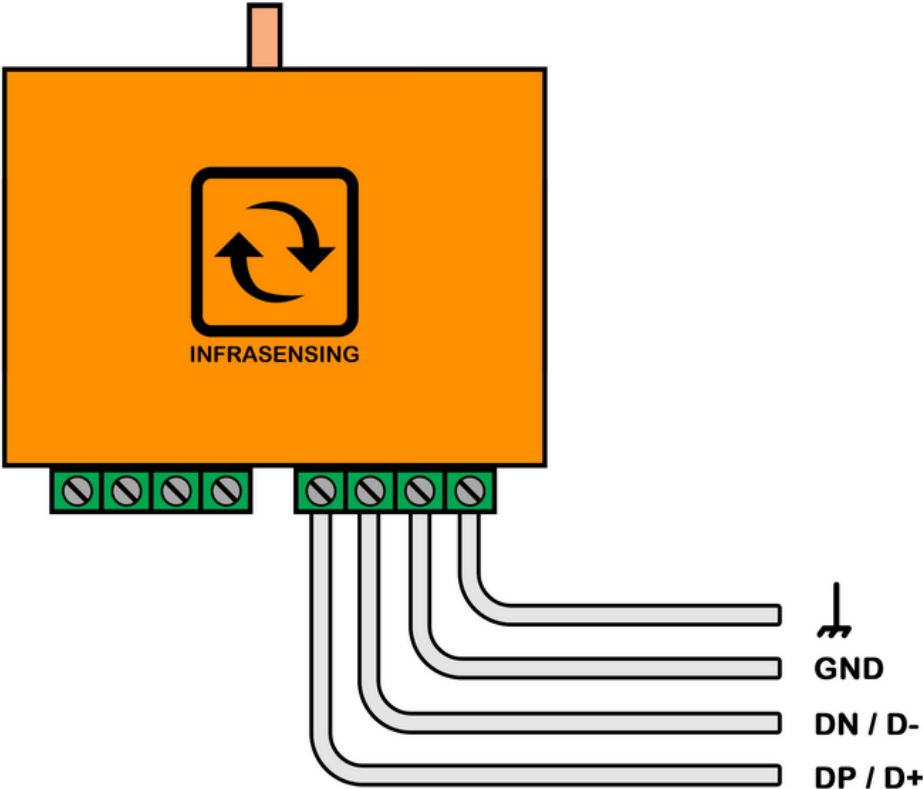
Just match the connection from your RS-485 going to our Modbus RTU Add-On

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 Base Unit we would see an additional option called Modbus Slave Add-On

Settings & Info

Device information
Account name   admin
                                      [Change Password]
Current System Date   01 Jan 2019
Current System Time   00:00:35
                                      [Update Time]
Hardware Version   Release 5.1
Firmware Version   Release 8.7 (Jan 21 2021)
                                      [Upgrade Firmware]
Mac Address   00:03:64:03:27:26
IP Address   192.168.11.14
                                      [Change IP]
Node Status (online/used/max)   2/9/51
                                      [Calibrate Sensors]

                                      [Modbus Slave Add-On]

Industrial & external communications
SNMP   (on)   InfraSensing Cloud   (off)   Email   (off)

Modbus   (off)   Cloud SMS   (off)

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

ADDON-RTU Config

Slave ID   [1]
Baud Rate   [9600 ▾]
Stop Bits   [1 ▾]
Parity   [Even ▾]

[Update] [Reset]

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)

4 Function Codes Supported

Code	Function	Description
01	Read Coils	Read from 1 to 2000 contiguous status of coils managed by the server. Coils in the response message are packed as one per bit of 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 server. 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 Input Registers	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).

5 Error 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 the remainder of a complex request, such as that the implied length is incorrect. It specifically 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 Device Failure	An unrecoverable error occurred while the slave was attempting to perform the requested action.
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.

Exception Code	Name	Meaning
7 (07 hex)	Negative Acknowledge	The slave cannot perform the pro- gram 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 at- tempted 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

Things to remember:

- The built-in Temperature Sensor of the Base Unit 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

- Daisy Chain Temperature & Humidity has 2 node value which appears as follows:
  - 1st Node value - Temperature
  - 2nd Node value - Humidity

- Note that if Internal Ping is enabled, Node 0 is Internal Temperature, Node 1 is Internal Ping, Node 2 is Daisy Chain Temperature and Node 3 is Daisy Chain Humidity.

- Daisy Chain sensors are *only* detected in Modbus TCP, *not* in Modbus RTU.

- 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.

6.1   Sensor List

1- Temperature	22- CO	43- CH2O	64- R410A
2- Humidity	23- HF	44- HCL	65- R22
3- Airflow	24- Volt (AC/DC Power Sensor)	45- HCN	66- SF6
4- Shock	25- Amp (AC/DC Power Sensor)	46- H2S	67- Nox
5- Dust	26- Watt (AC/DC Power Sensor)	47- CH4	68- Fan Status
6- VOC	27- Watthour (AC/DC Power Sensor)	48- NO	69- C5H402
7- Sound Pressure	28- Ping	49- NO2	70- CL2
8- Power Failure Sensor	29- H2	50- O3	71- CH3SH
9- Leak	30- AC Power Status	51- PH3	72- Fault Sensor
10- Smoke	31- THD	52- C3H8	73- Delta CO2 VOC
11- Air Pressure	32- Frequency	53- SO2	74- A1
12- Security	33- Location and Distance	54- R134A	75- A2L
13- Dewpoint	34- Tilt (Inclination)	55- DC Power Status	76- A3
14- Fuel Level (Fuel Level Sensor)	35- PM (Particle)	56- 4-20mA (DC Power Sensor)	77- Corrosion Copper
15- Flow Rate (Fuel Level Sensor)	36- Radon	57- 0-10V (DC Power Sensor)	78- Corrosion Silver
16- Resistance	37- kW (AC Meter3 Power)	58- R32	79- Webserver Status
17- TVOC	38- kWh (AC Meter 3 energy)	59- R1234YF	80- Fault Reason Ongoing
18- CO2	39- NH3	60- R1234ZE	81- Fault Reason Previous
19- Motion (EXP4HUB)	40- CLO2	61- R454B	82- Wire State
20- O2	41- C2H4	62- R404A	83- Heat Location
21- Light	42- ETO	63- R290	

6.2   List of Sensor Nodes and Registers

Length and Type	Data Label	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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 0 Connection			30203		0 - Base Unit 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	Data Label	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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 1 Connection			30235		0 - Base Unit 1 - Sensor Hub
Length = 3, Unsigned	Node 1 in Alarm Down	10233				
Length = 3, Unsigned	Node 1 in Alarm Warning	10234				
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 and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 2 Connection			30267		0 - Base Unit 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 High Warning				40270-40271	

Length and Type	Data Label	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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 3 Connection			30299		0 - Base Unit 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 and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 4 Connection			30331		0 - Base Unit 1 - Sensor Hub
Length = 3, Unsigned	Node 4 in Alarm Down	10239				
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 and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 5 Connection			30363		0 - Base Unit 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	Data Label	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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 6 Connection			3095		0 - Base Unit 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 = 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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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 = 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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 20 Connection			30843		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 20 in Alarm Down	10809				
Length = 3, Unsigned	Node 20 in Alarm Warning	10810				
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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 = 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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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 and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	Data Label	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		Please see section 6.1 for the sensor list
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	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 33 Value			31256-31257		
Length = 3, Unsigned	Node 33 State	11256				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 33 Type			31258		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 33 Connection			31259		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 33 in Alarm Down	11257				
Length = 3, Unsigned	Node 33 in Alarm Warning	11258				
Length = 8, Floating	Node 33 Threshold High Down				41256-41257	
Length = 8, Floating	Node 33 Threshold High Warning				41258-41259	
Length = 8, Floating	Node 33 Threshold Low Down				41260-41261	
Length = 8, Floating	Node 33 Threshold Low Warning				41262-41263	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 34 Value			31288-31289		
Length = 3, Unsigned	Node 34 State	11288				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 34 Type			31290		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 34 Connection			31291		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 34 in Alarm Down	11289				
Length = 3, Unsigned	Node 34 in Alarm Warning	11290				
Length = 8, Floating	Node 34 Threshold High Down				41288-41289	
Length = 8, Floating	Node 34 Threshold High Warning				41290-41291	
Length = 8, Floating	Node 34 Threshold Low Down				41292-41293	
Length = 8, Floating	Node 34 Threshold Low Warning				41294-41295	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 35 Value			31320-31321		
Length = 3, Unsigned	Node 35 State	11320				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 35 Type			31322		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 35 Connection			31323		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 35 in Alarm Down	11321				
Length = 3, Unsigned	Node 35 in Alarm Warning	11322				
Length = 8, Floating	Node 35 Threshold High Down				41320-41321	
Length = 8, Floating	Node 35 Threshold High Warning				41322-41323	
Length = 8, Floating	Node 35 Threshold Low Down				41324-41325	
Length = 8, Floating	Node 35 Threshold Low Warning				41326-41327	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 36 Value			31352-31353		
Length = 3, Unsigned	Node 36 State	11352				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 36 Type			31354		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 36 Connection			31355		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 36 in Alarm Down	11353				
Length = 3, Unsigned	Node 36 in Alarm Warning	11354				
Length = 8, Floating	Node 36 Threshold High Down				41352-41353	
Length = 8, Floating	Node 36 Threshold High Warning				41354-41355	
Length = 8, Floating	Node 36 Threshold Low Down				41356-41357	
Length = 8, Floating	Node 36 Threshold Low Warning				41358-41359	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 37 Value			31384-31385		
Length = 3, Unsigned	Node 37 State	11384				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 37 Type			31386		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 37 Connection			31387		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 37 in Alarm Down	11385				
Length = 3, Unsigned	Node 37 in Alarm Warning	11386				
Length = 8, Floating	Node 37 Threshold High Down				41384-41385	
Length = 8, Floating	Node 37 Threshold High Warning				41386-41387	
Length = 8, Floating	Node 37 Threshold Low Down				41388-41389	
Length = 8, Floating	Node 37 Threshold Low Warning				41390-41391	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 38 Value			31416-31417		
Length = 3, Unsigned	Node 38 State	11416				0 - Offline, 1 - Online
Length = 4, Unsigned	Node 38 Type			31418		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 38 Connection			31419		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 38 in Alarm Down	11417				
Length = 3, Unsigned	Node 38 in Alarm Warning	11418				
Length = 8, Floating	Node 38 Threshold High Down				41416-41417	
Length = 8, Floating	Node 38 Threshold High Warning				41418-41419	
Length = 8, Floating	Node 38 Threshold Low Down				41420-41421	
Length = 8, Floating	Node 38 Threshold Low Warning				41422-41423	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 39 Value			31448-31449		
Length = 3, Unsigned	Node 39 State	11448				0 - Offline 1 - Online
Length = 4, Unsigned	Node 39 Type			31450		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 39 Connection			31451		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 39 in Alarm Down	11489				
Length = 3, Unsigned	Node 39 in Alarm Warning	11490				
Length = 8, Floating	Node 39 Threshold High Down				41448-41449	
Length = 8, Floating	Node 39 Threshold High Warning				41450-41451	
Length = 8, Floating	Node 39 Threshold Low Down				41452-41453	
Length = 8, Floating	Node 39 Threshold Low Warning				41454-41455	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 40 Value			31480-31481		
Length = 3, Unsigned	Node 40 State	11480				0 - Offline 1 - Online
Length = 4, Unsigned	Node 40 Type			31482		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 40 Connection			31483		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 40 in Alarm Down	11481				
Length = 3, Unsigned	Node 40 in Alarm Warning	11482				
Length = 8, Floating	Node 40 Threshold High Down				41480-41481	
Length = 8, Floating	Node 40 Threshold High Warning				41482-41483	
Length = 8, Floating	Node 40 Threshold Low Down				41484-41485	
Length = 8, Floating	Node 40 Threshold Low Warning				41486-41487	

6.3 List of Fault Sensor Nodes and Registers

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 41 Value			31512-31513		
Length = 3, Unsigned	Node 41 State	11512				0 - Offline 1 - Online
Length = 4, Unsigned	Node 41 Type			31514		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 41 Connection			31515		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 41 in Alarm Down	11513				
Length = 3, Unsigned	Node 41 in Alarm Warning	11514				
Length = 8, Floating	Node 41 Threshold High Down				41512-41513	
Length = 8, Floating	Node 41 Threshold High Warning				41514-41515	
Length = 8, Floating	Node 41 Threshold Low Down				41516-41517	
Length = 8, Floating	Node 41 Threshold Low Warning				41518-41519	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 42 Value			31544-31545		
Length = 3, Unsigned	Node 42 State	11544				0 - Offline 1 - Online
Length = 4, Unsigned	Node 42 Type			31546		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 42 Connection			31547		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 42 in Alarm Down	11545				
Length = 3, Unsigned	Node 42 in Alarm Warning	11546				
Length = 8, Floating	Node 42 Threshold High Down				41544-41545	
Length = 8, Floating	Node 42 Threshold High Warning				41546-41547	
Length = 8, Floating	Node 42 Threshold Low Down				41548-41549	
Length = 8, Floating	Node 42 Threshold Low Warning				41550-41551	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 43 Value			31576-31577		
Length = 3, Unsigned	Node 43 State	11576				0 - Offline 1 - Online
Length = 4, Unsigned	Node 43 Type			31578		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 43 Connection			31579		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 43 in Alarm Down	11577				
Length = 3, Unsigned	Node 43 in Alarm Warning	11578				
Length = 8, Floating	Node 43 Threshold High Down				41576-41577	
Length = 8, Floating	Node 43 Threshold High Warning				41578-41579	
Length = 8, Floating	Node 43 Threshold Low Down				41580-41581	
Length = 8, Floating	Node 43 Threshold Low Warning				41582-41583	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 44 Value			31608-31609		
Length = 3, Unsigned	Node 44 State	11608				0 - Offline 1 - Online
Length = 4, Unsigned	Node 44 Type			31610		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 44 Connection			31611		0 - Gateway 1 - Sensor Hub
Length = 3, Unsigned	Node 44 in Alarm Down	11609				
Length = 3, Unsigned	Node 44 in Alarm Warning	11610				
Length = 8, Floating	Node 44 Threshold High Down				41608-41609	
Length = 8, Floating	Node 44 Threshold High Warning				41610-41611	
Length = 8, Floating	Node 44 Threshold Low Down				41612-41613	
Length = 8, Floating	Node 44 Threshold Low Warning				41614-41615	

6.4   List of Daisy Chain Nodes and Registers

Note: This is ONLY applicable in Modbus TCP. Daisy chain sensors are NOT detected when connected to Modbus RTU.

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 1 Value			35200-35201		
Length = 3, Unsigned	Node 1 State	15200				0 - Offline 1 - Online
Length = 4, Unsigned	Node 1 Type			35202		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 1 Connection			35203		0 - Gateway
Length = 3, Unsigned	Node 1 in Alarm Down	15201				
Length = 3, Unsigned	Node 1 in Alarm Warning	15202				
Length = 8, Floating	Node 1 Threshold High Down				45200-45201	
Length = 8, Floating	Node 1 Threshold High Warning				45202-45203	
Length = 8, Floating	Node 1 Threshold Low Down				45204-45205	
Length = 8, Floating	Node 1 Threshold Low Warning				45206-45207	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 2 Value			35232-35233		
Length = 3, Unsigned	Node 2 State	15232				0 - Offline 1 - Online
Length = 4, Unsigned	Node 2 Type			35234		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 2 Connection			35235		0 - Gateway
Length = 3, Unsigned	Node 2 in Alarm Down	15233				
Length = 3, Unsigned	Node 2 in Alarm Warning	15234				
Length = 8, Floating	Node 2 Threshold High Down				45232-45233	
Length = 8, Floating	Node 2 Threshold High Warning				45234-45235	
Length = 8, Floating	Node 2 Threshold Low Down				45236-45237	
Length = 8, Floating	Node 2 Threshold Low Warning				45238-45239	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 3 Value			35264-35265		
Length = 3, Unsigned	Node 3 State	15264				0 - Offline 1 - Online
Length = 4, Unsigned	Node 3 Type			35266		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 3 Connection			35267		0 - Gateway
Length = 3, Unsigned	Node 3 in Alarm Down	15265				
Length = 3, Unsigned	Node 3 in Alarm Warning	15266				
Length = 8, Floating	Node 3 Threshold High Down				45264-45265	
Length = 8, Floating	Node 3 Threshold High Warning				45266-45267	
Length = 8, Floating	Node 3 Threshold Low Down				45268-45269	
Length = 8, Floating	Node 3 Threshold Low Warning				45270-45271	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 4 Value			35296-35297		
Length = 3, Unsigned	Node 4 State	15296				0 - Offline 1 - Online
Length = 4, Unsigned	Node 4 Type			35298		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 4 Connection			35299		0 - Gateway
Length = 3, Unsigned	Node 4 in Alarm Down	15297				
Length = 3, Unsigned	Node 4 in Alarm Warning	15298				
Length = 8, Floating	Node 4 Threshold High Down				45296-45297	
Length = 8, Floating	Node 4 Threshold High Warning				45298-45299	
Length = 8, Floating	Node 4 Threshold Low Down				45300-45301	
Length = 8, Floating	Node 4 Threshold Low Warning				45302-45303	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 5 Value			35328-35329		
Length = 3, Unsigned	Node 5 State	15328				0 - Offline 1 - Online
Length = 4, Unsigned	Node 5 Type			35330		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 5 Connection			35331		0 - Gateway
Length = 3, Unsigned	Node 5 in Alarm Down	15329				
Length = 3, Unsigned	Node 5 in Alarm Warning	15330				
Length = 8, Floating	Node 5 Threshold High Down				45328-45329	
Length = 8, Floating	Node 5 Threshold High Warning				45330-45331	
Length = 8, Floating	Node 5 Threshold Low Down				45332-45333	
Length = 8, Floating	Node 5 Threshold Low Warning				45334-45335	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 6 Value			35360-35361		
Length = 3, Unsigned	Node 6 State	15360				0 - Offline 1 - Online
Length = 4, Unsigned	Node 6 Type			35362		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 6 Connection			35363		0 - Gateway
Length = 3, Unsigned	Node 6 in Alarm Down	15361				
Length = 3, Unsigned	Node 6 in Alarm Warning	15362				
Length = 8, Floating	Node 6 Threshold High Down				45360-45361	
Length = 8, Floating	Node 6 Threshold High Warning				45362-45363	
Length = 8, Floating	Node 6 Threshold Low Down				45364-45365	
Length = 8, Floating	Node 6 Threshold Low Warning				45366-45367	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 7 Value			35392-35393		
Length = 3, Unsigned	Node 7 State	15392				0 - Offline 1 - Online
Length = 4, Unsigned	Node 7 Type			35394		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 7 Connection			35395		0 - Gateway
Length = 3, Unsigned	Node 7 in Alarm Down	15393				
Length = 3, Unsigned	Node 7 in Alarm Warning	15394				
Length = 8, Floating	Node 7 Threshold High Down				45392-35393	
Length = 8, Floating	Node 7 Threshold High Warning				45394-45395	
Length = 8, Floating	Node 7 Threshold Low Down				45396-45397	
Length = 8, Floating	Node 7 Threshold Low Warning				45398-45399	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 8 Value			35424-35425		
Length = 3, Unsigned	Node 8 State	15424				0 - Offline 1 - Online
Length = 4, Unsigned	Node 8 Type			35426		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 8 Connection			35427		0 - Gateway
Length = 3, Unsigned	Node 8 in Alarm Down	15425				
Length = 3, Unsigned	Node 8 in Alarm Warning	15426				
Length = 8, Floating	Node 8 Threshold High Down				45424-45425	
Length = 8, Floating	Node 8 Threshold High Warning				45426-45427	
Length = 8, Floating	Node 8 Threshold Low Down				45428-45429	
Length = 8, Floating	Node 8 Threshold Low Warning				45430-45431	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 9 Value			35456-35457		
Length = 3, Unsigned	Node 9 State	15456				0 - Offline 1 - Online
Length = 4, Unsigned	Node 9 Type			35458		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 9 Connection			35459		0 - Gateway
Length = 3, Unsigned	Node 9 in Alarm Down	15457				
Length = 3, Unsigned	Node 9 in Alarm Warning	15458				
Length = 8, Floating	Node 9 Threshold High Down				45456-45457	
Length = 8, Floating	Node 9 Threshold High Warning				45458-45459	
Length = 8, Floating	Node 9 Threshold Low Down				45460-45461	
Length = 8, Floating	Node 9 Threshold Low Warning				45462-45463	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 10 Value			35488-35489		
Length = 3, Unsigned	Node 10 State	15488				0 - Offline 1 - Online
Length = 4, Unsigned	Node 10 Type			35490		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 10 Connection			35491		0 - Gateway
Length = 3, Unsigned	Node 10 in Alarm Down	15489				
Length = 3, Unsigned	Node 10 in Alarm Warning	15490				
Length = 8, Floating	Node 10 Threshold High Down				45488-45489	
Length = 8, Floating	Node 10 Threshold High Warning				45490-45491	
Length = 8, Floating	Node 10 Threshold Low Down				45492-45493	
Length = 8, Floating	Node 10 Threshold Low Warning				45494-45495	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 11 Value			35520-35521		
Length = 3, Unsigned	Node 11 State	15520				0 - Offline 1 - Online
Length = 4, Unsigned	Node 11 Type			35522		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 11 Connection			35523		0 - Gateway
Length = 3, Unsigned	Node 11 in Alarm Down	15521				
Length = 3, Unsigned	Node 11 in Alarm Warning	15522				
Length = 8, Floating	Node 11 Threshold High Down				45520-45521	
Length = 8, Floating	Node 11 Threshold High Warning				45522-45523	
Length = 8, Floating	Node 11 Threshold Low Down				45524-45525	
Length = 8, Floating	Node 11 Threshold Low Warning				45526-45527	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 12 Value			35552-35553		
Length = 3, Unsigned	Node 12 State	15552				0 - Offline 1 - Online
Length = 4, Unsigned	Node 12 Type			35554		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 12 Connection			35555		0 - Gateway
Length = 3, Unsigned	Node 12 in Alarm Down	15553				
Length = 3, Unsigned	Node 12 in Alarm Warning	15554				
Length = 8, Floating	Node 12 Threshold High Down				45552-45553	
Length = 8, Floating	Node 12 Threshold High Warning				45554-45555	
Length = 8, Floating	Node 12 Threshold Low Down				45556-45557	
Length = 8, Floating	Node 12 Threshold Low Warning				45558-45559	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 13 Value			35584-35585		
Length = 3, Unsigned	Node 13 State	15584				0 - Offline 1 - Online
Length = 4, Unsigned	Node 13 Type			35586		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 13 Connection			35587		0 - Gateway
Length = 3, Unsigned	Node 13 in Alarm Down	15585				
Length = 3, Unsigned	Node 13 in Alarm Warning	15586				
Length = 8, Floating	Node 13 Threshold High Down				45584-45585	
Length = 8, Floating	Node 13 Threshold High Warning				45586-45587	
Length = 8, Floating	Node 13 Threshold Low Down				45588-45589	
Length = 8, Floating	Node 13 Threshold Low Warning				45590-45591	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 14 Value			35616-35617		
Length = 3, Unsigned	Node 14 State	15616				0 - Offline 1 - Online
Length = 4, Unsigned	Node 14 Type			35618		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 14 Connection			35619		0 - Gateway
Length = 3, Unsigned	Node 14 in Alarm Down	15617				
Length = 3, Unsigned	Node 14 in Alarm Warning	15618				
Length = 8, Floating	Node 14 Threshold High Down				45616-45617	
Length = 8, Floating	Node 14 Threshold High Warning				45618-45619	
Length = 8, Floating	Node 14 Threshold Low Down				45620-45621	
Length = 8, Floating	Node 14 Threshold Low Warning				45622-45623	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 15 Value			35648-35649		
Length = 3, Unsigned	Node 15 State	15648				0 - Offline 1 - Online
Length = 4, Unsigned	Node 15 Type			35650		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 15 Connection			35651		0 - Gateway
Length = 3, Unsigned	Node 15 in Alarm Down	15649				
Length = 3, Unsigned	Node 15 in Alarm Warning	15650				
Length = 8, Floating	Node 15 Threshold High Down				45648-45649	
Length = 8, Floating	Node 15 Threshold High Warning				45650-45651	
Length = 8, Floating	Node 15 Threshold Low Down				45652-45653	
Length = 8, Floating	Node 15 Threshold Low Warning				45654-45655	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 16 Value			35680-35681		
Length = 3, Unsigned	Node 16 State	15680				0 - Offline 1 - Online
Length = 4, Unsigned	Node 16 Type			35682		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 16 Connection			35683		0 - Gateway
Length = 3, Unsigned	Node 16 in Alarm Down	15681				
Length = 3, Unsigned	Node 16 in Alarm Warning	15682				
Length = 8, Floating	Node 16 Threshold High Down				45680-45681	
Length = 8, Floating	Node 16 Threshold High Warning				45682-45683	
Length = 8, Floating	Node 16 Threshold Low Down				45684-45685	
Length = 8, Floating	Node 16 Threshold Low Warning				45686-45687	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 17 Value			35712-35713		
Length = 3, Unsigned	Node 17 State	15712				0 - Offline 1 - Online
Length = 4, Unsigned	Node 17 Type			35714		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 17 Connection			35715		0 - Gateway
Length = 3, Unsigned	Node 17 in Alarm Down	15713				
Length = 3, Unsigned	Node 17 in Alarm Warning	15714				
Length = 8, Floating	Node 17 Threshold High Down				45712-45713	
Length = 8, Floating	Node 17 Threshold High Warning				45714-45715	
Length = 8, Floating	Node 17 Threshold Low Down				45716-45717	
Length = 8, Floating	Node 17 Threshold Low Warning				45718-45719	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 18 Value			35744-35745		
Length = 3, Unsigned	Node 18 State	15744				0 - Offline 1 - Online
Length = 4, Unsigned	Node 18 Type			35746		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 18 Connection			35747		0 - Gateway
Length = 3, Unsigned	Node 18 in Alarm Down	15745				
Length = 3, Unsigned	Node 18 in Alarm Warning	15746				
Length = 8, Floating	Node 18 Threshold High Down				45744-45745	
Length = 8, Floating	Node 18 Threshold High Warning				45746-45747	
Length = 8, Floating	Node 18 Threshold Low Down				45748-45749	
Length = 8, Floating	Node 18 Threshold Low Warning				45750-45751	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 19 Value			35776-35777		
Length = 3, Unsigned	Node 19 State	15776				0 - Offline 1 - Online
Length = 4, Unsigned	Node 19 Type			35778		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 19 Connection			35779		0 - Gateway
Length = 3, Unsigned	Node 19 in Alarm Down	15777				
Length = 3, Unsigned	Node 19 in Alarm Warning	15778				
Length = 8, Floating	Node 19 Threshold High Down				45776-45777	
Length = 8, Floating	Node 19 Threshold High Warning				45778-45779	
Length = 8, Floating	Node 19 Threshold Low Down				45780-45781	
Length = 8, Floating	Node 19 Threshold Low Warning				45782-45783	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 20 Value			35808-35809		
Length = 3, Unsigned	Node 20 State	15808				0 - Offline 1 - Online
Length = 4, Unsigned	Node 20 Type			35810		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 20 Connection			35811		0 - Gateway
Length = 3, Unsigned	Node 20 in Alarm Down	15809				
Length = 3, Unsigned	Node 20 in Alarm Warning	15810				
Length = 8, Floating	Node 20 Threshold High Down				45808-45809	
Length = 8, Floating	Node 20 Threshold High Warning				45810-45811	
Length = 8, Floating	Node 20 Threshold Low Down				45812-45813	
Length = 8, Floating	Node 20 Threshold Low Warning				45814-45815	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 21 Value			35840-35841		
Length = 3, Unsigned	Node 21 State	15840				0 - Offline 1 - Online
Length = 4, Unsigned	Node 21 Type			35842		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 21 Connection			35843		0 - Gateway
Length = 3, Unsigned	Node 21 in Alarm Down	15841				
Length = 3, Unsigned	Node 21 in Alarm Warning	15842				
Length = 8, Floating	Node 21 Threshold High Down				45840-45841	
Length = 8, Floating	Node 21 Threshold High Warning				45842-45843	
Length = 8, Floating	Node 21 Threshold Low Down				45844-45845	
Length = 8, Floating	Node 21 Threshold Low Warning				45846-45847	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 22 Value			35872-35873		
Length = 3, Unsigned	Node 22 State	15872				0 - Offline 1 - Online
Length = 4, Unsigned	Node 22 Type			35874		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 22 Connection			35875		0 - Gateway
Length = 3, Unsigned	Node 22 in Alarm Down	15873				
Length = 3, Unsigned	Node 22 in Alarm Warning	15874				
Length = 8, Floating	Node 22 Threshold High Down				45872-45873	
Length = 8, Floating	Node 22 Threshold High Warning				45874-45875	
Length = 8, Floating	Node 22 Threshold Low Down				45876-45877	
Length = 8, Floating	Node 22 Threshold Low Warning				45878-45879	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 23 Value			35904-35905		
Length = 3, Unsigned	Node 23 State	15904				0 - Offline 1 - Online
Length = 4, Unsigned	Node 23 Type			35906		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 23 Connection			35907		0 - Gateway
Length = 3, Unsigned	Node 23 in Alarm Down	15905				
Length = 3, Unsigned	Node 23 in Alarm Warning	15906				
Length = 8, Floating	Node 23 Threshold High Down				45904-45905	
Length = 8, Floating	Node 23 Threshold High Warning				45906-45907	
Length = 8, Floating	Node 22 Threshold Low Down				45908-45909	
Length = 8, Floating	Node 23 Threshold Low Warning				45910-45911	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 24 Value			35936-35937		
Length = 3, Unsigned	Node 24 State	15936				0 - Offline 1 - Online
Length = 4, Unsigned	Node 24 Type			35938		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 24 Connection			35939		0 - Gateway
Length = 3, Unsigned	Node 24 in Alarm Down	15937				
Length = 3, Unsigned	Node 24 in Alarm Warning	15938				
Length = 8, Floating	Node 24 Threshold High Down				45936-45937	
Length = 8, Floating	Node 24 Threshold High Warning				45938-45939	
Length = 8, Floating	Node 24 Threshold Low Down				45940-45941	
Length = 8, Floating	Node 24Threshold Low Warning				45942-45943	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 25 Value			35968-35969		
Length = 3, Unsigned	Node 25 State	15968				0 - Offline 1 - Online
Length = 4, Unsigned	Node 25 Type			35970		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 25 Connection			35971		0 - Gateway
Length = 3, Unsigned	Node 25 in Alarm Down	15969				
Length = 3, Unsigned	Node 25 in Alarm Warning	15970				
Length = 8, Floating	Node 25 Threshold High Down				45968-45969	
Length = 8, Floating	Node 25 Threshold High Warning				45970-45971	
Length = 8, Floating	Node 25 Threshold Low Down				45972-45973	
Length = 8, Floating	Node 25 Threshold Low Warning				45974-45975	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 26 Value			36000-36001		
Length = 3, Unsigned	Node 26 State	16000				0 - Offline 1 - Online
Length = 4, Unsigned	Node 26 Type			36002		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 26 Connection			36003		0 - Gateway
Length = 3, Unsigned	Node 26 in Alarm Down	16001				
Length = 3, Unsigned	Node 26 in Alarm Warning	16002				
Length = 8, Floating	Node 26 Threshold High Down				46000-46001	
Length = 8, Floating	Node 26 Threshold High Warning				46002-46003	
Length = 8, Floating	Node 26 Threshold Low Down				46004-46005	
Length = 8, Floating	Node 26 Threshold Low Warning				46006-46007	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 27 Value			36032-36033		
Length = 3, Unsigned	Node 27 State	16032				0 - Offline 1 - Online
Length = 4, Unsigned	Node 27 Type			36034		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 27 Connection			36035		0 - Gateway
Length = 3, Unsigned	Node 27 in Alarm Down	16003				
Length = 3, Unsigned	Node 27 in Alarm Warning	16034				
Length = 8, Floating	Node 27 Threshold High Down				46032-46033	
Length = 8, Floating	Node 27 Threshold High Warning				46034-46035	
Length = 8, Floating	Node 27 Threshold Low Down				46036-46037	
Length = 8, Floating	Node 27 Threshold Low Warning				46038-46039	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 28 Value			36064-36065		
Length = 3, Unsigned	Node 28 State	16064				0 - Offline 1 - Online
Length = 4, Unsigned	Node 28 Type			36066		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 28 Connection			36067		0 - Gateway
Length = 3, Unsigned	Node 28 in Alarm Down	16065				
Length = 3, Unsigned	Node 28 in Alarm Warning	16066				
Length = 8, Floating	Node 28 Threshold High Down				46064-46065	
Length = 8, Floating	Node 28 Threshold High Warning				46066-46067	
Length = 8, Floating	Node 28 Threshold Low Down				46068-46069	
Length = 8, Floating	Node 28 Threshold Low Warning				46070-46071	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 29 Value			36096-36097		
Length = 3, Unsigned	Node 29 State	16096				0 - Offline 1 - Online
Length = 4, Unsigned	Node 29 Type			36098		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 29 Connection			36099		0 - Gateway
Length = 3, Unsigned	Node 29 in Alarm Down	16097				
Length = 3, Unsigned	Node 29 in Alarm Warning	16098				
Length = 8, Floating	Node 29 Threshold High Down				46096-46097	
Length = 8, Floating	Node 29 Threshold High Warning				46098-46099	
Length = 8, Floating	Node 29 Threshold Low Down				46100-46101	
Length = 8, Floating	Node 29 Threshold Low Warning				46102-46103	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 30 Value			36218-36219		
Length = 3, Unsigned	Node 30 State	16128				0 - Offline 1 - Online
Length = 4, Unsigned	Node 30 Type			36130		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 30 Connection			36131		0 - Gateway
Length = 3, Unsigned	Node 30 in Alarm Down	16129				
Length = 3, Unsigned	Node 30 in Alarm Warning	16130				
Length = 8, Floating	Node 30 Threshold High Down				46128-46129	
Length = 8, Floating	Node 30 Threshold High Warning				46130-46131	
Length = 8, Floating	Node 30 Threshold Low Down				46132-46133	
Length = 8, Floating	Node 30 Threshold Low Warning				46134-46135	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 31 Value			36160-36161		
Length = 3, Unsigned	Node 31 State	16160				0 - Offline 1 - Online
Length = 4, Unsigned	Node 31 Type			36162		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 31 Connection			36163		0 - Gateway
Length = 3, Unsigned	Node 31 in Alarm Down	16161				
Length = 3, Unsigned	Node 31 in Alarm Warning	16162				
Length = 8, Floating	Node 31 Threshold High Down				46160-46161	
Length = 8, Floating	Node 31 Threshold High Warning				46162-46163	
Length = 8, Floating	Node 31 Threshold Low Down				46164-46165	
Length = 8, Floating	Node 31 Threshold Low Warning				46166-46167	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 32 Value			36192-36193		
Length = 3, Unsigned	Node 32 State	16192				0 - Offline 1 - Online
Length = 4, Unsigned	Node 32 Type			36194		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 32 Connection			36195		0 - Gateway
Length = 3, Unsigned	Node 32 in Alarm Down	16193				
Length = 3, Unsigned	Node 32 in Alarm Warning	16194				
Length = 8, Floating	Node 32 Threshold High Down				46192-46193	
Length = 8, Floating	Node 32 Threshold High Warning				46194-46195	
Length = 8, Floating	Node 32 Threshold Low Down				46196-46197	
Length = 8, Floating	Node 32 Threshold Low Warning				46198-46199	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 33 Value			36224-36225		
Length = 3, Unsigned	Node 33 State	16224				0 - Offline 1 - Online
Length = 4, Unsigned	Node 33 Type			36226		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 33 Connection			36227		0 - Gateway
Length = 3, Unsigned	Node 33 in Alarm Down	16225				
Length = 3, Unsigned	Node 33 in Alarm Warning	16226				
Length = 8, Floating	Node 33 Threshold High Down				46224-46225	
Length = 8, Floating	Node 33 Threshold High Warning				46226-46227	
Length = 8, Floating	Node 33 Threshold Low Down				46228-46229	
Length = 8, Floating	Node 33 Threshold Low Warning				46230-46231	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 34 Value			36256-36257		
Length = 3, Unsigned	Node 34 State	16256				0 - Offline 1 - Online
Length = 4, Unsigned	Node 34 Type			36258		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 34 Connection			36259		0 - Gateway
Length = 3, Unsigned	Node 34 in Alarm Down	16257				
Length = 3, Unsigned	Node 34 in Alarm Warning	16258				
Length = 8, Floating	Node 34 Threshold High Down				46256-46257	
Length = 8, Floating	Node 34 Threshold High Warning				46258-46259	
Length = 8, Floating	Node 34 Threshold Low Down				46260-46261	
Length = 8, Floating	Node 34 Threshold Low Warning				46262-46263	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 35 Value			36288-36289		
Length = 3, Unsigned	Node 35 State	16288				0 - Offline 1 - Online
Length = 4, Unsigned	Node 35 Type			36290		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 35 Connection			36291		0 - Gateway
Length = 3, Unsigned	Node 35 in Alarm Down	16289				
Length = 3, Unsigned	Node 35 in Alarm Warning	16290				
Length = 8, Floating	Node 35 Threshold High Down				46288-46289	
Length = 8, Floating	Node 35 Threshold High Warning				46290-46291	
Length = 8, Floating	Node 35 Threshold Low Down				46292-46293	
Length = 8, Floating	Node 35 Threshold Low Warning				46294-46295	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 36 Value			36320-36321		
Length = 3, Unsigned	Node 36 State	16320				0 - Offline 1 - Online
Length = 4, Unsigned	Node 36 Type			36322		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 36 Connection			36323		0 - Gateway
Length = 3, Unsigned	Node 36 in Alarm Down	16321				
Length = 3, Unsigned	Node 36 in Alarm Warning	13322				
Length = 8, Floating	Node 36 Threshold High Down				46320-46321	
Length = 8, Floating	Node 36 Threshold High Warning				46322-46323	
Length = 8, Floating	Node 36 Threshold Low Down				46324-46325	
Length = 8, Floating	Node 36 Threshold Low Warning				46326-46327	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 37 Value			36352-36353		
Length = 3, Unsigned	Node 37 State	16352				0 - Offline 1 - Online
Length = 4, Unsigned	Node 37 Type			36354		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 37 Connection			35355		0 - Gateway
Length = 3, Unsigned	Node 37 in Alarm Down	16353				
Length = 3, Unsigned	Node 37 in Alarm Warning	16354				
Length = 8, Floating	Node 37 Threshold High Down				46352-46353	
Length = 8, Floating	Node 37 Threshold High Warning				46354-46355	
Length = 8, Floating	Node 37 Threshold Low Down				46356-46357	
Length = 8, Floating	Node 37 Threshold Low Warning				46358-46359	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 38 Value			36384-36385		
Length = 3, Unsigned	Node 38 State	16384				0 - Offline 1 - Online
Length = 4, Unsigned	Node 38 Type			36386		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 38 Connection			36387		0 - Gateway
Length = 3, Unsigned	Node 38 in Alarm Down	16385				
Length = 3, Unsigned	Node 38 in Alarm Warning	16386				
Length = 8, Floating	Node 38 Threshold High Down				46384-46385	
Length = 8, Floating	Node 38 Threshold High Warning				46386-46387	
Length = 8, Floating	Node 38 Threshold Low Down				46388-46389	
Length = 8, Floating	Node 38 Threshold Low Warning				46390-46391	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 39 Value			36416-36417		
Length = 3, Unsigned	Node 39 State	16416				0 - Offline 1 - Online
Length = 4, Unsigned	Node 39 Type			36418		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 39 Connection			36419		0 - Gateway
Length = 3, Unsigned	Node 39 in Alarm Down	16417				
Length = 3, Unsigned	Node 39 in Alarm Warning	16418				
Length = 8, Floating	Node 39 Threshold High Down				46416-46417	
Length = 8, Floating	Node 39 Threshold High Warning				46418-46419	
Length = 8, Floating	Node 39 Threshold Low Down				46420-46421	
Length = 8, Floating	Node 39 Threshold Low Warning				46422-46423	

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node 40 Value			36448-36449		
Length = 3, Unsigned	Node 40 State	16448				0 - Offline 1 - Online
Length = 4, Unsigned	Node 40 Type			36450		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node 40 Connection			36451		0 - Gateway
Length = 3, Unsigned	Node 40 in Alarm Down	16449				
Length = 3, Unsigned	Node 40 in Alarm Warning	16450				
Length = 8, Floating	Node 40 Threshold High Down				46448-46449	
Length = 8, Floating	Node 40 Threshold High Warning				46450-46451	
Length = 8, Floating	Node 40 Threshold Low Down				46452-46453	
Length = 8, Floating	Node 40 Threshold Low Warning				46454-46455	

7   Sensorhub Input Register List

Length and Type	Data Label	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	Data Label	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 3Control		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	Data Label	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	Data Label	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 = 16, Unsigned	Input 9 State			30009		0 - Open 1 - Close
Length = 16, Unsigned	Input 9 in Alarm	10009				0 - Ok 1 - Triggered

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 16,	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 Input Register List

| Length and Type	Data Label	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

12 Extended Modbus Register List

In firmware 9.2, a new set of registers was added so that users can easily create template to map the Modbus registers efficiently. With the implementation of the new structure, every sensor is now allocated a Slave ID.

It's important to note that the Slave ID number is dynamically assigned based on which port the sensor is connected. Please note that Base Unit is always designated as Slave ID 1. Please see example below for reference.

Image 1
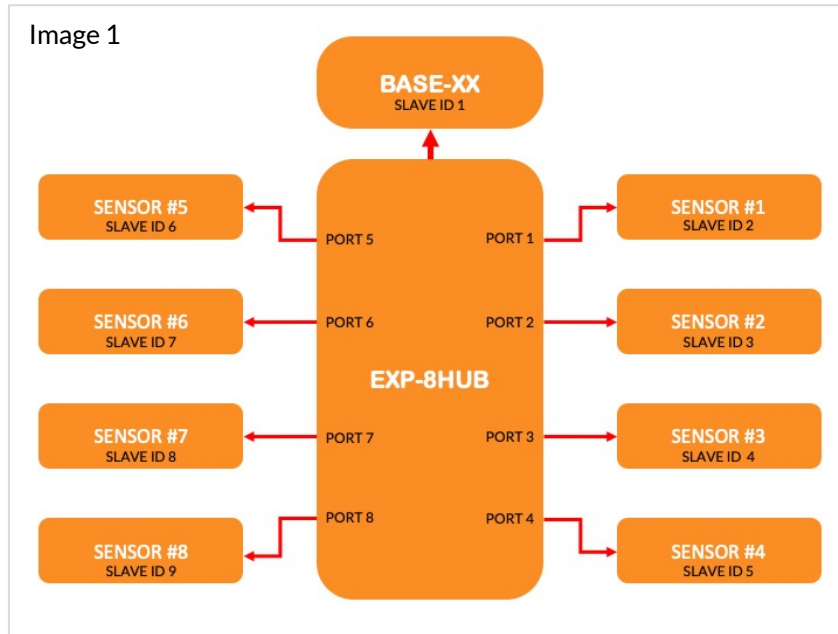
For example, let's consider a scenario where there are four sensors connected to the expansion hub, each connected to different ports. In this case, the Slave ID number will be assigned according to the port to which each sensor is connected.

Image 2
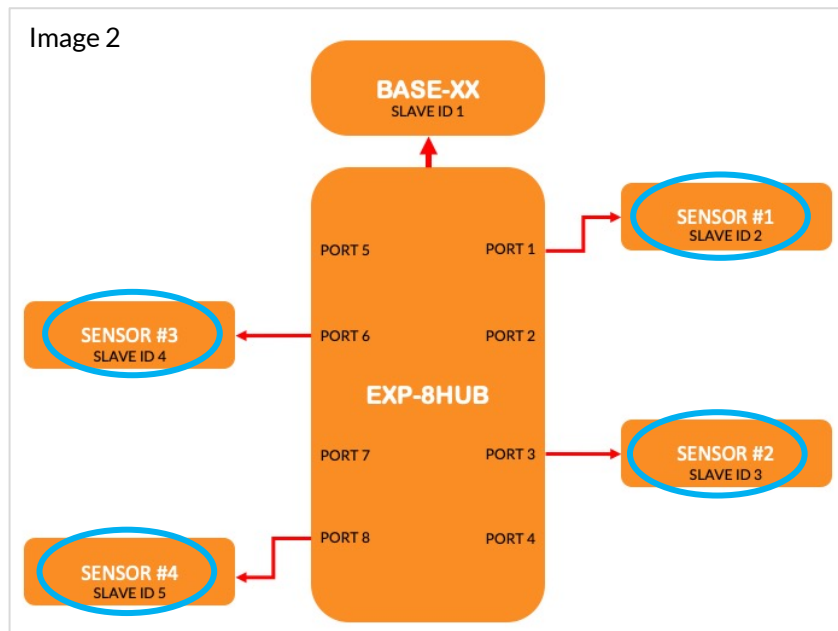
For instance, if Sensor #1 is connected to port 1 and Sensor #2 is connected to port 3, the Slave ID #2 will be assigned to the first sensor connected, in this case, Sensor #1. This dynamic assignment ensures efficient communication and management of multiple sensors within the system. The same rule applies for sensors connected directly to the Base Unit.

With the new structure, the register always begins at 8000 with an increment of 32.

For instance, on the image 2 on page 63 the Slave ID 3 is ENV-THUM, which comprises of 3 nodes: (1) Temperature, (2) Humidity, and (3) Dew point, and you wish to get the node value of dew point. To obtain its value, you would employ the following formula: **= 8000 + (position node – 1) * 32**

Since the Dew point is 3rd node we will use it as the value for *position node*:

> **= 8000 + (position node – 1) * 32**
> **= 8000 + (3 – 1) * 32**
> **= 8064**

So the node value of dew point is 8064.

Below is the sample table for the Extended Modbus Register list. Please note that the number of nodes will depend on the actual sensor and each node will always starts at **8000.**

Length and Type	Data Label	Status	Coils	Input Register	Holding Register	Notes:
Length = 4, Floating	Node *XX* Value			8000-8001		
Length = 3, Unsigned	Node *XX* State	8000				0 - Offline 1 - Online
Length = 4, Unsigned	Node *XX* Type			8002		Please see section 6.1 for the sensor list
Length = 4, Unsigned	Node *XX* Connection			8003		0 - Gateway
Length = 3, Unsigned	Node *XX* in Alarm Down	8001				
Length = 3, Unsigned	Node *XX* in Alarm Warning	8002				
Length = 8, Floating	Node *XX* Threshold High Down				8000-8001	
Length = 8, Floating	Node *XX* Threshold High Warning				8002-8003	
Length = 8, Floating	Node *XX* Threshold Low Down				8004-8005	
Length = 8, Floating	Node XX Threshold Low Warning				8006-8007	