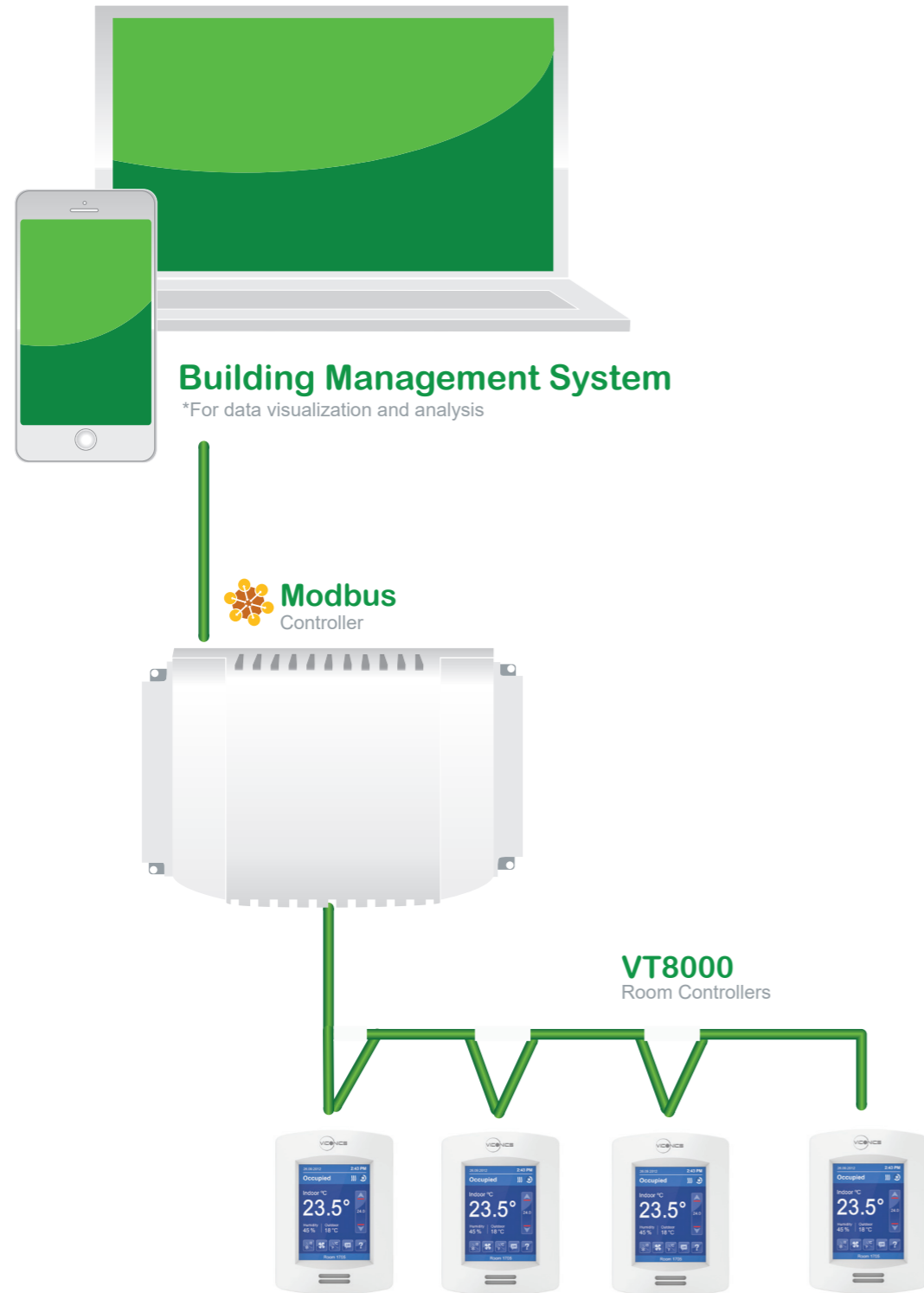


# VT8000 Room Controllers

## VT8650 Modbus Integration Guide

Roof Top Unit (RTU), Heat Pump and Indoor Air Quality (IAQ)



## TABLE OF CONTENTS

Introduction.....	2
Modbus Specifications .....	2
Modbus Specific Read-Only Points.....	2
Configuration .....	3
Mapping .....	3
General Modbus Functions .....	4
1000+ Modbus Address Functions .....	5
3000+ Modbus Address Functions .....	6
4000+ Modbus Address Functions .....	15
5000+ Modbus Address Functions .....	26

## INTRODUCTION

Modbus is an application-layer messaging protocol which is independent of the physical network layer. A Modbus serial line can be integrated into Modbus TCP networks, using simple gateways.

### MODBUS SPECIFICATIONS

The VT8650 Room Controller acts as a Modbus slave by using its RS485 port. As BACnet and Modbus use the same RS485 port, a setup menu allows switching between the two protocols.

### MODBUS SPECIFIC READ-ONLY POINTS

The below points serve to identify the version Numbers for all VT8650 Room Controllers.

Modbus point type	Description	Modbus functions available	Modbus Register	Modbus Address
16-bit Input	Hardware Revision	4	9001	39001
16-bit Input	Software Version Major	4	9002	39002
16-bit Input	Software Version Minor	4	9003	39003
16-bit Input	Software Version Revision	4	9004	39004
16-bit Input	Software Version Build	4	9005	39005
16-bit Input	Model Number	4	9006	39006

## CONFIGURATION

**Modbus Network**

COM address	254
Network units	SI
Baud rate	19200
Parity	None

↶
↷
🏠
⏴
⏵

- Modbus ID is the same as already defined in COM address for BACnet & ZigBee
- Network units can be changed to SI or Imperial
- The baudrate can be: 4800 / 9600 / 19200 / 38400 / 57600
- The data bits are always 8
- The parity can be: none, odd or even. In case of parity odd or even, 1 stop bit is used, otherwise 2 stop bits are used

Configuration Parameters Default Value	Significance and Adjustments
<b>Comm address</b> Room Controller networking address Default value: 254 Range: 0 to 254	<b>Communication Address</b> Default value of 254 disables Modbus communication for the Room Controller.
<b>Network units</b> Default value: Imperial	<b>Measurement Units</b> <b>Imperial:</b> network units shown as Imperial units. <b>SI:</b> network units shown as International Metric units.
<b>Baud rate</b> Default value: Auto	<b>Baud Rate</b> <b>Auto:</b> automatically detects baud rate. <b>Other choices:</b> (115200, 76800, 57600, 38400, 19200, and 9600).
<b>Parity</b> Default value: None	<b>Parity</b> Parity checking of the data character frame (Even, Odd, or no parity (None)).

## MAPPING

The mapping is directly based on database IDs.

**The correspondence is the following:**

function 1, register 1 (Modbus addr 1)	<=> DB id 0x6000 (BOs)
function 1/5, register 5001 (Modbus addr 5001)	<=> DB id 0x4000 (BVs)
function 2, register 1 (Modbus addr 10001)	<=> DB id 0x5000 (BIs)
function 4, register 1 (Modbus addr 30001)	<=> DB id 0x3000 (AHVs)
function 4, register 1001 (Modbus addr 31001)	<=> DB id 0x7000 (AIs)
function 4, register 5001 (Modbus addr 35001)	<=> DB id 0xC000 (MSIs)
function 3/6, register 1 (Modbus addr 40001)	<=> DB id 0x1000 (MVs)
function 3/6, register 4001 (Modbus addr 44001)	<=> DB id 0x2000 (AVs)
function 3, register 8001 (Modbus addr 48001)	<=> DB id 0x8000 (AOs)
function 3, register 9001 (Modbus addr 49001)	<=> DB id 0x9000 (AHOs)

A special range of addresses is used to identify the device: function 4, register 9001 (Modbus addr 39001)

## GENERAL MODBUS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
UO10 Binary Output	2	2	1	0	1	0=Off, 1=On
BO1 Auxiliary Binary Output	7	7	1	0	1	0=Off, 1=On
UO11 Binary Output	8	8	1	0	1	0=Off, 1=On
UO12 Binary Output	9	9	1	0	1	0=Off, 1=On
G Fan Status	10	10	1	0	1	0=Off, 1=On
Y1 Status	11	11	1	0	1	0=Off, 1=On
Y2 Status	12	12	1	0	1	0=Off, 1=On
W1 Status	13	13	1	0	1	0=Off, 1=On
W2/OB Status	14	14	1	0	1	0=Off, 1=On

## 1000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
UI16 Binary Input	1	10001	2	0	1	0=Activated, 1=Not activ.
UI17 Binary Input	2	10002	2	0	1	0=Activated, 1=Not activ.
UI19 Binary Input	6	10006	2	0	1	0=Activated, 1=Not activ.
UI20 Binary Input	7	10007	2	0	1	0=Activated, 1=Not activ.
UI22 Binary Input	8	10008	2	0	1	0=Activated, 1=Not activ.
UI23 Binary Input	9	10009	2	0	1	0=Activated, 1=Not activ.
UI24 Binary Input	10	10010	2	0	1	0=Activated, 1=Not activ.

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Room Temperature	1	30001	4	-40°F(-40°C)	122°F(50°C)	Fahrenheit/Celsius
UI22 Supply Temperature	3	30003	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
Room Humidity	4	30004	4	0	100	Percent Relative Humidity
UI20 Remote Temperature	6	30006	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
CO2 Level	7	30007	4	0	5000	Parts per Million
Airflow Level	8	30008	4	0	20000	Cubic Feet per Minute
UI19 Analog Input	9	30009	4	0	10	Voltage
Outdoor Temperature	10	30010	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI24 Analog Input	11	30011	4	0	10	Voltage
UI24 Temperature	12	30012	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI16 Analog Input	13	30013	4	0	10	Voltage
UI17 Analog Input	14	30014	4	0	10	Voltage
UI20 Analog Input	15	30015	4	0	10	Voltage
UI22 Analog Input	16	30016	4	0	10	Voltage
UI23 Analog Input	17	30017	4	0	10	Voltage
UI16 Analog Temperature	18	30018	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI17 Analog Temperature	19	30019	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI19 Analog Temperature	20	30020	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI20 Analog Temperature	21	30021	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI22 Analog Temperature	22	30022	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI23 Analog Temperature	23	30023	4	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
Light Sensor Level	1002	31002	4	0	30000	
Relative Humidity Raw Value	1004	31004	4	0	1000	Percent Relative Humidity

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
UI20 Raw Value	1005	31005	4	0	4095	
UI19 Raw Value	1006	31006	4	0	4095	
UI23 Raw Value	1007	31007	4	0	4095	
UI22 Raw Value	1008	31008	4	0	4095	
UI24 Raw Value	1009	31009	4	0	4095	
Wireless Device 1 - Temperature	1026	31026	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 2 - Temperature	1027	31027	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 3 - Temperature	1028	31028	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 4 - Temperature	1029	31029	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 5 - Temperature	1030	31030	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 6 - Temperature	1031	31031	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 7 - Temperature	1032	31032	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 8 - Temperature	1033	31033	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 9 - Temperature	1034	31034	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 10 - Temperature	1035	31035	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Effective Setpoint	1040	31040	4	40°F(4°C)	100°F(38°C)	Fahrenheit/Celsius
Paired ZigBee Devices	1041	31041	4	0	20	
RH Temperature Raw Value	1042	31042	4	-400	1220	
UI16 Raw Value	1043	31043	4	0	4095	
UI17 Raw Value	1044	31044	4	0	4095	
Therm. Raw Value	1045	31045	4	-400	1220	
SH Therm. Raw Value	1046	31046	4	-400	1220	
Wi-Fi Network Signal Strength	1058	31058	4	0	100	Percent

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wi-Fi Module Boot Count	1059	31059	4	0	32767	
Wireless Device 11 - Temperature	1061	31061	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 12 - Temperature	1062	31062	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 13 - Temperature	1063	31063	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 14 - Temperature	1064	31064	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 15 - Temperature	1065	31065	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 16 - Temperature	1066	31066	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 17 - Temperature	1067	31067	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 18 - Temperature	1068	31068	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 19 - Temperature	1069	31069	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 20 - Temperature	1070	31070	4	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 1 - Humidity	1071	31071	4	0	100	Percent Relative Humidity
Wireless Device 2 - Humidity	1072	31072	4	0	100	Percent Relative Humidity
Wireless Device 3 - Humidity	1073	31073	4	0	100	Percent Relative Humidity
Wireless Device 4 - Humidity	1074	31074	4	0	100	Percent Relative Humidity
Wireless Device 5 - Humidity	1075	31075	4	0	100	Percent Relative Humidity
Wireless Device 6 - Humidity	1076	31076	4	0	100	Percent Relative Humidity
Wireless Device 7 - Humidity	1077	31077	4	0	100	Percent Relative Humidity
Wireless Device 8 - Humidity	1078	31078	4	0	100	Percent Relative Humidity
Wireless Device 9 - Humidity	1079	31079	4	0	100	Percent Relative Humidity
Wireless Device 10 - Humidity	1080	31080	4	0	100	Percent Relative Humidity
Wireless Device 11 - Humidity	1081	31081	4	0	100	Percent Relative Humidity
Wireless Device 12 - Humidity	1082	31082	4	0	100	Percent Relative Humidity



## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wireless Device 13 - Humidity	1083	31083	4	0	100	Percent Relative Humidity
Wireless Device 14 - Humidity	1084	31084	4	0	100	Percent Relative Humidity
Wireless Device 15 - Humidity	1085	31085	4	0	100	Percent Relative Humidity
Wireless Device 16 - Humidity	1086	31086	4	0	100	Percent Relative Humidity
Wireless Device 17 - Humidity	1087	31087	4	0	100	Percent Relative Humidity
Wireless Device 18 - Humidity	1088	31088	4	0	100	Percent Relative Humidity
Wireless Device 19 - Humidity	1089	31089	4	0	100	Percent Relative Humidity
Wireless Device 20 - Humidity	1090	31090	4	0	100	Percent Relative Humidity
Wireless Device 1 - CO2	1091	31091	4	0	5000	Parts per Million
Wireless Device 2 - CO2	1092	31092	4	0	5000	Parts per Million
Wireless Device 3 - CO2	1093	31093	4	0	5000	Parts per Million
Wireless Device 4 - CO2	1094	31094	4	0	5000	Parts per Million
Wireless Device 5 - CO2	1095	31095	4	0	5000	Parts per Million
Wireless Device 6 - CO2	1096	31096	4	0	5000	Parts per Million
Wireless Device 7 - CO2	1097	31097	4	0	5000	Parts per Million
Wireless Device 8 - CO2	1098	31098	4	0	5000	Parts per Million
Wireless Device 9 - CO2	1099	31099	4	0	5000	Parts per Million
Wireless Device 10 - CO2	1100	31100	4	0	5000	Parts per Million
Wireless Device 11 - CO2	1101	31101	4	0	5000	Parts per Million
Wireless Device 12 - CO2	1102	31102	4	0	5000	Parts per Million
Wireless Device 13 - CO2	1103	31103	4	0	5000	Parts per Million
Wireless Device 14 - CO2	1104	31104	4	0	5000	Parts per Million
Wireless Device 15 - CO2	1105	31105	4	0	5000	Parts per Million

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wireless Device 16 - CO2	1106	31106	4	0	5000	Parts per Million
Wireless Device 17 - CO2	1107	31107	4	0	5000	Parts per Million
Wireless Device 18 - CO2	1108	31108	4	0	5000	Parts per Million
Wireless Device 19 - CO2	1109	31109	4	0	5000	Parts per Million
Wireless Device 20 - CO2	1110	31110	4	0	5000	Parts per Million
Effective Occupancy	5001	35001	4	0	3	0=Occupied, 1=Unoccupied, 2=Override, 3=Standby
ZigBee Network Status	5003	35003	4	0	4	0=Not det., 1=Pwr on, 2=No NWK, 3=Joined, 4=Online
Weekday	5005	35005	4	0	6	0=Monday, 1=Tuesday, 2=Wed., 3=Thursday, 4=Friday, 5=Saturday, 6=Sunday
Program Status	5006	35006	4	0	5	0=Idle, 1=Loading, 2=Running, 3=Waiting, 4=Halted, 5=Unloading
Program Error	5007	35007	4	0	5	0=No error, 1=Yield, 2=Runtime, 3=Syntax, 4=Memory, 5=Double err
Wireless Device 1 - Status	5008	35008	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 2 - Status	5009	35009	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 3 - Status	5010	35010	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 4 - Status	5011	35011	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 5 - Status	5012	35012	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 6 - Status	5013	35013	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 7 - Status	5014	35014	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 8 - Status	5015	35015	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 9 - Status	5016	35016	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 10 - Status	5017	35017	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 1 - Battery	5018	35018	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 2 - Battery	5019	35019	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 3 - Battery	5020	35020	4	0	2	0=None, 1=Normal, 2=Low

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wireless Device 4 - Battery	5021	35021	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 5 - Battery	5022	35022	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 6 - Battery	5023	35023	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 7 - Battery	5024	35024	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 8 - Battery	5025	35025	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 9 - Battery	5026	35026	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 10 - Battery	5027	35027	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 1 - Communication Status	5028	35028	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 2 - Communication Status	5029	35029	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 3 - Communication Status	5030	35030	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 4 - Communication Status	5031	35031	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 5 - Communication Status	5032	35032	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 6 - Communication Status	5033	35033	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 7 - Communication Status	5034	35034	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 8 - Communication Status	5035	35035	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 9 - Communication Status	5036	35036	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 10 - Communication Status	5037	35037	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
CO2 Effective Source	5044	35044	4	0	23	0=None, 1=Internal, 2=Error, 3=Wired, 4=WL 1, 5=WL 2, 6=WL 3, 7=WL 4, 8=WL 5, 9=WL 6, 10=WL 7, 11=WL 8, 12=WL 9, 13=WL 10, 14=WL 11, 15=WL 12, 16=WL 13, 17=WL 14, 18=WL 15, 19=WL 16, 20=WL 17, 21=WL 18, 22=WL 19, 23=WL 20
Effective temperature sensor	5048	35048	4	0	22	0=Wired, 1=Internal, 2=WL IO, 3=WL 1, 4=WL 2, 5=WL 3, 6=WL 4, 7=WL 5, 8=WL 6, 9=WL 7, 10=WL 8, 11=WL 9, 12=WL 10, 13=WL 11, 14=WL 12, 15=WL 13, 16=WL 14, 17=WL 15, 18=WL 16, 19=WL 17, 20=WL 18, 21=WL 19, 22=WL 20
Effective relative humidity sensor	5049	35049	4	0	21	0=None, 1=Internal, 2=WL 1, 3=WL 2, 4=WL 3, 5=WL 4, 6=WL 5, 7=WL 6, 8=WL 7, 9=WL 8, 10=WL 9, 11=WL 10, 12=WL 11, 13=WL 12, 14=WL 13, 15=WL 14, 16=WL 15, 17=WL 16, 18=WL 17, 19=WL 18, 20=WL 19, 21=WL 20
Effective System Mode	5050	35050	4	0	2	0=Cool, 1=Heat
Wi-Fi Module Status	5051	35051	4	0	6	0=Offline, 1=Initializing, 2=Ready, 3=Booting, 4=Resetting, 5=Fail, 6=Testing
Wi-Fi Status	5052	35052	4	0	6	0=Idle, 1=Associate, 2=Config., 3=Ready, 4=Online, 5=Disconn., 6=Failure

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
BACnet IP Status	5053	35053	4	0	2	0=Disabled, 1=Enabled
SMTP Server Status	5054	35054	4	0	3	0=Unkown, 1=Disabled, 2=Offline, 3=Online
Facility Expert Enabled	5055	35055	4	0	2	0=Disabled, 1=Enabled
Facility Expert Status	5056	35056	4	0	5	0=Disabled, 1=Offline, 2=Connect., 3=Online, 4=Failure, 5=Unknown
Wireless Device 11 - Status	5057	35057	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 12 - Status	5058	35058	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 13 - Status	5059	35059	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 14 - Status	5060	35060	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 15 - Status	5061	35061	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 16 - Status	5062	35062	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 17 - Status	5063	35063	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 18 - Status	5064	35064	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 19 - Status	5065	35065	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 20 - Status	5066	35066	4	0	6	0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion, 5=Normal, 6=Leak
Wireless Device 11 - Battery	5067	35067	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 12 - Battery	5068	35068	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 13 - Battery	5069	35069	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 14 - Battery	5070	35070	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 15 - Battery	5071	35071	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 16 - Battery	5072	35072	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 17 - Battery	5073	35073	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 18 - Battery	5074	35074	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 19 - Battery	5075	35075	4	0	2	0=None, 1=Normal, 2=Low

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wireless Device 20 - Battery	5076	35076	4	0	2	0=None, 1=Normal, 2=Low
Wireless Device 11 - Communication Status	5077	35077	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 12 - Communication Status	5078	35078	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 13 - Communication Status	5079	35079	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 14 - Communication Status	5080	35080	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 15 - Communication Status	5081	35081	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 16 - Communication Status	5082	35082	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 17 - Communication Status	5083	35083	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 18 - Communication Status	5084	35084	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 19 - Communication Status	5085	35085	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 20 - Communication Status	5086	35086	4	0	3	0=Not paired, 1=Online, 2=Invalid, 3=Offline
Wireless Device 1 - Sensor Type	5087	35087	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 2 - Sensor Type	5088	35088	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 3 - Sensor Type	5089	35089	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 4 - Sensor Type	5090	35090	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 5 - Sensor Type	5091	35091	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 6 - Sensor Type	5092	35092	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 7 - Sensor Type	5093	35093	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 8 - Sensor Type	5094	35094	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 9 - Sensor Type	5095	35095	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 10 - Sensor Type	5096	35096	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 11 - Sensor Type	5097	35097	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 12 - Sensor Type	5098	35098	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2

## 3000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wireless Device 13 - Sensor Type	5099	35099	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 14 - Sensor Type	5100	35100	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 15 - Sensor Type	5101	35101	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 16 - Sensor Type	5102	35102	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 17 - Sensor Type	5103	35103	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 18 - Sensor Type	5104	35104	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 19 - Sensor Type	5105	35105	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Wireless Device 20 - Sensor Type	5106	35106	4	0	7	0=None, 1=Unknown, 2=Motion, 3=Contact, 4=Water, 5=Temp., 6=Temp./RH, 7=CO2
Time source	5107	35107	4	0	4	0=None, 1=Local, 2=BACnet, 3=NTP, 4=Cloud

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Temperature Scale	1	40001	3,6	0	1	0=°C, 1=°F
Display Language	2	40002	3,6	0	22	0=English, 1=French, 2=Spanish, 3=Chinese, 4=Russian, 5=Arabic, 6=Bulgarian, 7=Czech, 8=Danish, 9=Dutch, 10=Finnish, 11=German, 12=Hungarian, 13=Indones, 14=Italian, 15=Norwegian, 16=polish, 17=Portug., 18=Slovak, 19=Swedish, 20=Turkish, 21 = Japanese, 22 = Hebrew
System Mode	4	40004	3,6	0	3	0=Off, 1=Auto, 2=Cool, 3=Heat
Room Humidity Display	10	40010	3,6	0	1	0=Disabled, 1=Enabled
Dehumidification Lockout	12	40012	3,6	0	1	0=Disabled, 1=Enabled
Setpoint Function	17	40017	3,6	0	1	0=Dual SP, 1=Attach SP
Occupancy Command	22	40022	3,6	0	2	0=Loc. occ., 1=Occupied, 2=Unocc.
Network Units	23	40023	3,6	0	1	0=SI, 1=Imperial
Time Format	27	40027	3,6	0	1	0=AM-PM, 1=24-Hours
Standby Mode Configuration	28	40028	3,6	0	1	0=Absolute, 1=Offset
HMI Color	29	40029	3,6	0	9	0=White, 1=Green, 2=Blue, 3=Grey, 4=Dark grey, 5=Pink, 6=Purple, 7=Red, 8=Orange 9=Black
Main Display	30	40030	3,6	0	1	0=Temp., 1=Setpoint
Long Message Background Colour	31	40031	3,6	0	10	0=White, 1=Green, 2=Blue, 3=Grey, 4=Dark grey, 5=Pink, 6=Purple, 7=Red, 8=Orange 9=Black, 10= Default
Use Standby Screen	32	40032	3,6	0	3	0=No, 1=Yes, 2=Occ. only, 3=Screen sav
UO9 Configuration	41	40041	3,6	0	3	0=Analog, 1=Binary, 2=Relay RC, 3=Relay RH
UO10 Configuration	42	40042	3,6	0	2	0=Analog, 1=Binary, 2=Relay RC
UO11 Configuration	43	40043	3,6	0	1	0=Analog, 1=Binary
UO12 Configuration	44	40044	3,6	0	1	0=Analog, 1=Binary
Frost Protection	45	40045	3,6	0	1	0=Off, 1=On
Fan Control in Heating Mode	46	40046	3,6	0	1	0=Off, 1=On
Fan Mode	47	40047	3,6	0	2	0=On, 1=Auto, 2=Smart
UI16 Configuration	48	40048	3,6	0	5	0=None, 1=Rem NSB, 2=Motion NO, 3=Motion NC, 4=Window, 5=Fan lock
BO1 Auxiliary Output Configuration	49	40049	3,6	0	1	0=NO, 1=NC

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Mechanical Cooling Allowed	50	40050	3,6	0	1	0=Off., 1=On
Enable Smart Recovery	51	40051	3,6	0	1	0=Off, 1=On
UI19 Configuration	52	40052	3,6	0	1	0=None, 1=CO2
Economizer Configuration	53	40053	3,6	0	1	0=Off., 1=On
Schedule Menu	54	40054	3,6	0	3	0=Disabled, 1=Enabled, 2=Dis.no.clk, 3=En.no.clk
French	56	40056	3,6	0	1	0=Disabled, 1=Enabled
Spanish	57	40057	3,6	0	1	0=Disabled, 1=Enabled
Chinese	58	40058	3,6	0	1	0=Disabled, 1=Enabled
Russian	59	40059	3,6	0	1	0=Disabled, 1=Enabled
Month	60	40060	3,6	0	11	0=Jan., 1=Feb., 2=Mar., 3=Apr., 4=May, 5=June, 6=July, 7=Aug., 8=Sept., 9=Oct., 10=Nov., 11=Dec.
Fan Delay	61	40061	3,6	0	1	0=Off., 1=On
UI17 Configuration	63	40063	3,6	0	4	0=None, 1=Door dry, 2=Override, 3=Filter, 4=Service
Wireless Device 1 - Function	66	40066	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 2 - Function	67	40067	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 3 - Function	68	40068	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 4 - Function	69	40069	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 5 - Function	70	40070	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 6 - Function	71	40071	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 7 - Function	72	40072	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 8 - Function	73	40073	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 9 - Function	74	40074	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 10 - Function	75	40075	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Occupancy Source	77	40077	3,6	0	3	0=Motion, 1=Schedule, 2=Mot. occ., 3=Mot. unoc.



## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Mode Button	78	40078	3,6	0	1	0=Normal, 1=Off-Auto
Control Status	79	40079	3	0	2	0=Off, 1=Cool, 2=Heat
Custom button icon	81	40081	3,6	0	16	0=Default Button, 1=No Button, 2=System Mode Heat/Cool, 3=System Mode On/Off, 4=Fan Mode, 5=Override Button, 6=Units Button, 7=Help Button, 8=Language Button, 9=Schedule Button, 10=Lighting Button, 11=Blind Button, 12=Lamp Button, 13=Energy Button, 14=make Room Button, 15=Setting Button, 16=Timer Button
Custom button behavior	82	40082	3,6	0	11	0=Default function, 1=No function, 2=System mode function, 3=Fan function, 4=Override function, 5=Schedule function, 6=Units function, 7=Help function, 8=Language function, 9=Configuration function, 10=Custom function, 11=Standby function
Arabic	83	40083	3,6	0	1	0=Disabled, 1=Enabled
Czech	85	40085	3,6	0	1	0=Disabled, 1=Enabled
Danish	86	40086	3,6	0	1	0=Disabled, 1=Enabled
Dutch	87	40087	3,6	0	1	0=Disabled, 1=Enabled
Finnish	88	40088	3,6	0	1	0=Disabled, 1=Enabled
German	89	40089	3,6	0	1	0=Disabled, 1=Enabled
Hungarian	90	40090	3,6	0	1	0=Disabled, 1=Enabled
Indonesian	91	40091	3,6	0	1	0=Disabled, 1=Enabled
Italian	92	40092	3,6	0	1	0=Disabled, 1=Enabled
Norwegian	93	40093	3,6	0	1	0=Disabled, 1=Enabled
Polish	94	40094	3,6	0	1	0=Disabled, 1=Enabled
Portuguese	95	40095	3,6	0	1	0=Disabled, 1=Enabled
Slovak	96	40096	3,6	0	1	0=Disabled, 1=Enabled
Swedish	97	40097	3,6	0	1	0=Disabled, 1=Enabled
Turkish	98	40098	3,6	0	1	0=Disabled, 1=Enabled
Comfort or economy mode	99	40099	3,6	0	1	0=Comfort, 1=Economy
Reversing valve operation	100	40100	3,6	0	1	0=O, 1=B
Compressor - auxiliary interlock	101	40101	3,6	0	1	0=Off, 1=On
Application	102	40102	3,6	0	1	0=Rooftop, 1=Heatpump

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Modbus Baud Rate	105	40105	3,6	0	4	0=4800, 1=9600, 2=19200, 3=38400, 4=57600
Modbus Parity Bit	106	40106	3,6	0	2	0=None, 1=Odd, 2=Even
Schedule Type	107	40107	3,6	0	2	0=7 days, 1= 5+2 days, 2=5+1+1 days
UI16 Input Type	109	40109	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
UI17 Input Type	110	40110	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
UI19 Input Type	111	40111	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
UI20 Input Type	112	40112	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
UI22 Input Type	113	40113	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
UI23 Input Type	114	40114	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
UI24 Input Type	115	40115	3,6	0	2	0=Therm., 1=Binary, 2=Voltage
Room Temperature Sensor	116	40116	3,6	0	22	0=Wired, 1=Internal, 2=WL IO, 3=WL 1, 4=WL 2, 5=WL 3, 6=WL 4, 7=WL 5, 8=WL 6, 9=WL 7, 10=WL 8, 11=WL 9, 12=WL 10, 13=WL 11, 14=WL 12, 15=WL 13, 16=WL 14, 17=WL 15, 18=WL 16, 19=WL 17, 20=WL 18, 21=WL 19, 22=WL 20
CO2 Display	118	40118	3,6	0	1	0=Disabled, 1=Enabled
CO2 Auto calibration	119	40119	3,6	0	1	0=Disabled, 1=Enabled
Lock Screen	120	40120	3,6	0	1	0=No, 1=Yes
Relative humidity sensor	121	40121	3,6	0	21	0=None, 1=Internal, 2=WL 1, 3=WL 2, 4=WL 3, 5=WL 4, 6=WL 5, 7=WL 6, 8=WL 7, 9=WL 8, 10=WL 9, 11=WL 10, 12=WL 11, 13=WL 12, 14=WL 13, 15=WL 14, 16=WL 15, 17=WL 16, 18=WL 17, 19=WL 18, 20=WL 19, 21=WL 20
Temperature Alarm Enabled	123	40123	3,6	0	1	0=Off, 1=On
ADR Permission	124	40124	3,6	0	1	0=Off, 1=On
Japanese	129	40129	3,6	0	1	0= Disabled 1=Enabled
Hebrew	130	40130	3,6	0	1	0= Disabled 1=Enabled
Wireless Device 11 - Function	138	40138	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 12 - Function	139	40139	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 13 - Function	140	40140	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 14 - Function	141	40141	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Wireless Device 15 - Function	142	40142	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 16 - Function	143	40143	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 17 - Function	144	40144	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 18 - Function	145	40145	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 19 - Function	146	401346	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
Wireless Device 20 - Function	147	40147	3,6	0	8	0=None, 1=Window, 2=Door, 3=Motion, 4=Env. data, 5=Remove, 6=Water, 7=Refrig., 8=Freezer
CO2 source	148	40148	3,6	0	21	0=None, 1=Local, 2=WL 1, 3=WL 2, 4=WL 3, 5=WL 4, 6=WL 5, 7=WL 6, 8=WL 7, 9=WL 8, 10=WL 9, 11=WL 10, 12=WL 11, 13=WL 12, 14=WL 13, 15=WL 14, 16=WL 15, 17=WL 16, 18=WL 17, 19=WL 18, 20=WL 19, 21=WL 20
Display the Fan Status icon	150	40150	3-6	0	1	0=Disabled, 1=Enabled
Display the System Status icon	151	40151	3-6	0	1	0=Disabled, 1=Enabled
Display the Help button	152	40152	3-6	0	1	0=Disabled, 1=Enabled
Occupied Cool Setpoint	4001	44001	3,6	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Occupied Heat Setpoint	4002	44002	3,6	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Unoccupied Cool Setpoint	4003	44003	3,6	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Unoccupied Heat Setpoint	4004	44004	3,6	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Heating Setpoint Limit	4005	44005	3,6	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Cooling Setpoint Limit	4006	44006	3,6	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Calibrate Room Temperature Sensor	4007	44007	3,6	-5°F(-2.5°C)	5°F(2.5°C)	Fahrenheit/Celsius
Standby Cool Setpoint	4009	44009	3,6	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Standby Heat Setpoint	4010	44010	3,6	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Dehumidification Setpoint	4012	44012	3,6	30	95	Percent Relative Humidity
Calibrate Humidity Sensor	4013	44013	3,6	-15	15	Percent Relative Humidity
Dehumidification Hysteresis	4015	44015	3,6	2	20	Percent Relative Humidity
Main Password	4017	44017	3,6	0	9999	

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
COM Address	4018	44018	3,6	0	254	
Model Number	4019	44019	3	160	164	
Minimum Deadband	4020	44020	3,6	2°F(1°C)	5°F(2.5°C)	Fahrenheit/Celsius
Heating CPH	4021	44021	3,6	3	8	
Cooling CPH	4022	44022	3,6	3	4	
Unoccupied Time	4026	44026	3,6	0	24	Hours
Temporary Occupancy Time	4027	44027	3,6	0	24	Hours
Standby Time	4028	44028	3,6	5	24	Hours
Proportional Band	4029	44029	3,6	3	10	
Cooling Demand Limit	4030	44030	3,6	0	100	Percent
Heating Demand Limit	4031	44031	3,6	0	100	Percent
Low Backlight	4033	44033	3,6	0	100	Percent
Night Backlight	4034	44034	3,6	0	100	Percent
Standby Temperature Differential	4038	44038	3,6	1°F(0.5°C)	5°F(2.5°C)	Fahrenheit/Celsius
User Password	4039	44039	3,6	0	9999	
User HMI	4042	44042	3,6	0	12	
Default Heating Setpoint	4043	44043	3,6	65°F(18°C)	80°F(27°C)	Fahrenheit/Celsius
Anti Short Cycle Time	4047	44047	3,6	0	5	Minutes
Number of Heating Stages	4048	44048	3,6	0	2	
Number of Cooling Stages	4049	44049	3,6	1	2	
Power-up Delay	4050	44050	3,6	10	120	Seconds
Calibrate Outside Temperature Sensor	4051	44051	3,6	-5°F(-2.5°C)	5°F(2.5°C)	Fahrenheit/Celsius
Heating Lockout from Outside Air Temperature	4052	44052	3,6	-15°F(-26°C)	120°F(49°C)	Fahrenheit/Celsius

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Cooling Lockout	4053	44053	3,6	-40°F(-40°C)	95°F(35°C)	Fahrenheit/Celsius
Supply Air Setpoint	4054	44054	3,6	50°F(10°C)	90°F(32°C)	Fahrenheit/Celsius
Changeover Setpoint	4055	44055	3,6	14°F(-10°C)	70°F(21°C)	Fahrenheit/Celsius
Economizer Minimum Position	4056	44056	3,6	0	100	Percent
Economizer Maximum Position	4057	44057	3,6	0	100	Percent
Occupied 1	4059	44059	3,6	0	1440	
Unoccupied 1	4060	44060	3,6	0	1440	
Occupied 2	4061	44061	3,6	0	1440	
Unoccupied 2	4062	44062	3,6	0	1440	
Occupied 3	4063	44063	3,6	0	1440	
Unoccupied 3	4064	44064	3,6	0	1440	
Occupied 1	4065	44065	3,6	0	1440	
Unoccupied 1	4066	44066	3,6	0	1440	
Occupied 2	4067	44067	3,6	0	1440	
Unoccupied 2	4068	44068	3,6	0	1440	
Occupied 3	4069	44069	3,6	0	1440	
Unoccupied 3	4070	44070	3,6	0	1440	
Occupied 1	4071	44071	3,6	0	1440	
Unoccupied 1	4072	44072	3,6	0	1440	
Occupied 2	4073	44073	3,6	0	1440	
Unoccupied 2	4074	44074	3,6	0	1440	
Occupied 3	4075	44075	3,6	0	1440	
Unoccupied 3	4076	44076	3,6	0	1440	

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Occupied 1	4077	44077	3,6	0	1440	
Unoccupied 1	4078	44078	3,6	0	1440	
Occupied 2	4079	44079	3,6	0	1440	
Unoccupied 2	4080	44080	3,6	0	1440	
Occupied 3	4081	44081	3,6	0	1440	
Unoccupied 3	4082	44082	3,6	0	1440	
Occupied 1	4083	44083	3,6	0	1440	
Unoccupied 1	4084	44084	3,6	0	1440	
Occupied 2	4085	44085	3,6	0	1440	
Unoccupied 2	4086	44086	3,6	0	1440	
Occupied 3	4087	44087	3,6	0	1440	
Unoccupied 3	4088	44088	3,6	0	1440	
Occupied 1	4089	44089	3,6	0	1440	
Unoccupied 1	4090	44090	3,6	0	1440	
Occupied 2	4091	44091	3,6	0	1440	
Unoccupied 2	4092	44092	3,6	0	1440	
Occupied 3	4093	44093	3,6	0	1440	
Unoccupied 3	4094	44094	3,6	0	1440	
Occupied 1	4095	44095	3,6	0	1440	
Unoccupied 1	4096	44096	3,6	0	1440	
Occupied 2	4097	44097	3,6	0	1440	
Unoccupied 2	4098	44098	3,6	0	1440	
Occupied 3	4099	44099	3,6	0	1440	

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Unoccupied 3	4100	44100	3,6	0	1440	
Fresh Air Range Upper Limit	4101	44101	3,6	0	20000	Cubic Feet per Minute
Minimum Supply Heat	4102	44102	3,6	50°F(10°C)	72°F(22°C)	Fahrenheit/Celsius
Supply Heat Lockout	4103	44103	3,6	-15°F(-26°C)	120°F(49°C)	Fahrenheit/Celsius
Discharge High Limit	4104	44104	3,6	70°F(21°C)	150°F(65°C)	Fahrenheit/Celsius
Discharge Low Limit	4105	44105	3,6	35°F(2°C)	65°F(18°C)	Fahrenheit/Celsius
Minimum Fresh Air	4106	44106	3,6	0	20000	Cubic Feet per Minute
Maximum Fresh Air	4107	44107	3,6	0	20000	Cubic Feet per Minute
Minimum CO2	4108	44108	3,6	0	5000	Parts per Million
Maximum CO2	4109	44109	3,6	0	5000	Parts per Million
Time	4110	44110	3,6	0	1439	
Year	4111	44111	3,6	2000	2100	
Day	4112	44112	3,6	1	31	
Lua Parameter A (AV25)	4117	44117	3,6	-32768	32767	
Lua Parameter B (AV26)	4118	44118	3,6	-32768	32767	
Lua Parameter C (AV27)	4119	44119	3,6	-32768	32767	
Lua Parameter D (AV28)	4120	44120	3,6	-32768	32767	
Lua Parameter E (AV29)	4121	44121	3,6	-32768	32767	
Lua Parameter F (AV30)	4122	44122	3,6	-32768	32767	
Hardware Revision	4123	44123	3	20	21	
Keyboard Value	4126	44126	3,6	0	35	
High balance point	4132	44132	3,6	34°F(1°C)	90°F(32°C)	Fahrenheit/Celsius
Low balance point	4133	44133	3,6	-40°F(-40°C)	30°F(-1°C)	Fahrenheit/Celsius

## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
UI19 Lua	4134	44134	3,6	-32768	32767	
UI20 Lua	4135	44135	3,6	-32768	32767	
UI22 Lua	4136	44136	3,6	-32768	32767	
UI23 Lua	4137	44137	3,6	-32768	32767	
UI24 Lua	4138	44138	3,6	-32768	32767	
Ambient Low Temperature Threshold	4143	44143	3,6	32°F(0°C)	50°F(10°C)	Fahrenheit/Celsius
Temperature Alarm Hysteresis	4144	44144	3,6	0°F(0°C)	10°F(5.5°C)	Fahrenheit/Celsius
Load Shedding Offset	4145	44145	3,6	4°F(2°C)	10°F(5.5°C)	Fahrenheit/Celsius
Lua Parameter G (AV225)	4146	44146	3,6	-32768	32767	
Lua Parameter H (AV226)	4147	44147	3,6	-32768	32767	
Lua Parameter I (AV227)	4148	44148	3,6	-32768	32767	
Lua Parameter J (AV228)	4149	44149	3,6	-32768	32767	
Lua Parameter K (AV229)	4150	44150	3,6	-32768	32767	
Lua Parameter L (AV230)	4151	44151	3,6	-32768	32767	
Standby Screen Delay	4174	44174	3,6	5	300	Seconds
Ambient High Temperature Threshold	4175	44175	3,6	32°F(0°C)	122°F(50°C)	Fahrenheit/Celsius
Refrigeration High Temperature Threshold	4176	44176	3,6	32°F(0°C)	60°F(15.5°C)	Fahrenheit/Celsius
Refrigeration Low Temperature Threshold	4177	44177	3,6	32°F(0°C)	50°F(10°C)	Fahrenheit/Celsius
Freezer High Temperature Threshold	4178	44178	3,6	-40°F(-40°C)	32°F(0°C)	Fahrenheit/Celsius
PI Heating Demand	8001	48001	3	0	100	Percent
PI Cooling Demand	8002	48002	3	0	100	Percent
Economizer Demand	8004	48004	3	0	100	Percent
Analog Output Heat Demand	8005	48005	3	0	100	Percent



## 4000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
UO11 Analog Output	9001	49001	3	0	10	Voltage
UO12 Analog Output	9002	49002	3	0	10	Voltage
UO9 Analog Output	9003	49003	3	0	10	Voltage
UO10 Analog Output	9004	49004	3	0	10	Voltage

## 5000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Filter Alarm	5001	5001	1	0	1	0=Off, 1=On
Service Alarm	5002	5002	1	0	1	0=Off, 1=On
Window Alarm	5003	5003	1	0	1	0=Off, 1=On
PIR Local Motion	5004	5004	1	0	1	0=No motion, 1=Motion
Dehumidification Status	5005	5005	1	0	1	0=Off, 1=On
Low Battery Alarm	5006	5006	1	0	1	0=Off, 1=On
Window Contact Installed	5007	5007	1	0	1	0=No, 1=Yes
Window Contact Status	5008	5008	1	0	1	0=Closed, 1=Open
Door Contact Installed	5009	5009	1	0	1	0=No, 1=Yes
Door Contact Status	5010	5010	1	0	1	0=Closed, 1=Open
Display Long Screen Message	5011	5011	1,5	0	1	0=Off, 1=On
Force High Backlight	5012	5012	1,5	0	1	0=Off, 1=On
Fan Lock Alarm	5013	5013	1	0	1	0=Off, 1=On
Smart Recovery Status	5014	5014	1	0	1	0=Off, 1=On
Exception Status	5015	5015	1	0	1	0=Off, 1=On
CO2 Alarm	5016	5016	1	0	1	0=Off, 1=On
Low Fresh Air Alarm	5017	5017	1	0	1	0=Off, 1=On
Frost Protection Alarm	5018	5018	1	0	1	0=Off, 1=On
ZigBee PIR Sensor Installed	5019	5019	1	0	1	0=Off, 1=On
ZigBee Sensor Motion	5020	5020	1	0	1	0=No motion, 1=Motion
Clock Alarm	5021	5021	1	0	1	0=Off, 1=On
Water Leak	5024	5024	1	0	1	0=Off, 1=On
Water Leak Sensor Installed	5025	5025	1,	0	1	0=No, 1=Yes

## 5000+ MODBUS ADDRESS FUNCTIONS

Object Name	Modbus Register	Modbus Address	Function Code	Low Limit	High Limit	Description ***
Water leak Sensor Status	5026	5026	1	0	1	0=Normal, 1=Leak
Low Temperature	5027	5027	1	0	1	0=Off, 1=On
Load Shedding Demand	5028	5028	1,5	0	1	0=Off, 1=On
Load Shedding Status	5029	5029	1	0	1	0=Off, 1=On
Load Shedding Override	5030	5030	1	0	1	0=Off, 1=On
High Temperature	5033	5033	1	0	1	0=Off, 1=On