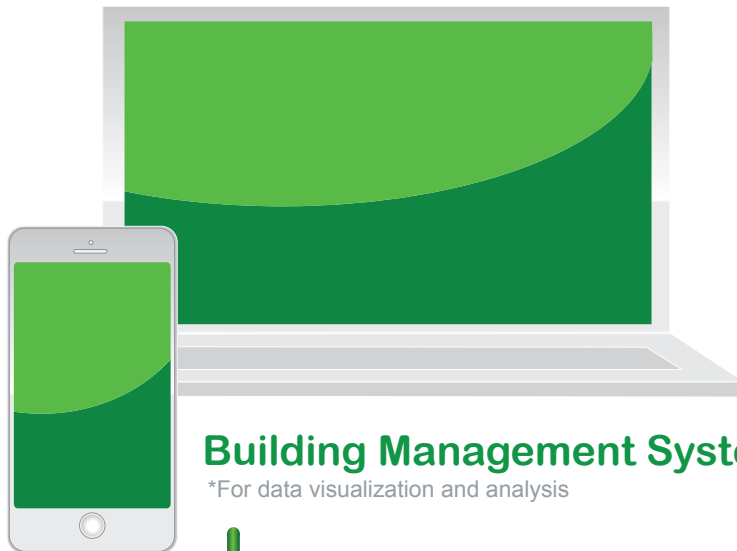


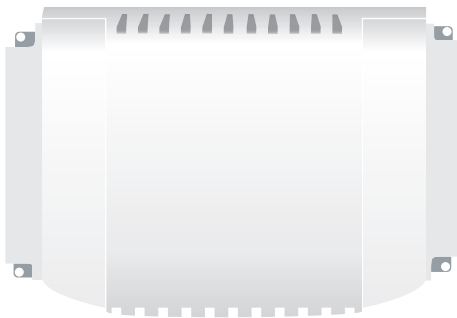
# Modbus Integration

Integration for Modbus Functionality for SE8000 Series



## Building Management System

\*For data visualization and analysis



## VT8000

Series room controllers



## TABLE OF CONTENTS

|   |    |
|---|----|
| Modbus Specific Read-only Points . . . . .      | 2  |
| Configuration . . . . .                         | 3  |
| Mapping . . . . .                               | 3  |
| BACnet Device Object properties . . . . .       | 4  |
| SE8000 series Common Modbus Functions . . . . . | 6  |
| SE8600 series Modbus Functions . . . . .        | 30 |
| SE8300 series Modbus Functions . . . . .        | 60 |
| SER8300 series Modbus Functions . . . . .       | 52 |
| Technical Support . . . . .                     | 62 |

## INTRODUCTION

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

## SE8000 SERIES MODBUS SPECIFICATIONS

The SE800 Series 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 SE8000 Series 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

1/1 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
- Only the RTU mode is used
- 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><br>Room Controller networking address<br>Default value: 254<br>Range: 0 to 254 | <b>Communication Address</b><br>Default value of 254 disables Modbus communication for the Room Controller.  |
| <b>Network units</b><br>Default value: Imperial  | <b>Measurement Units</b><br><b>Imperial:</b> network units shown as Imperial units.<br><b>SI:</b> network units shown as International Metric units. |
| <b>Baud rate</b><br>Default value: Auto  | <b>Baud Rate</b><br><b>Auto:</b> automatically detects baud rate.<br><b>Other choices:</b> (115200, 76800, 57600, 38400, 19200, and 9600).           |
| <b>Parity</b><br>Default value: None   | <b>Parity</b><br>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)

## BACNET DEVICE OBJECT PROPERTIES

| Name                            | Number | Info  |
|---------------------------------|--------|---|
| apdu-timeout                    | 11     |   |
| application-software-version    | 12     | also available via modbus, see points 39002...39005 above |
| description                     | 28     | same as CSV2  |
| device-address-binding          | 30     | -   |
| firmware-revision               | 44     | same as application-software-version                      |
| local-date                      | 56     | also available via modbus and ZigBee*                     |
| local-time                      | 57     | also available via modbus and ZigBee*                     |
| location                        | 58     | same as CSV1  |
| max-apdu-length-accepted        | 62     | 480 bytes (MS/TP)   |
| max-info-frames                 | 63     | -   |
| max-master                      | 64     | -   |
| model-Name                      | 70     | 8000 Series   |
| Number-of-APDU-retries          | 73     |   |
| object-identifier               | 75     | Device, <instance_Number>                                 |
| object-Name                     | 77     | writable  |
| object-type                     |        | Device  |
| required properties             | 80     | array   |
| protocol-object-types-supported | 96     | -   |
| protocol-services-supported     | 97     | -   |
| protocol-version                | 98     | -   |
| segmentation-supported          | 107    | segmentation is not supported                             |
| system-status                   | 112    | -   |

## BACNET DEVICE OBJECT PROPERTIES

| Name                     | Number | Info                              |
|--------------------------|--------|-----------------------------------|
| vendor-identifier        | 120    | -                                 |
| vendor-Name              | 121    | -                                 |
| protocol-revision        | 139    | -                                 |
| active-cov-subscriptions | 152    | -                                 |
| database-revision        | 155    | -                                 |
| profile-Name             | 168    | contains precise sub-model Number |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                            | BACnet ***  | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|--|-------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Display Temperature Scale              | MSV51       | 0         | 1          | 16-bit holding register | 3,6              | 1               | 40001          |
| Display Language                       | MSV4        | 0         | 20         | 16-bit holding register | 3,6              | 2               | 40002          |
| System Mode                            | MSV16       | 0         | 3          | 16-bit holding register | 3,6              | 4               | 40004          |
| Room Humidity Display **               | MSV70       | 0         | 1          | 16-bit holding register | 3,6              | 10              | 40010          |
| Setpoint Function                      | MSV58       | 0         | 1          | 16-bit holding register | 3,6              | 17              | 40017          |
| Occupancy Command                      | MSV10       | 0         | 2          | 16-bit holding register | 3,6              | 22              | 40022          |
| Network Units (BACnet and Modbus only) | MSV6        | 0         | 1          | 16-bit holding register | 3,6              | 23              | 40023          |
| Network Language                       | MSV7        | 0         | 2          |                         |                  |                 |                |
| BACnet Baud Rate                       | MSV8        | 0         | 6          |                         |                  |                 |                |
| Enable Smart Recovery                  | MSV71       | 0         | 1          | 16-bit holding register | 3,6              | 51              | 40051          |
| Schedule Menu                          | MSV73       | 0         | 3          | 16-bit holding register | 3,6              | 54              | 40054          |
| English                                |             | 1         | 1          |                         |                  |                 |                |
| French                                 | MSV101      | 0         | 1          | 16-bit holding register | 3,6              | 56              | 40056          |
| Spanish                                | MSV102      | 0         | 1          | 16-bit holding register | 3,6              | 57              | 40057          |
| Chinese                                | MSV103      | 0         | 1          | 16-bit holding register | 3,6              | 58              | 40058          |
| Program Command                        | Part of PGn | 0         | 1          | -                       | -                | -               | -              |
| Wireless Zone 1 Set Function           | MSV210      | 0         | 6          | 16-bit holding register | 3,6              | 66              | 40066          |
| Wireless Zone 2 Set Function           | MSV220      | 0         | 6          | 16-bit holding register | 3,6              | 67              | 40067          |
| Wireless Zone 3 Set Function           | MSV230      | 0         | 6          | 16-bit holding register | 3,6              | 68              | 40068          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***   |
|------------------------|-----------------------|----------------------------------|---|
| yes                    | yes                   | 1                                | 0=°C (SI/Metric units), 1=°F (Imperial units)   |
| yes                    | yes                   | 1                                | 0=English, 1=French, 2=Spanish, 3=Chinese, 4=Russian, 5=Arabic, 6=Bulgarian(not available in 1.3.0), 7=Czech, 8=Danish, 9=Dutch, 10=Finnish, 11=German, 12=Hungarian, 13=Indonesian, 14=Italian, 15=Norwegian, 16=Polish, 17=Portug., 18=Slovak, 19=Swedish, 20=Turkish |
| yes                    | yes                   | 1                                | 0=Off, 1=Auto, 2=Cool, 3=Heat   |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled   |
| yes                    | yes                   | 1                                | 0=Dual SP, 1=Attach SP  |
| yes                    | yes                   | 1                                | 0=Loc occ., 1=Occupied, 2=Unocc.  |
| yes                    | *                     | 1                                | 0=SI, 1=Imperial (Note: units for the MPM communication are changed on the MPM, not on the thermostat)  |
| -                      | *                     | 1                                | 0=English, 1=French, 2=Spanish  |
| -                      | *                     | 1                                | 0=9600, 1=19200, 2=38400, 3=57600, 4=76800, 5=115200, 6=Auto  |
| yes                    | yes                   | 1                                | 0=Off, 1=On   |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled, 2=Dis.no.clk, 3=En.no.clk  |
| -                      | yes                   | 1                                | 0=Disabled, 1=Enabled   |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled   |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled   |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled   |
| -                      | yes                   | 1                                | 0=Stop, 1=Run   |
| yes                    | *                     | 1                                | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2   |
| yes                    | *                     | 1                                | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2   |
| yes                    | *                     | 1                                | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2   |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                  | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Wireless Zone 4 Set Function | MSV240     | 0         | 6          | 16-bit holding register | 3,6              | 69              | 40069          |
| Wireless Zone 5 Set Function | MSV250     | 0         | 6          | 16-bit holding register | 3,6              | 70              | 40070          |
| Wireless Zone 6 Set Function | MSV260     | 0         | 6          | 16-bit holding register | 3,6              | 71              | 40071          |
| Wireless Zone 7 Set Function | MSV270     | 0         | 6          | 16-bit holding register | 3,6              | 72              | 40072          |
| Wireless Zone 8 Set Function | MSV280     | 0         | 6          | 16-bit holding register | 3,6              | 73              | 40073          |
| Wireless Zone 9 Set Function | MSV290     | 0         | 6          | 16-bit holding register | 3,6              | 74              | 40074          |
| Custom button icon           | MSV114     | 0         | 16         | 16-bit holding register | 3,6              | 81              | 40081          |
| Custom button behavior       | MSV115     | 0         | 11         | 16-bit holding register | 3,6              | 82              | 40082          |
| Arabic                       | MSV120     | 0         | 1          | 16-bit holding register | 3,6              | 83              | 40083          |
| Czech                        | MSV122     | 0         | 1          | 16-bit holding register | 3,6              | 85              | 40085          |
| Danish                       | MSV123     | 0         | 1          | 16-bit holding register | 3,6              | 86              | 40086          |
| Dutch                        | MSV124     | 0         | 1          | 16-bit holding register | 3,6              | 87              | 40087          |
| Finnish                      | MSV125     | 0         | 1          | 16-bit holding register | 3,6              | 88              | 40088          |
| German                       | MSV126     | 0         | 1          | 16-bit holding register | 3,6              | 89              | 40089          |
| Hungarian                    | MSV127     | 0         | 1          | 16-bit holding register | 3,6              | 90              | 40090          |
| Swedish                      | MSV134     | 0         | 1          | 16-bit holding register | 3,6              | 97              | 40097          |
| Turkish                      | MSV135     | 0         | 1          | 16-bit holding register | 3,6              | 98              | 40098          |
| Modbus Baud Rate             | -          | 0         | 4          | 16-bit holding register | 3,6              | 105             | 40105          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



| Writable Via Modbus | ZigBee Available * | Zigbee Counting Starts At *** | Description ***  |
|---------------------|--------------------|-------------------------------|--|
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2  |
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2  |
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2  |
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2  |
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2  |
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2  |
| yes                 | yes                | 1                             | 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 |
| yes                 | yes                | 1                             | 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   |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | -                  |                               | 0=4800, 1=9600, 2=19200, 3=38400, 4=57600  |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                       | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-----------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Modbus Parity                     | -          | 0         | 2          | 16-bit holding register | 3,6              | 106             | 40106          |
| Occupied Cool Setpoint            | AV40       | 540       | 1000       | 16-bit holding register | 3,6              | 4001            | 44001          |
| Occupied Heat Setpoint            | AV39       | 400       | 900        | 16-bit holding register | 3,6              | 4002            | 44002          |
| Unoccupied Cool Setpoint          | AV44       | 540       | 1000       | 16-bit holding register | 3,6              | 4003            | 44003          |
| Unoccupied Heat Setpoint          | AV43       | 400       | 900        | 16-bit holding register | 3,6              | 4004            | 44004          |
| Heating Setpoint Limit            | AV58       | 400       | 900        | 16-bit holding register | 3,6              | 4005            | 44005          |
| Cooling Setpoint Limit            | AV59       | 540       | 1000       | 16-bit holding register | 3,6              | 4006            | 44006          |
| Calibrate Room Temperature Sensor | AV7        | -50       | 50         | 16-bit holding register | 3,6              | 4007            | 44007          |
| Standby Cool Setpoint             | AV42       | 540       | 1000       | 16-bit holding register | 3                | 4009            | 44009          |
| Standby Heat Setpoint             | AV41       | 400       | 900        | 16-bit holding register | 3,6              | 4010            | 44010          |
| Main Password                     | AV56       | 0         | 9999       | 16-bit holding register | 3,6              | 4017            | 44017          |
| COM Address                       | AV10       | 0         | 254        | 16-bit holding register | 3,6              | 4018            | 44018          |
| Model Number                      | -          | 153       | 156        | 16-bit Input            | 4                | 9006            | 39006          |
| Minimum Deadband                  | AV63       | 20        | 50         | 16-bit holding register | 3,6              | 4020            | 44020          |
| Unoccupied Time                   | AV68       | 0         | 240        | 16-bit holding register | 3,6              | 4026            | 44026          |
| Low Backlight                     | AV3        | 0         | 100        | 16-bit holding register | 3,6              | 4033            | 44033          |
| Night Backlight                   | AV4        | 0         | 100        | 16-bit holding register | 3,6              | 4034            | 44034          |
| Standby Temperature Differential  | AV46       | 10        | 50         | 16-bit holding register | 3,6              | 4038            | 44038          |
| User Password                     | AV57       | 0         | 9999       | 16-bit holding register | 3,6              | 4039            | 44039          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***       |
|------------------------|-----------------------|----------------------------------|-----------------------|
| yes                    | -                     |                                  | 0=None, 1=Odd, 2=Even |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| -                      | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| -                      | yes                   | 0                                | -                     |
| -                      | *                     | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |
| yes                    | yes                   | 0                                | -                     |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description            | BACnet ***   | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|------------------------|--------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| User HMI               | AV2          | 0         | 11         | 16-bit holding register | 3,6              | 4042            | 44042          |
| Tuesday Occupied 1     | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4065            | 44065          |
| Tuesday Unoccupied 1   | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4066            | 44066          |
| Tuesday Occupied 2     | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4067            | 44067          |
| Tuesday Unoccupied 2   | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4068            | 44068          |
| Tuesday Occupied 3     | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4069            | 44069          |
| Tuesday Unoccupied 3   | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4070            | 44070          |
| Wednesday Occupied 1   | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4071            | 44071          |
| Wednesday Unoccupied 1 | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4072            | 44072          |
| Wednesday Occupied 2   | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4073            | 44073          |
| Wednesday Unoccupied 2 | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4074            | 44074          |
| Thursday Occupied 3    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4081            | 44081          |
| Thursday Unoccupied 3  | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4082            | 44082          |
| Friday Occupied 1      | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4083            | 44083          |
| Friday Unoccupied 1    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4084            | 44084          |
| Friday Occupied 2      | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4085            | 44085          |
| Friday Unoccupied 2    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4086            | 44086          |
| Friday Occupied 3      | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4087            | 44087          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

[illegible]

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description            | BACnet ***   | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|------------------------|--------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Friday Unoccupied 3    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4088            | 44088          |
| Saturday Occupied 1    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4089            | 44089          |
| Saturday Unoccupied 1  | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4090            | 44090          |
| Sunday Occupied 2      | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4097            | 44097          |
| Sunday Unoccupied 2    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4098            | 44098          |
| Sunday Occupied 3      | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4099            | 44099          |
| Sunday Unoccupied 3    | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4100            | 44100          |
| Lua Parameter A (AV25) | AV25         | -32768    | 32767      | 16-bit holding register | 3,6              | 4117            | 44117          |
| Lua Parameter B (AV26) | AV26         | -32768    | 32767      | 16-bit holding register | 3,6              | 4118            | 44118          |
| Lua Parameter C (AV27) | AV27         | -32768    | 32767      | 16-bit holding register | 3,6              | 4119            | 44119          |
| Lua Parameter D (AV28) | AV28         | -32768    | 32767      | 16-bit holding register | 3,6              | 4120            | 44120          |
| Lua Parameter E (AV29) | AV29         | -32768    | 32767      | 16-bit holding register | 3,6              | 4121            | 44121          |
| Lua Parameter F (AV30) | AV30         | -32768    | 32767      | 16-bit holding register | 3,6              | 4122            | 44122          |
| Room Temperature       | AV100        | -400      | 1220       | 16-bit Input            | 4                | 1               | 30001          |
| Room Humidity **       | AV103        | 5         | 95         | 16-bit Input            | 4                | 4               | 30004          |
| Filter Alarm           | BV36         | 0         | 1          | Discrete value          | 1                | 5001            | 5001           |
| Service Alarm          | BV37         | 0         | 1          | Discrete value          | 1                | 5002            | 5002           |
| Window Alarm           | BV35         | 0         | 1          | Discrete value          | 1                | 5003            | 5003           |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description *** |
|------------------------|-----------------------|----------------------------------|-----------------|
| yes                    | *                     | 0                                | -               |
| yes                    | *                     | 0                                | -               |
| yes                    | *                     | 0                                | -               |
| yes                    | *                     | 0                                | -               |
| yes                    | *                     | 0                                | -               |
| yes                    | *                     | 0                                | -               |
| yes                    | *                     | 0                                | -               |
| yes                    | yes                   | 0                                | -               |
| yes                    | yes                   | 0                                | -               |
| yes                    | yes                   | 0                                | -               |
| yes                    | yes                   | 0                                | -               |
| yes                    | yes                   | 0                                | -               |
| yes                    | yes                   | 0                                | -               |
| -                      | yes                   | 0                                | -               |
| -                      | yes                   | 0                                | -               |
| -                      | yes                   | 0                                | 0=Off, 1=On     |
| -                      | yes                   | 0                                | 0=Off, 1=On     |
| -                      | yes                   | 0                                | 0=Off, 1=On     |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                   | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| PIR Local Motion              | BV32       | 0         | 1          | Discrete value          | 1                | 5004            | 5004           |
| Dehumidification Status **    | BV38       | 0         | 1          | Discrete value          | 1                | 5005            | 5005           |
| Low Battery Alarm             | BV5        | 0         | 1          | Discrete value          | 1,5              | 5006            | 5006           |
| Window Contact Installed      | BV4        | 0         | 1          | Discrete value          | 1,5              | 5007            | 5007           |
| Window Contact Status         | BV3        | 0         | 1          | Discrete value          | 1,5              | 5008            | 5008           |
| Door Contact Installed        | BV2        | 0         | 1          | Discrete value          | 1,5              | 5009            | 5009           |
| Door Contact Status           | BV1        | 0         | 1          | Discrete value          | 1,5              | 5010            | 5010           |
| ZigBee PIR Sensor Installed   | BV200      | 0         | 1          | Discrete value          | 1,5              | 5019            | 5019           |
| ZigBee Sensor Motion          | BV201      | 0         | 1          | Discrete value          | 1,5              | 5020            | 5020           |
| Clock Alarm                   | BV8        | 0         | 1          | Discrete value          | 1                | 5021            | 5021           |
| BI1 Binary Input              | BI29       | 0         | 1          | Discrete Input          | 2                | 1               | 10001          |
| Light Sensor Level            | AI2        | 0         | 30000      | 16-bit Input            | 4                | 1002            | 31002          |
| Wireless Zone 7 IEEE Address  | AI270      | -32768    | 32767      | 16-bit Input            | 4                | 1017            | 31017          |
| Wireless Zone 8 IEEE Address  | AI280      | -32768    | 32767      | 16-bit Input            | 4                | 1018            | 31018          |
| Wireless Zone 9 IEEE Address  | AI290      | -32768    | 32767      | 16-bit Input            | 4                | 1019            | 31019          |
| Wireless Zone 10 IEEE Address | AI300      | -32768    | 32767      | 16-bit Input            | 4                | 1020            | 31020          |
| PI Heating Demand             | AO21       | 0         | 100        | 16-bit holding register | 3                | 8001            | 48001          |
| PI Cooling Demand             | AO22       | 0         | 100        | 16-bit holding register | 3                | 8002            | 48002          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***                            |
|------------------------|-----------------------|----------------------------------|--|
| -                      | yes                   | 0                                | 0=No motion, 1=Motion                      |
| -                      | yes                   | 0                                | 0=Off, 1=On                                |
| yes                    | yes                   | 0                                | 0=Off, 1=On                                |
| yes                    | yes                   | 0                                | 0=No, 1=Yes                                |
| yes                    | yes                   | 0                                | 0=Closed, 1=Opened                         |
| yes                    | yes                   | 0                                | 0=No, 1=Yes                                |
| yes                    | yes                   | 0                                | 0=Closed, 1=Opened                         |
| yes                    | yes                   | 0                                | 0=Off, 1=On                                |
| yes                    | yes                   | 0                                | 0=No motion, 1=Motion                      |
| -                      | yes                   | 0                                | 0=Off, 1=On                                |
| -                      | yes                   | 0                                | 0=Activated, 1=Not activ.                  |
| -                      | yes                   | 0                                | Raw value, no units                        |
| -                      | yes                   | 0                                | <i>Last two bytes of the MAC addresses</i> |
| -                      | yes                   | 0                                | <i>Last two bytes of the MAC addresses</i> |
| -                      | yes                   | 0                                | <i>Last two bytes of the MAC addresses</i> |
| -                      | yes                   | 0                                | <i>Last two bytes of the MAC addresses</i> |
| -                      | yes                   | 0                                | <i>percent</i>                             |
| -                      | yes                   | 0                                | <i>percent</i>                             |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                    | BACnet ***  | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|--------------------------------|-------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| UO12 Analog Output             | AO124       | 0         | 100        | 16-bit holding register | 3                | 9002            | 49002          |
| Dehumidification Lockout **    | MSV13       | 0         | 1          | 16-bit holding register | 3,6              | 12              | 40012          |
| Time Format                    | MSV5        | 0         | 1          | 16-bit holding register | 3,6              | 27              | 40027          |
| Standby Mode Configuration     | MSV11       | 0         | 1          | 16-bit holding register | 3,6              | 28              | 40028          |
| HMI Colour                     | MSV2        | 0         | 4          | 16-bit holding register | 3,6              | 29              | 40029          |
| Main Display                   | MSV3        | 0         | 1          | 16-bit holding register | 3,6              | 30              | 40030          |
| Long Message Background Colour | MSV1        | 0         | 6          | 16-bit holding register | 3,6              | 31              | 40031          |
| Use Standby Screen             | MSV32       | 0         | 1          | 16-bit holding register | 3,6              | 32              | 40032          |
| Russian                        | MSV104      | 0         | 1          | 16-bit holding register | 3,6              | 59              | 40059          |
| Month                          | Part of DEV | 0         | 11         | 16-bit holding register | 3,6              | 60              | 40060          |
| Wireless Zone 10 Set Function  | MSV300      | 0         | 6          | 16-bit holding register | 3,6              | 75              | 40075          |
| Occupancy Source               | MSV110      | 0         | 1          | 16-bit holding register | 3,6              | 77              | 40077          |
| Mode Button                    | MSV111      | 0         | 1          | 16-bit holding register | 3,6              | 78              | 40078          |
| Control Status                 | MSV112      | 0         | 2          | 16-bit holding register | 3                | 79              | 40079          |
| Indonesian                     | MSV128      | 0         | 1          | 16-bit holding register | 3,6              | 91              | 40091          |
| Italian                        | MSV129      | 0         | 1          | 16-bit holding register | 3,6              | 92              | 40092          |
| Norwegian                      | MSV130      | 0         | 1          | 16-bit holding register | 3,6              | 93              | 40093          |
| Polish                         | MSV131      | 0         | 1          | 16-bit holding register | 3,6              | 94              | 40094          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable Via Modbus | ZigBee Available * | Zigbee Counting Starts At *** | Description ***  |
|---------------------|--------------------|-------------------------------|--|
| -                   | -                  | -                             | <i>percent (cooling output) 0%=0Vdc, 100%=10Vdc</i>  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=AM-PM, 1=24 Hours  |
| yes                 | yes                | 1                             | 0=Absolute, 1=Offset   |
| yes                 | yes                | 1                             | 0=White, 1=Green, 2=Blue, 3=Grey, 4=Dark grey  |
| yes                 | yes                | 1                             | 0=Temp., 1=Setpoint  |
| yes                 | *                  | 1                             | 0=White, 1=Green, 2=Blue, 3=Grey, 4=Dark grey, 5=Default, 6=Red                                  |
| yes                 | yes                | 1                             | 0=No, 1=Yes  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | *                  | 1                             | 0=Jan., 1=Feb., 2=Mar., 3=Apr., 4=May, 5=June, 6=July, 7=Aug., 8=Sept., 9=Oct., 10=Nov., 11=Dec. |
| yes                 | *                  | 1                             | 0=None, 1=Window, 2=Door, 3=Motion, 4=Status, 5=Remove, 6=TE2                                    |
| yes                 | yes                | 1                             | 0=Motion, 1=Schedule   |
| yes                 | yes                | 1                             | 0=Normal, 1=Off-Auto   |
| -                   | yes                | 1                             | 0=Off, 1=Cool, 2=Heat  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |
| yes                 | yes                | 1                             | 0=Disabled, 1=Enabled  |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                    | BACnet ***   | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|--------------------------------|--------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Portuguese                     | MSV132       | 0         | 1          | 16-bit holding register | 3,6              | 95              | 40095          |
| Slovak                         | MSV133       | 0         | 1          | 16-bit holding register | 3,6              | 96              | 40096          |
| Schedule Type                  | MSV136       | 0         | 2          | 16-bit holding register | 3,6              | 107             | 40107          |
| Dehumidification Setpoint **   | AV71         | 30        | 95         | 16-bit holding register | 3,6              | 4012            | 44012          |
| Calibrate Humidity Sensor **   | AV8          | -15       | 15         | 16-bit holding register | 3,6              | 4013            | 44013          |
| Dehumidification Hysteresis ** | AV72         | 2         | 20         | 16-bit holding register | 3,6              | 4015            | 44015          |
| Temporary Occupancy Time       | AV62         | 0         | 24         | 16-bit holding register | 3,6              | 4027            | 44027          |
| Standby Time                   | AV67         | 5         | 240        | 16-bit holding register | 3,6              | 4028            | 44028          |
| Proportional Band              | AV65         | 3         | 10         | 16-bit holding register | 3,6              | 4029            | 44029          |
| Cooling Demand Limit           | AV89         | 0         | 100        | 16-bit holding register | 3,6              | 4030            | 44030          |
| Heating Demand Limit           | AV88         | 0         | 100        | 16-bit holding register | 3,6              | 4031            | 44031          |
| BACnet Stack Poll Rate         | AV16         | 1         | 5          | -                       | -                | -               | -              |
| Default Heating Setpoint       | AV45         | 650       | 800        | 16-bit holding register | 3,6              | 4043            | 44043          |
| Monday Occupied 1              | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4059            | 44059          |
| Monday Unoccupied 1            | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4060            | 44060          |
| Monday Occupied 2              | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4061            | 44061          |
| Monday Unoccupied 2            | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4062            | 44062          |
| Monday Occupied 3              | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4063            | 44063          |
| Monday Unoccupied 3            | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4064            | 44064          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***  |
|------------------------|-----------------------|----------------------------------|--|
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled  |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled  |
| yes                    | -                     | -                                | 0=7 days, 1=5+2 days, 2=5+1+1 days                                     |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| -                      | *                     | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | *                     | 0                                | Weekly schedule available as separate points via Modbus (and ZigBee *) |
| yes                    | *                     | 0                                | minutes: 0=0h00 , 1439=23h59, 1400 = nullvalue                         |
| yes                    | *                     | 0                                | -  |
| yes                    | *                     | 0                                | -  |
| yes                    | *                     | 0                                | -  |
| yes                    | *                     | 0                                | -  |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                 | BACnet ***   | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-----------------------------|--------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Wednesday Occupied 3        | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4075            | 44075          |
| Wednesday Unoccupied 3      | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4076            | 44076          |
| Thursday Occupied 1         | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4077            | 44077          |
| Thursday Unoccupied 1       | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4078            | 44078          |
| Thursday Occupied 2         | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4079            | 44079          |
| Thursday Unoccupied 2       | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4080            | 44080          |
| Saturday Occupied 2         | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4091            | 44091          |
| Saturday Unoccupied 2       | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4092            | 44092          |
| Saturday Occupied 3         | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4093            | 44093          |
| Saturday Unoccupied 3       | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4094            | 44094          |
| Sunday Occupied 1           | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4095            | 44095          |
| Sunday Unoccupied 1         | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4096            | 44096          |
| Time                        | Part of DEV  | 0         | 1439       | 16-bit holding register | 3,6              | 4110            | 44110          |
| Year                        | Part of DEV  | 2000      | 2100       | 16-bit holding register | 3,6              | 4111            | 44111          |
| Day                         | Part of DEV  | 1         | 31         | 16-bit holding register | 3,6              | 4112            | 44112          |
| Hardware Revision           | -            | 1         | 3          | 16-bit holding register | 3                | 4123            | 44123          |
| Keyboard Value              | AV92         | 0         | 35         | 16-bit holding register | 3,6              | 4126            | 44126          |
| Display Long Screen Message | BV7          | 0         | 1          | Discrete value          | 1,5              | 5011            | 5011           |
| Monday Unoccupied 3         | Part of SCH1 | 0         | 1440       | 16-bit holding register | 3,6              | 4064            | 44064          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***              |
|------------------------|-----------------------|----------------------------------|------------------------------|
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | minutes: 0=0h00 , 1439=23h59 |
| yes                    | *                     | 0                                | -                            |
| yes                    | *                     | 0                                | -                            |
| -                      | yes                   | 0                                | -                            |
| yes                    | yes                   | 0                                | -                            |
| yes                    | *                     | 0                                | 0=Off, 1=On                  |
| -                      | -                     | -                                | -                            |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description                  | BACnet ***  | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|------------------------------|-------------|-----------|------------|------------------|------------------|-----------------|----------------|
| Force High Backlight         | BV6         | 0         | 1          | Discrete value   | 1,5              | 5012            | 5012           |
| Smart Recovery Status        | BV40        | 0         | 1          | Discrete value   | 1                | 5014            | 5014           |
| Exception Status             | BV10        | 0         | 1          | Discrete value   | 1                | 5015            | 5015           |
| Wireless Zone 1 IEEE Address | AI210       | -32768    | 32767      | 16-bit Input     | 4                | 1011            | 31011          |
| Wireless Zone 2 IEEE Address | AI220       | -32768    | 32767      | 16-bit Input     | 4                | 1012            | 31012          |
| Wireless Zone 3 IEEE Address | AI230       | -32768    | 32767      | 16-bit Input     | 4                | 1013            | 31013          |
| Wireless Zone 4 IEEE Address | AI240       | -32768    | 32767      | 16-bit Input     | 4                | 1014            | 31014          |
| Wireless Zone 5 IEEE Address | AI250       | -32768    | 32767      | 16-bit Input     | 4                | 1015            | 31015          |
| Wireless Zone 6 IEEE Address | AI260       | -32768    | 32767      | 16-bit Input     | 4                | 1016            | 31016          |
| Short Screen Message Text    | CSV1        | -         | 64         | -                | -                | -               | -              |
| External Memory Revision     | CSV3        | -         | -          | -                | -                | -               | -              |
| Effective Occupancy          | MSI33       | 0         | 3          | 16-bit Input     | 4                | 5001            | 35001          |
| BACnet Status                | n/a         | 0         | 1          | n/a              | -                | -               | -              |
| ZigBee Status                | MSI2        | 0         | 4          | 16-bit Input     | 4                | 5003            | 35003          |
| Weekday                      | Part of DEV | 0         | 6          | 16-bit Input     | 4                | 5005            | 35005          |
| Program Status               | Part of PGn | 0         | 5          | 16-bit Input     | 4                | 5006            | 35006          |
| Program Error                | Part of PGn | 0         | 5          | 16-bit Input     | 4                | 5007            | 35007          |
| Wireless Zone 1 Status       | MSI210      | 0         | 4          | 16-bit Input     | 4                | 5008            | 35008          |
| Wireless Zone 2 Status       | MSI220      | 0         | 4          | 16-bit Input     | 4                | 5009            | 35009          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



| Writable Via Modbus | ZigBee Available * | Zigbee Counting Starts At *** | Description ***   |
|---------------------|--------------------|-------------------------------|---|
| yes                 | yes                | 0                             | 0=Off, 1=On   |
| -                   | yes                | 0                             | 0=Off, 1=On   |
| -                   | yes                | 0                             | 0=Off, 1=On   |
| -                   | yes                | 0                             | Last two bytes of the MAC addresses                                     |
| -                   | yes                | 0                             | Last two bytes of the MAC addresses                                     |
| -                   | yes                | 0                             | Last two bytes of the MAC addresses                                     |
| -                   | yes                | 0                             | Last two bytes of the MAC addresses                                     |
| -                   | yes                | 0                             | Last two bytes of the MAC addresses                                     |
| -                   | yes                | 0                             | Last two bytes of the MAC addresses                                     |
| -                   | -                  | -                             | limit means max length  |
| -                   | -                  | -                             | Revision of the Fonts and Graphics file                                 |
| -                   | yes                | 1                             | 0=Occupied, 1=Unoccupied, 2=Override, 3=Standby                         |
| -                   | *                  | 1                             | 0=Offline, 1=Online   |
| -                   | -                  | -                             | 0=Not det., 1=Pwr on, 2=No NWK, 3=Joined, 4=Online                      |
| -                   | *                  | 1                             | 0=Monday, 1=Tuesday, 2=Wed., 3=Thursday, 4=Friday, 5=Saturday, 6=Sunday |
| -                   | yes                | 1                             | 0=Idle, 1=Loading, 2=Running, 3=Waiting, 4=Halted, 5=Unloading          |
| -                   | yes                | 1                             | 0=No error, 1=Yield, 2=Runtime, 3=Syntax, 4=Memory, 5=Double err        |
| -                   | yes                | 1                             | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion                       |
| -                   | yes                | 1                             | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion                       |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description              | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|--------------------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| Wireless Zone 3 Status   | MSI230     | 0         | 4          | 16-bit Input     | 4                | 5010            | 35010          |
| Wireless Zone 4 Status   | MSI240     | 0         | 4          | 16-bit Input     | 4                | 5011            | 35011          |
| Wireless Zone 5 Status   | MSI250     | 0         | 4          | 16-bit Input     | 4                | 5012            | 35012          |
| Wireless Zone 6 Status   | MSI260     | 0         | 4          | 16-bit Input     | 4                | 5013            | 35013          |
| Wireless Zone 7 Status   | MSI270     | 0         | 4          | 16-bit Input     | 4                | 5014            | 35014          |
| Wireless Zone 8 Status   | MSI280     | 0         | 4          | 16-bit Input     | 4                | 5015            | 35015          |
| Wireless Zone 9 Status   | MSI290     | 0         | 4          | 16-bit Input     | 4                | 5016            | 35016          |
| Wireless Zone 10 Status  | MSI300     | 0         | 4          | 16-bit Input     | 4                | 5017            | 35017          |
| Wireless Zone 1 Battery  | MSI211     | 0         | 2          | 16-bit Input     | 4                | 5018            | 35018          |
| Wireless Zone 2 Battery  | MSI221     | 0         | 2          | 16-bit Input     | 4                | 5019            | 35019          |
| Wireless Zone 3 Battery  | MSI231     | 0         | 2          | 16-bit Input     | 4                | 5020            | 35020          |
| Wireless Zone 4 Battery  | MSI241     | 0         | 2          | 16-bit Input     | 4                | 5021            | 35021          |
| Wireless Zone 5 Battery  | MSI251     | 0         | 2          | 16-bit Input     | 4                | 5022            | 35022          |
| Wireless Zone 6 Battery  | MSI261     | 0         | 2          | 16-bit Input     | 4                | 5023            | 35023          |
| Wireless Zone 7 Battery  | MSI271     | 0         | 2          | 16-bit Input     | 4                | 5024            | 35024          |
| Wireless Zone 8 Battery  | MSI281     | 0         | 2          | 16-bit Input     | 4                | 5025            | 35025          |
| Wireless Zone 9 Battery  | MSI291     | 0         | 2          | 16-bit Input     | 4                | 5026            | 35026          |
| Wireless Zone 10 Battery | MSI301     | 0         | 2          | 16-bit Input     | 4                | 5027            | 35027          |
| Wireless Zone 1 Paired   | MSI212     | 0         | 2          | 16-bit Input     | 4                | 5028            | 35028          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***                                   |
|------------------------|-----------------------|----------------------------------|---|
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Closed, 2=Opened, 3=No motion, 4=Motion |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=None, 1=Normal, 2=Low                           |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid                            |

## SE8000 SERIES COMMON MODBUS FUNCTIONS

| Description             | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|-------------------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| Wireless Zone 2 Paired  | MSI222     | 0         | 2          | 16-bit Input     | 4                | 5029            | 35029          |
| Wireless Zone 3 Paired  | MSI232     | 0         | 2          | 16-bit Input     | 4                | 5030            | 35030          |
| Wireless Zone 4 Paired  | MSI242     | 0         | 2          | 16-bit Input     | 4                | 5031            | 35031          |
| Wireless Zone 5 Paired  | MSI252     | 0         | 2          | 16-bit Input     | 4                | 5032            | 35032          |
| Wireless Zone 6 Paired  | MSI262     | 0         | 2          | 16-bit Input     | 4                | 5033            | 35033          |
| Wireless Zone 7 Paired  | MSI272     | 0         | 2          | 16-bit Input     | 4                | 5034            | 35034          |
| Wireless Zone 8 Paired  | MSI282     | 0         | 2          | 16-bit Input     | 4                | 5035            | 35035          |
| Wireless Zone 9 Paired  | MSI292     | 0         | 2          | 16-bit Input     | 4                | 5036            | 35036          |
| Wireless Zone 10 Paired | MSI302     | 0         | 2          | 16-bit Input     | 4                | 5037            | 35037          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description***         |
|------------------------|-----------------------|----------------------------------|------------------------|
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |
| -                      | yes                   | 1                                | 0=No, 1=Yes, 2=Invalid |

## SE8600 SERIES MODBUS FUNCTIONS

| Description                                  | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|--|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| UO9 Configuration                            | MSV96      | 0         | 3          | 16-bit holding register | 3                | 41              | 40041          |
| UO10 Configuration                           | MSV97      | 0         | 2          | 16-bit holding register | 3                | 42              | 40042          |
| BO1 Auxiliary Output Configuration           | MSV92      | 0         | 1          | 16-bit holding register | 3,6              | 49              | 40049          |
| Mechanical Cooling Allowed                   | MSV79      | 0         | 1          | 16-bit holding register | 3,6              | 50              | 40050          |
| UI19 Configuration                           | MSV49      | 0         | 1          | 16-bit holding register | 3,6              | 52              | 40052          |
| Economizer Configuration                     | MSV72      | 0         | 1          | 16-bit holding register | 3,6              | 53              | 40053          |
| Comfort or economy mode                      | MSV116     | 0         | 1          | 16-bit holding register | 3,6              | 99              | 40099          |
| Reversing valve operation                    | MSV117     | 0         | 1          | 16-bit holding register | 3,6              | 100             | 40100          |
| Compressor - auxiliary inter-lock            | MSV118     | 0         | 1          | 16-bit holding register | 3,6              | 101             | 40101          |
| Application                                  | MSV119     | 0         | 1          | 16-bit holding register | 3,6              | 102             | 40102          |
| UI22 Input Type                              | MSV142     | 0         | 0          | 16-bit holding register | 3,6              | 113             | 40113          |
| UI23 Input Type                              | MSV143     | 0         | 0          | 16-bit holding register | 3,6              | 114             | 40114          |
| UI24 Input Type                              | MSV144     | 0         | 2          | 16-bit holding register | 3                | 115             | 40115          |
| Heating CPH                                  | AV84       | 3         | 8          | 16-bit holding register | 3,6              | 4021            | 44021          |
| Cooling CPH                                  | AV85       | 3         | 4          | 16-bit holding register | 3,6              | 4022            | 44022          |
| Number of Cooling Stages                     | AV75       | 1         | 2          | 16-bit holding register | 3,6              | 4049            | 44049          |
| Power-up Delay                               | AV76       | 10        | 120        | 16-bit holding register | 3,6              | 4050            | 44050          |
| Calibrate Outside Temperature Sensor         | AV74       | -50       | 50         | 16-bit holding register | 3,6              | 4051            | 44051          |
| Heating Lockout from Outside Air Temperature | AV91       | -150      | 1200       | 16-bit holding register | 3,6              | 4052            | 44052          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable Via Modbus | ZigBee Available * | Zigbee Counting Starts At *** | Description ***                            |
|---------------------|--------------------|-------------------------------|--|
| -                   | yes                | 1                             | 0=Analog, 1=Binary, 2=Relay RC, 3=Relay RH |
| -                   | yes                | 1                             | 0=Analog, 1=Binary, 2=Relay RC             |
| yes                 | yes                | 1                             | 0=NO, 1=NC                                 |
| yes                 | yes                | 1                             | 0=Off, 1=On                                |
| yes                 | yes                | 1                             | 0=None, 1=CO2                              |
| yes                 | yes                | 1                             | 0=Off, 1=On                                |
| yes                 | yes                | 1                             | 0=Comfort, 1=Economy                       |
| yes                 | yes                | 1                             | 0=O, 1=B                                   |
| yes                 | yes                | 1                             | 0=Off, 1=On                                |
| yes                 | yes                | 1                             | 0=Rooftop, 1=Heatpump                      |
| yes                 | -                  | 0                             | 0=Thermistor, 1=Binary, 2=Voltage          |
| yes                 | -                  | 0                             | 0=Thermistor, 1=Binary, 2=Voltage          |
| -                   | -                  | 0                             | 0=Thermistor, 1=Binary, 2=Voltage          |
| yes                 | yes                | 0                             | -  |
| yes                 | yes                | 0                             | -  |
| yes                 | yes                | 0                             | -  |
| yes                 | yes                | 0                             | -  |
| yes                 | yes                | 0                             | -  |
| yes                 | yes                | 0                             | -  |

## SE8600 SERIES MODBUS FUNCTIONS

| Description                 | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|-----------------------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| Room Humidity **            | AV103      | 5         | 95         | 16-bit Input     | 4                | 4               | 30004          |
| UI19 Temperature            | AV104      | -400      | 1500       | 16-bit Input     | 4                | 5               | 30005          |
| UI20 Remote Temperature     |            | -400      | 1220       |                  |                  |                 |                |
| CO2 Level                   | AV106      | 0         | 2000       | 16-bit Input     | 4                | 7               | 30007          |
| Airflow Level               | AV107      | 0         | 20000      | 16-bit Input     | 4                | 8               | 30008          |
| UI19 Analog Input           | AV108      | 0         | 100        | 16-bit Input     | 4                | 9               | 30009          |
| Outdoor Temperature         | AV101      | -400      | 1500       | 16-bit Input     | 4                | 10              | 30010          |
| Low Fresh Air Alarm         | BV42       | 0         | 1          | Discrete value   | 1                | 5017            | 5017           |
| Frost Protection Alarm      | BV43       | 0         | 1          | Discrete value   | 1                | 5018            | 5018           |
| UI17 Binary Input           | BI30       | 0         | 1          | Discrete Input   | 2                | 2               | 10002          |
| UI19 Binary Input           | BI91       | 0         | 1          | Discrete Input   | 2                | 6               | 10006          |
| UI20 Binary Input           | BI94       | 0         | 1          | Discrete Input   | 2                | 7               | 10007          |
| UI22 Binary Input           | BI95       | 0         | 1          | Discrete Input   | 2                | 8               | 10008          |
| UI23 Binary Input           | BI96       | 0         | 1          | Discrete Input   | 2                | 9               | 10009          |
| UI24 Binary Input           | BI97       | 0         | 1          | Discrete Input   | 2                | 10              | 10010          |
| UO10 Binary Output          | BO94       | 0         | 1          | Discrete value   | 1                | 2               | 2              |
| BO1 Auxiliary Binary Output | BO98       | 0         | 1          | Discrete value   | 1                | 7               | 7              |
| UO11 Binary Output          | BO101      | 0         | 1          | Discrete value   | 1                | 8               | 8              |
| UO12 Binary Output          | BO102      | 0         | 1          | Discrete value   | 1                | 9               | 9              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***           |
|------------------------|-----------------------|----------------------------------|---------------------------|
| -                      | yes                   | 0                                | -                         |
| -                      | -                     | 0                                | -                         |
| -                      | *                     | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |

## SE8600 SERIES MODBUS FUNCTIONS

| Description                 | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-----------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| G Fan Status                | BO25       | 0         | 1          | Discrete value          | 1                | 10              | 10             |
| UI20 Raw Value              | AI5        | 0         | 4095       | 16-bit Input            | 4                | 1005            | 31005          |
| UI23 Raw Value              | AI7        | 0         | 4095       | 16-bit Input            | 4                | 1007            | 31007          |
| UI22 Raw Value              | AI8        | 0         | 4095       | 16-bit Input            | 4                | 1008            | 31008          |
| UI24 Raw Value              | AI9        | 0         | 4095       | 16-bit Input            | 4                | 1009            | 31009          |
| UI19 Raw Value              | AI31       | 0         | 4095       | 16-bit Input            | 4                | 1010            | 31010          |
| Economizer Demand           | AO23       | 0         | 100        | 16-bit holding register | 3                | 8004            | 48004          |
| Analog Output Heat Demand   | AO24       | 0         | 100        | 16-bit holding register | 3                | 8005            | 48005          |
| UO11 Analog Output          | AO123      | 0         | 100        | 16-bit holding register | 3                | 9001            | 49001          |
| UO11 Analog Output          | AO123      | 0         | 100        | 16-bit holding register | 3                | 9001            | 49001          |
| UO9 Analog Output           | AO125      | 0         | 100        | 16-bit holding register | 3                | 9003            | 49003          |
| UO10 Analog Output          | AO126      | 0         | 100        | 16-bit holding register | 3                | 9004            | 49004          |
| UO11 Configuration          | MSV98      | 0         | 1          | 16-bit holding register | 3                | 43              | 40043          |
| UO12 Configuration          | MSV99      | 0         | 1          | 16-bit holding register | 3                | 44              | 40044          |
| Frost Protection            | MSV55      | 0         | 1          | 16-bit holding register | 3,6              | 45              | 40045          |
| Fan Control in Heating Mode | MSV95      | 0         | 1          | 16-bit holding register | 3,6              | 46              | 40046          |
| Fan Mode                    | MSV17      | 0         | 2          | 16-bit holding register | 3,6              | 47              | 40047          |
| UI16 Configuration          | MSV46      | 0         | 5          | 16-bit holding register | 3,6              | 48              | 40048          |
| Fan Delay                   | MSV12      | 0         | 1          | 16-bit holding register | 3,6              | 61              | 40061          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***   |
|------------------------|-----------------------|----------------------------------|---|
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 0                                | -   |
| -                      | yes                   | 1                                | 0=Analog, 1=Binary  |
| -                      | yes                   | 1                                | 0=Analog, 1=Binary  |
| yes                    | yes                   | 1                                | 0=Off, 1=On   |
| yes                    | yes                   | 1                                | 0=Off, 1=On   |
| yes                    | yes                   | 1                                | 0=On, 1=Auto, 2=Smart   |
| yes                    | yes                   | 1                                | 0=None, 1=Rem NSB, 2=Motion NO, 3=Motion NC, 4=Window, 5=Fan lock |
| yes                    | yes                   | 1                                | 0=Off, 1=On   |

## SE8600 SERIES MODBUS FUNCTIONS

| Description              | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|--------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| UI17 Configuration       | MSV47      | 0         | 4          | 16-bit holding register | 3,6              | 63              | 40063          |
| UI16 Input Type          | MSV138     | 1         | 1          | 16-bit holding register | 3,6              | 109             | 40109          |
| UI17 Input Type          | MSV139     | 1         | 1          | 16-bit holding register | 3,6              | 110             | 40110          |
| UI19 Input Type          | MSV140     | 0         | 2          | 16-bit holding register | 3                | 111             | 40111          |
| UI20 Input Type          | MSV141     | 0         | 0          | 16-bit holding register | 3,6              | 112             | 40112          |
| Anti Short Cycle Time    | AV86       | 0         | 5          | 16-bit holding register | 3,6              | 4047            | 44047          |
| Number of Heating Stages | AV87       | 0         | 2          | 16-bit holding register | 3,6              | 4048            | 44048          |
| Maximum Fresh Air        | AV22       | 0         | 20000      | 16-bit holding register | 3,6              | 4107            | 44107          |
| Minimum CO2              | AV23       | 0         | 2000       | 16-bit holding register | 3,6              | 4108            | 44108          |
| Maximum CO2              | AV24       | 0         | 2000       | 16-bit holding register | 3,6              | 4109            | 44109          |
| UI24 Temperature         | AV109      | -400      | 1500       | 16-bit Input            | 4                | 12              | 30012          |
| Fan Lock Alarm           | BV39       | 0         | 1          | Discrete value          | 1                | 5013            | 5013           |
| CO2 Alarm                | BV41       | 0         | 1          | Discrete value          | 1                | 5016            | 5016           |
| Y1 Status                | BO26       | 0         | 1          | Discrete value          | 1                | 11              | 11             |
| Y2 Status                | BO27       | 0         | 1          | Discrete value          | 1                | 12              | 12             |
| W1 Status                | BO28       | 0         | 1          | Discrete value          | 1                | 13              | 13             |
| W2 Status                | BO29       | 0         | 1          | Discrete value          | 1                | 14              | 14             |
| Long Screen Message Text | CSV2       | 0         | 480        | -                       | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***                                     |
|------------------------|-----------------------|----------------------------------|---|
| yes                    | yes                   | 1                                | 0=None, 1=Door dry, 2=Override, 3=Filter, 4=Service |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage                   |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage                   |
| -                      | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage                   |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage                   |
| yes                    | yes                   | 0                                | -   |
| yes                    | yes                   | 0                                | -   |
| yes                    | yes                   | 0                                | -   |
| yes                    | yes                   | 0                                | -   |
| yes                    | yes                   | 0                                | -   |
| -                      | -                     | 0                                | -   |
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | yes                   | 0                                | 0=Off, 1=On   |
| -                      | -                     | 0                                | -   |

## SE8300 SERIES MODBUS FUNCTIONS

| Description                  | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Fan Mode                     | MSV17      | 0         | 4          | 16-bit holding register | 3,6              | 3               | 40003          |
| Auto Mode Enable             | MSV50      | 0         | 1          | 16-bit holding register | 3,6              | 6               | 40006          |
| UI16 Configuration           | MSV46      | 0         | 4          | 16-bit holding register | 3,6              | 8               | 40008          |
| Auto Mode Fan Function       | MSV66      | 0         | 1          | 16-bit holding register | 3,6              | 18              | 40018          |
| No Activity Sleep Mode Time  | MSV9       | 0         | 1          | 16-bit holding register | 3,6              | 26              | 40026          |
| Permit Join                  | -          | 0         | 1          | -                       | -                | -               | -              |
| Control Type                 | MSV81      | 0         | 2          | 16-bit holding register | 3,6              | 34              | 40034          |
| BO8 Aux Output Time Base     | MSV91      | 0         | 1          | 16-bit holding register | 3,6              | 35              | 40035          |
| BO8 Aux Output Configuration | MSV92      | 0         | 4          | 16-bit holding register | 3,6              | 36              | 40036          |
| Sequence of Operation        | MSV15      | 0         | 5          | 16-bit holding register | 3,6              | 37              | 40037          |
| UI17 Configuration           | MSV47      | 0         | 4          | 16-bit holding register | 3,6              | 38              | 40038          |
| UI19 Configuration           | MSV49      | 0         | 3          | 16-bit holding register | 3,6              | 39              | 40039          |
| Action                       | MSV94      | 0         | 1          | 16-bit holding register | 3,6              | 40              | 40040          |
| UO9 Configuration            | MSV96      | 0         | 3          | 16-bit holding register | 3                | 41              | 40041          |
| UO10 Configuration           | MSV97      | 0         | 2          | 16-bit holding register | 3                | 42              | 40042          |
| X:DB_ID_MV_WIRE_PROTOCOL     | -          | 0         | 2          | -                       | -                | -               | -              |
| X:DB_ID_MV_OPTIONAL_PROTOCOL | -          | 0         | 1          | -                       | -                | -               | -              |
| UI22 Input Type              | MSV142     | 0         | 0          | 16-bit holding register | 3,6              | 113             | 40113          |
| UI23 Input Type              | MSV143     | 0         | 0          | 16-bit holding register | 3,6              | 114             | 40114          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description***   |
|------------------------|-----------------------|----------------------------------|--|
| yes                    | yes                   | 1                                | 0=Low, 1=Med, 2=High, 3=Auto, 4=On   |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled  |
| yes                    | yes                   | 1                                | 0=None, 1=Rem NSB, 2=Motion NO, 3=Motion NC, 4=Window  |
| yes                    | yes                   | 1                                | 0=AS, 1=AS / AD  |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled  |
| -                      | yes                   | 1                                | 0=Off, 1=On  |
| yes                    | yes                   | 1                                | 0=On/Off, 1=Floating, 2=Analog   |
| yes                    | yes                   | 1                                | 0=15 min., 1=10 sec.   |
| yes                    | yes                   | 1                                | 0=Reheat, 1=Aux NO, 2=Aux NC, 3=Aux F&NO, 4=Aux F&NC   |
| yes                    | yes                   | 1                                | 0=Cool only, 1=Heat only, 2=Cool-rht, 3=Heat-rht, 4=Cool/Heat, 5=Cl/ht-rht                     |
| yes                    | yes                   | 1                                | 0=None, 1=Door dry, 2=Override, 3=Filter, 4=Service  |
| yes                    | yes                   | 1                                | 0=None, 1=COC/NH, 2=COC/NC, 3=COS  |
| yes                    | yes                   | 1                                | 0=DA, 1=RA   |
| -                      | yes                   | 1                                | 0=Analog, 1=Binary, 2=Relay RC, 3=Relay RH   |
| -                      | yes                   | 1                                | 0=Analog, 1=Binary, 2=Relay RC   |
| -                      | -                     | 0                                | X??-1=None, 0=BACnet, 1=Modbus, -1=None, 0=BACnet, 1=Modbus,<br>-1=None, 0=BACnet, 1=ModbusX?? |
| -                      | -                     | 0                                | X??-1=None, 0=ZigBee, -1=None, 0=ZigBee, -1=None, 0=ZigBeeX??                                  |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage  |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage  |

## SE8300 SERIES MODBUS FUNCTIONS

| Description             | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| UI24 Input Type         | MSV144     | 0         | 2          | 16-bit holding register | 3                | 115             | 40115          |
| ZigBee PAN ID           | AV11       | -32768    | 32767      | -                       | -                | -               | -              |
| ZigBee Channel          | AV12       | 10        | 25         | -                       | -                | -               | -              |
| Get from COM            | AV15       | 0         | 254        | -                       | -                | -               | -              |
| Number of Pipes         | AV52       | 2         | 4          | 16-bit holding register | 3,6              | 4025            | 44025          |
| COM Test                | -          | 1         | 255        | -                       | -                | -               | -              |
| Purge Sample Period     | AV5        | 0         | 40         | 16-bit holding register | 3,6              | 4036            | 44036          |
| Purge Open              | AV6        | 1         | 3          | 16-bit holding register | 3,6              | 4037            | 44037          |
| ZigBee Short Address    | AV13       | -32768    | 32767      | -                       | -                | -               | -              |
| ZigBee IEEE Address     | AV14       | -32768    | 32767      | -                       | -                | -               | -              |
| X:DB_ID_AV_SCH_PRIORITY | -          | 1         | 16         | -                       | -                | -               | -              |
| X:Time RTC              | -          | 0         | 1439       | -                       | -                | -               | -              |
| X:Year RTC              | -          | 2000      | 2100       | -                       | -                | -               | -              |
| X:Day RTC               | -          | 1         | 31         | -                       | -                | -               | -              |
| X:Contrast              | -          | -5        | 5          | -                       | -                | -               | -              |
| UI19 Lua                | AV202      | -32768    | 32767      | 16-bit holding register | 3,6              | 4134            | 44134          |
| UI20 Lua                | AV203      | -32768    | 32767      | 16-bit holding register | 3,6              | 4135            | 44135          |
| UI22 Lua                | AV204      | -32768    | 32767      | 16-bit holding register | 3,6              | 4136            | 44136          |
| UI23 Lua                | AV205      | -32768    | 32767      | 16-bit holding register | 3,6              | 4137            | 44137          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***                   |
|------------------------|-----------------------|----------------------------------|-----------------------------------|
| -                      | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage |
| -                      | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| yes                    | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| yes                    | yes                   | 0                                | -                                 |
| yes                    | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| yes                    | -                     | 0                                | -                                 |
| yes                    | -                     | 0                                | -                                 |
| yes                    | -                     | 0                                | -                                 |
| yes                    | -                     | 0                                | -                                 |

## SE8300 SERIES MODBUS FUNCTIONS

| Description                 | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-----------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| UI24 Lua                    | AV206      | -32768    | 32767      | 16-bit holding register | 3,6              | 4138            | 44138          |
| Outdoor Temperature         | AV101      | -400      | 1500       | 16-bit Input            | 4                | 2               | 30002          |
| UI22 Supply Temperature     | AV102      | -400      | 1220       | 16-bit Input            | 4                | 3               | 30003          |
| Room Humidity **            | AV103      | 5         | 95         | 16-bit Input            | 4                | 4               | 30004          |
| UI19 Changeover Temperature | AV104      | -400      | 1500       | 16-bit Input            | 4                | 5               | 30005          |
| UI20 Remote Temperature     | -          | -400      | 1220       | -                       | -                | -               | -              |
| UI17 Binary Input           | BI30       | 0         | 1          | Discrete Input          | 2                | 2               | 10002          |
| UI19 Binary Input           | BI91       | 0         | 1          | Discrete Input          | 2                | 6               | 10006          |
| UI20 Binary Input           | BI94       | 0         | 1          | Discrete Input          | 2                | 7               | 10007          |
| UI22 Binary Input           | BI95       | 0         | 1          | Discrete Input          | 2                | 8               | 10008          |
| UI23 Binary Input           | BI96       | 0         | 1          | Discrete Input          | 2                | 9               | 10009          |
| UI24 Binary Input           | BI97       | 0         | 1          | Discrete Input          | 2                | 10              | 10010          |
| UO9 Binary Output           | BO93       | 0         | 1          | Discrete value          | 1                | 1               | 1              |
| UO10 Binary Output          | BO94       | 0         | 1          | Discrete value          | 1                | 2               | 2              |
| BO4 High Speed Fan Output   | BO95       | 0         | 1          | Discrete value          | 1                | 3               | 3              |
| BO3 Medium Speed Fan Output | BO96       | 0         | 1          | Discrete value          | 1                | 4               | 4              |
| BO2 Low Speed Fan Output    | BO97       | 0         | 1          | Discrete value          | 1                | 5               | 5              |
| BO8 Auxiliary Binary Output | BO98       | 0         | 1          | Discrete value          | 1                | 7               | 7              |
| UO11 Binary Output          | BO101      | 0         | 1          | Discrete value          | 1                | 8               | 8              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***           |
|------------------------|-----------------------|----------------------------------|---------------------------|
| yes                    | -                     | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | yes                   | 0                                | -                         |
| -                      | *                     | 0                                | -                         |
| -                      | yes                   | 0                                | 0=Activated, 1=Not activ. |
| -                      | *                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | -                     | 0                                | 0=Activated, 1=Not activ. |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |
| -                      | yes                   | 0                                | 0=Off, 1=On               |

## SE8300 SERIES MODBUS FUNCTIONS

| Description                    | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|--------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| UO12 Binary Output             | BO102      | 0         | 1          | Discrete value          | 1                | 9               | 9              |
| Thermistor                     | -          | -400      | 1220       | -                       | -                | -               | -              |
| Thermistor Self Heating        | -          | -400      | 1220       | -                       | -                | -               | -              |
| Relative Humidity Raw Value ** | -          | 200       | 800        | -                       | -                | -               | -              |
| UI20 Raw Value                 | AI5        | 0         | 4095       | 16-bit Input            | 4                | 1005            | 31005          |
| UI19 Raw Value                 | AI31       | 0         | 4095       | 16-bit Input            | 4                | 1006            | 31006          |
| UI23 Raw Value                 | AI7        | 0         | 4095       | 16-bit Input            | 4                | 1007            | 31007          |
| UI22 Raw Value                 | AI8        | 0         | 4095       | 16-bit Input            | 4                | 1008            | 31008          |
| UI24 Raw Value                 | AI9        | 0         | 4095       | 16-bit Input            | 4                | 1009            | 31009          |
| UO11 Analog Output             | AO123      | 0         | 100        | 16-bit holding register | 3                | 9001            | 49001          |
| UO11 Analog Output             | AO123      | 0         | 100        | 16-bit holding register | 3                | 9001            | 49001          |
| UO9 Analog Output              | AO125      | 0         | 100        | 16-bit holding register | 3                | 9003            | 49003          |
| UO10 Analog Output             | AO126      | 0         | 100        | 16-bit holding register | 3                | 9004            | 49004          |
| X:BacNet present               | -          | 0         | 1          | -                       | -                | -               | -              |
| Fan Sequence                   | MSV57      | 0         | 4          | 16-bit holding register | 3,6              | 16              | 40016          |
| UO11 Configuration             | MSV98      | 0         | 1          | 16-bit holding register | 3                | 43              | 40043          |
| UO12 Configuration             | MSV99      | 0         | 1          | 16-bit holding register | 3                | 44              | 40044          |
| X:Month RTC                    | -          | 0         | 11         | -                       | -                | -               | -              |
| ZigBee Sensor Pairing Ready    | -          | 0         | 1          | -                       | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***  |
|------------------------|-----------------------|----------------------------------|--|
| -                      | yes                   | 0                                | 0=Off, 1=On  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | *                     | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | -                     | 0                                | X??-1=No, 0=Yes, -1=No ???, 0=Yes, -1=No, 0=YesX??   |
| yes                    | yes                   | 1                                | 0=L-M-H, 1=L-H, 2=L-M-H-A, 3=L-H-A, 4=On-Auto  |
| -                      | yes                   | 1                                | 0=Analog, 1=Binary   |
| -                      | yes                   | 1                                | 0=Analog, 1=Binary   |
| -                      | -                     | 0                                | X??-1=Jan., 0=Feb., 1=Mar., 2=Apr., 3=May, 4=June, 5=July, 6=Aug., 7=Sept., 8=Oct., 9=Nov., 10=Dec., -1=Jan., 0=Feb., 1=Mar., 2=Apr., 3=May, 4=June, 5=July, 6=Aug., 7=Sept., 8=Oct., 9=Nov., 10=Dec., -1=Jan., 0=Feb., 1=Mar., 2=Apr., 3=May, 4=June, 5=July, 6=Aug., 7=Sept., 8=Oct., 9=Nov., 10=Dec.X?? |
| -                      | yes                   | 1                                | 0=No, 1=Yes  |

## SE8300 SERIES MODBUS FUNCTIONS

| Description                           | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|---------------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Node Type                             | MSV113     | 0         | 1          | -                       | -                | -               | -              |
| X:DB_ID_MV_SCHED_EVENTS               | MSV137     | 0         | 2          | -                       | -                | -               | -              |
| UI16 Input Type                       | MSV138     | 1         | 1          | 16-bit holding register | 3,6              | 109             | 40109          |
| UI17 Input Type                       | MSV139     | 1         | 1          | 16-bit holding register | 3,6              | 110             | 40110          |
| UI19 Input Type                       | MSV140     | 0         | 2          | 16-bit holding register | 3                | 111             | 40111          |
| UI20 Input Type                       | MSV141     | 0         | 0          | 16-bit holding register | 3,6              | 112             | 40112          |
| Dehumidification Max Cooling Limit ** | AV73       | 20        | 100        | 16-bit holding register | 3,6              | 4011            | 44011          |
| Internal RH                           | -          | -150      | 150        | -                       | -                | -               | -              |
| RS Internal                           | -          | -50       | 50         | -                       | -                | -               | -              |
| RS Self Heating                       | -          | -50       | 50         | -                       | -                | -               | -              |
| Floating Actuator Timing              | AV90       | 5         | 90         | 16-bit holding register | 3,6              | 4045            | 44045          |
| CPH                                   | AV84       | 3         | 8          | 16-bit holding register | 3,6              | 4046            | 44046          |
| X:DB_ID_AV_ZIGBEE_HW_REV              | -          | 0         | 127        | -                       | -                | -               | -              |
| X:DB_ID_AV_ZIGBEE_SW_REV              | -          | 0         | 127        | -                       | -                | -               | -              |
| Terminal24 10V                        | AV107      | 0         | 100        | 16-bit Input            | 4                | 11              | 30011          |
| UI24 Temperature                      | AV109      | -400      | 1500       | 16-bit Input            | 4                | 12              | 30012          |
| Long Screen Message Text              | CSV2       | -         | 480        | -                       | -                | -               | -              |
| X:exception schedule, binary          | -          | -         | 480        | -                       | -                | -               | -              |
| X:calendar, binary                    | -          | -         | 480        | -                       | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***                   |
|------------------------|-----------------------|----------------------------------|-----------------------------------|
| -                      | yes                   | 1                                | 0=Router, 1=Coord.                |
| -                      | -                     | 0                                | -                                 |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage |
| -                      | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage |
| yes                    | -                     | 0                                | 0=Thermistor, 1=Binary, 2=Voltage |
| yes                    | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| -                      | yes                   | 0                                | -                                 |
| yes                    | yes                   | 0                                | -                                 |
| yes                    | yes                   | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | limit=max length                  |
| -                      | -                     | 0                                | -                                 |
| -                      | -                     | 0                                | -                                 |

## SE8300 SERIES MODBUS FUNCTIONS

| Description                        | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|------------------------------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| X:DB_ID_CSV_LUA_HALT_MSG csv5 B004 | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_1               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_2               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_3               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_4               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_5               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_6               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_7               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_8               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_9               | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_LUA_PG_10              | -          | -         | 480        | -                | -                | -               | -              |
| X:DB_ID_CSV_VENDOR_Name            | -          | -         | 48         | -                | -                | -               | -              |
| X:DB_ID_CSV_DEVICE_Name            | -          | -         | 48         | -                | -                | -               | -              |
| X:DB_ID_CSV_FIRMWARE_REV           | -          | 0         | 8          | -                | -                | -               | -              |
| X:MV114_Desc                       | -          | 0         | 32         | -                | -                | -               | -              |
| X:AV25_DESC                        | -          | 0         | 16         | -                | -                | -               | -              |
| X:AV26_DESC                        | -          | 0         | 16         | -                | -                | -               | -              |
| X:AV27_DESC                        | -          | 0         | 16         | -                | -                | -               | -              |
| X:AV28_DESC                        | -          | 0         | 16         | -                | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



[illegible]

## SE8300 SERIES MODBUS FUNCTIONS

| Description | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|-------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| X:AV29_DESC | -          | 0         | 16         | -                | -                | -               | -              |
| X:AV30_DESC | -          | 0         | 16         | -                | -                | -               | -              |
| Service Pin | -          | 0         | 1          | -                | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description*** |
|------------------------|-----------------------|----------------------------------|----------------|
| -                      | -                     | 0                                | -              |
| -                      | -                     | 0                                | -              |
| -                      | yes                   | 1                                | 0=Off, 1=On    |

## SER8300 SERIES MODBUS FUNCTIONS

| Description                 | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|-----------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Fan Mode                    | MSV17      | 0         | 4          | 16-bit holding register | 3,6              | 3               | 40003          |
| RBI2 Configuration          | MSV83      | 0         | 2          | 16-bit holding register | 3,6              | 5               | 40005          |
| Auto Mode Enable            | MSV50      | 0         | 1          | 16-bit holding register | 3,6              | 6               | 40006          |
| Heating Valve               | MSV86      | 0         | 1          | 16-bit holding register | 3,6              | 7               | 40007          |
| BI1 Configuration           | MSV46      | 0         | 4          | 16-bit holding register | 3,6              | 8               | 40008          |
| BI2 Configuration           | MSV47      | 0         | 2          | 16-bit holding register | 3,6              | 9               | 40009          |
| Auto Mode Fan Function      | MSV66      | 0         | 1          | 16-bit holding register | 3,6              | 18              | 40018          |
| Fan Control in Heating Mode | MSV95      | 0         | 2          | 16-bit holding register | 3,6              | 19              | 40019          |
| Sequence of Operation       | MSV15      | 0         | 4          | 16-bit holding register | 3,6              | 20              | 40020          |
| No Activity Sleep Mode Time | MSV9       | 0         | 1          | 16-bit holding register | 3,6              | 26              | 40026          |
| Permit Join                 | -          | 0         | 1          | -                       | -                | -               | -              |
| DB_ID_MV_WIRE_PROTOCOL      | -          | 0         | 2          | -                       | -                | -               | -              |
| DB_ID_MV_OPTIONAL_PROTOCOL  | -          | 0         | 1          | -                       | -                | -               | -              |
| ZigBee PAN ID               | -          | -32768    | 32767      | -                       | -                | -               | -              |
| Heating CPH                 | AV84       | 3         | 8          | 16-bit holding register | 3,6              | 4021            | 44021          |
| Cooling CPH                 | AV85       | 3         | 8          | 16-bit holding register | 3,6              | 4022            | 44022          |
| ZigBee Channel              | -          | 10        | 25         | -                       | -                | -               | -              |
| Get from COM                | -          | 0         | 254        | -                       | -                | -               | -              |
| Number of Pipes             | AV52       | 2         | 4          | 16-bit holding register | 3,6              | 4025            | 44025          |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***  |
|------------------------|-----------------------|----------------------------------|--|
| yes                    | yes                   | 1                                | 0=Low, 1=Med, 2=High, 3=Auto, 4=On   |
| yes                    | yes                   | 1                                | 0=None, 1=Filter, 2=Service  |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled  |
| yes                    | yes                   | 1                                | 0=NO, 1=NC   |
| yes                    | yes                   | 1                                | 0=None, 1=Rem NSB, 2=Motion NO, 3=Motion NC, 4=Window  |
| yes                    | yes                   | 1                                | 0=None, 1=Door dry, 2=Override   |
| yes                    | yes                   | 1                                | 0=AS, 1=AS / AD  |
| yes                    | yes                   | 1                                | 0=On, 1=Off-Auto, 2=Off-All  |
| yes                    | yes                   | 1                                | 0=Cool only, 1=Heat only, 2=Cool/Heat, 3=Heat-Rht, 4=Reheat                                    |
| yes                    | yes                   | 1                                | 0=Disabled, 1=Enabled  |
| -                      | yes                   | 1                                | 0=Off, 1=On  |
| -                      | -                     | 0                                | ???-1=None, 0=BACnet, 1=Modbus, -1=None, 0=BACnet, 1=Modbus,<br>-1=None, 0=BACnet, 1=Modbus??? |
| -                      | -                     | 0                                | ???-1=None, 0=ZigBee, -1=None, 0=ZigBee, -1=None, 0=ZigBee???                                  |
| -                      | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | 10 = disabled  |
| -                      | *                     | 0                                | -  |
| yes                    | yes                   | 0                                | -  |

## SER8300 SERIES MODBUS FUNCTIONS

| Description            | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| COM Test               | -          | 1         | 255        | -                       | -                | -               | -              |
| Purge Sample Period    | AV5        | 0         | 40         | 16-bit holding register | 3,6              | 4036            | 44036          |
| Purge Open             | AV6        | 1         | 3          | 16-bit holding register | 3,6              | 4037            | 44037          |
| ZigBee Short Address   | -          | -32768    | 32767      | -                       | -                | -               | -              |
| ZigBee IEEE Address    | -          | -32768    | 32767      | -                       | -                | -               | -              |
| DB_ID_AV_SCH_PRIORITY  | -          | 1         | 16         | -                       | -                | -               | -              |
| Time RTC               | -          | 0         | 1439       | -                       | -                | -               | -              |
| Year RTC               | -          | 2000      | 2100       | -                       | -                | -               | -              |
| Day RTC                | -          | 1         | 31         | -                       | -                | -               | -              |
| Contrast               | -          | -5        | 5          | -                       | -                | -               | -              |
| Outdoor Temperature    | AV101      | -400      | 1500       | 16-bit Input            | 4                | 2               | 30002          |
| Supply Temperature     | AV102      | -400      | 1220       | 16-bit Input            | 4                | 3               | 30003          |
| Changeover Temperature | AV104      | -400      | 1220       | 16-bit Input            | 4                | 5               | 30005          |
| BI2 Binary Input       | BI30       | 0         | 1          | Discrete Input          | 2                | 2               | 10002          |
| RUI1 Binary Input      | BI91       | 0         | 1          | Discrete Input          | 2                | 3               | 10003          |
| RBI2 Binary Input      | BI92       | 0         | 1          | Discrete Input          | 2                | 4               | 10004          |
| Cooling Output         | BO93       | 0         | 1          | Discrete value          | 1                | 1               | 1              |
| Heating Output         | BO94       | 0         | 1          | Discrete value          | 1                | 2               | 2              |
| High Speed Fan Output  | BO95       | 0         | 1          | Discrete value          | 1                | 3               | 3              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***                          |
|------------------------|-----------------------|----------------------------------|--|
| -                      | *                     | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| -                      | *                     | 0                                | -  |
| -                      | *                     | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | -                     | -                                | Available on screen only, see User Guide |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | 0=Activated, 1=Not activ.                |
| -                      | yes                   | 0                                | 0=Activated, 1=Not activ.                |
| -                      | yes                   | 0                                | 0=Activated, 1=Not activ.                |
| -                      | yes                   | 0                                | 0=Off, 1=On                              |
| -                      | yes                   | 0                                | 0=Off, 1=On                              |
| -                      | yes                   | 0                                | 0=Off, 1=On                              |

## SER8300 SERIES MODBUS FUNCTIONS

| Description                           | BACnet *** | Low-Limit | High-Limit | Modbus Data Type        | Modbus Functions | Modbus Register | Modbus Address |
|---------------------------------------|------------|-----------|------------|-------------------------|------------------|-----------------|----------------|
| Medium Speed Fan Output               | BO96       | 0         | 1          | Discrete value          | 1                | 4               | 4              |
| Low Speed Fan Output                  | BO97       | 0         | 1          | Discrete value          | 1                | 5               | 5              |
| Thermistor                            | -          | -400      | 1220       | -                       | -                | -               | -              |
| Thermistor Self Heating               | -          | -400      | 1220       | -                       | -                | -               | -              |
| Relative Humidity Raw Value **        | -          | 200       | 800        | -                       | -                | -               | -              |
| Pulsed Heating Demand                 | AO90       | 0         | 100        | 16-bit holding register | 3                | 8003            | 48003          |
| Cooling Valve                         | MSV87      | 0         | 1          | 16-bit holding register | 3,6              | 11              | 40011          |
| RUI1 Configuration                    | MSV82      | 0         | 5          | 16-bit holding register | 3,6              | 13              | 40013          |
| BacNet present                        | -          | 0         | 1          | -                       | -                | -               | -              |
| Pulsed Heating                        | MSV90      | 0         | 2          | 16-bit holding register | 3,6              | 15              | 40015          |
| Fan Sequence                          | MSV57      | 0         | 4          | 16-bit holding register | 3,6              | 16              | 40016          |
| Month RTC                             | -          | 0         | 11         | -                       | -                | -               | -              |
| ZigBee Sensor Pairing Ready           | -          | 0         | 1          | -                       | -                | -               | -              |
| Node Type                             | -          | 0         | 1          | -                       | -                | -               | -              |
| DB_ID_MV_SCHED_EVENTS                 | -          | 0         | 2          | -                       | -                | -               | -              |
| Dehumidification Max Cooling Limit ** | AV73       | 20        | 100        | 16-bit holding register | 3,6              | 4011            | 44011          |
| Internal RH                           | -          | -150      | 150        | -                       | -                | -               | -              |
| RS Internal                           | -          | -50       | 50         | -                       | -                | -               | -              |
| RS Self Heating                       | -          | -50       | 50         | -                       | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.



| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***  |
|------------------------|-----------------------|----------------------------------|--|
| -                      | yes                   | 0                                | 0=Off, 1=On  |
| -                      | yes                   | 0                                | 0=Off, 1=On  |
| -                      | *                     | 0                                | -  |
| -                      | *                     | 0                                | -  |
| -                      | *                     | 0                                | -  |
| -                      | yes                   | 0                                | percent  |
| yes                    | yes                   | 1                                | 0=NO, 1=NC   |
| yes                    | yes                   | 1                                | 0=None, 1=Filter, 2=Service, 3=COC/NH, 4=COC/NC, 5=COS   |
| -                      | -                     | 0                                | ???-1=No, 0=Yes, -1=No ???, 0=Yes, -1=No, 0=Yes???   |
| yes                    | yes                   | 1                                | 0=Off, 1=On, 2=Occ out   |
| yes                    | yes                   | 1                                | 0=L-M-H, 1=L-H, 2=L-M-H-A, 3=L-H-A, 4=On-Auto  |
| -                      | *                     | 0                                | ???-1=Jan., 0=Feb., 1=Mar., 2=Apr., 3=May, 4=June, 5=July, 6=Aug.,<br>7=Sept., 8=Oct., 9=Nov., 10=Dec., -1=Jan., 0=Feb., 1=Mar., 2=Apr., 3=May,<br>4=June, 5=July, 6=Aug., 7=Sept., 8=Oct., 9=Nov., 10=Dec., -1=Jan., 0=Feb.,<br>1=Mar., 2=Apr., 3=May, 4=June, 5=July, 6=Aug., 7=Sept., 8=Oct., 9=Nov.,<br>10=Dec.??? |
| -                      | yes                   | 1                                | 0=No, 1=Yes  |
| -                      | yes                   | 1                                | 0=Router, 1=Coord.   |
| -                      | -                     | 0                                | -  |
| yes                    | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | yes                   | 0                                | -  |
| -                      | *                     | 0                                | -  |

## SER8300 SERIES MODBUS FUNCTIONS

| Description                     | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|---------------------------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| DB_ID_AV_ZIGBEE_HW_REV          | -          | 0         | 127        | -                | -                | -               | -              |
| Zigbee Module Firmware Revision | -          | 0         | 127        | -                | -                | -               | -              |
| Long Screen Message Text        | CSV2       | -         | 480        | -                | -                | -               | -              |
| Exception Schedule (binary)     | -          | 0         | 480        | -                | -                | -               | -              |
| Exception Calendar (binary)     | -          | 0         | 480        | -                | -                | -               | -              |
| Lua Halt Message (pg1..10)      | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 1 - description          | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 2                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 3                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 4                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 5                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 6                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 7                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 8                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 9                        | -          | 0         | 480        | -                | -                | -               | -              |
| Lua PG 10                       | -          | 0         | 480        | -                | -                | -               | -              |
| Vendor Name                     | -          | 0         | 48         | -                | -                | -               | -              |
| Device Name (DEV obj Name)      | -          | 0         | 48         | -                | -                | -               | -              |
| Firmware Revision string        | -          | 0         | 8          | -                | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

[illegible]

## SER8300 SERIES MODBUS FUNCTIONS

| Description         | BACnet *** | Low-Limit | High-Limit | Modbus Data Type | Modbus Functions | Modbus Register | Modbus Address |
|---------------------|------------|-----------|------------|------------------|------------------|-----------------|----------------|
| MV114_Desc          | -          | 0         | 32         | -                | -                | -               | -              |
| AV25_DESC           | -          | 0         | 16         | -                | -                | -               | -              |
| Service Pin         | -          | 0         | 1          | -                | -                | -               | -              |
| Lua Program (1..10) | PG1..10    | -         | -          | -                | -                | -               | -              |
| Weekly Schedule     | SCH1       | -         | -          | -                | -                | -               | -              |

\*Certain points can be made available via ZigBee on request, but are not present in the MPM by default

\*\*Only available on models with a humidity sensor

\*\*\*For BACnet, counting starts at 1 for all Multi-State points and at zero for all Binary points, as per the standard  
For Modbus, counting always starts at zero for Multi-State or Binary objects.

| Writable<br>Via Modbus | ZigBee<br>Available * | Zigbee Counting<br>Starts At *** | Description ***  |
|------------------------|-----------------------|----------------------------------|--|
| -                      | -                     | 0                                | -  |
| -                      | -                     | 0                                | -  |
| -                      | yes                   | 1                                | 0=Off, 1=On  |
| -                      | -                     | -                                | Programs can be uploaded via USB (into the Flash memory) or BACnet (into the EEPROM) |
| -                      | -                     | -                                | Weekly schedule available as separate points via Modbus (and ZigBee *)<br>see below  |

# Technical Support



For any issues with SmartStruxure Solution or SmartStruxure Lite, contact Schneider Electric Technical Support according to your region.

## AMERICAS

- +1-(978)-975-9508: Andover, MA, USA, 8:30am - 5:00pm (EST)
- +1-(800)-830-1274: Carrollton, TX, USA, 8:00am - 5:00pm (CST)
- +1-(888)-444-1311: Rockford, IL, USA, 8:00am - 5:00pm (CST)

## EUROPE

- +44-1628-741-147: London, England, UK, 8:00am - 4:30pm (GMT)
- +46-40-38-69-00: Malmö, Sweden, 8:00am - 4:15pm (CET/CEST)

## ASIA PACIFIC

Contact Technical Support at <https://ecobuilding.schneider-electric.com/support>