

VT8000 Series BACnet Integration

BACnet Integration for VT8000 Series Room Controller

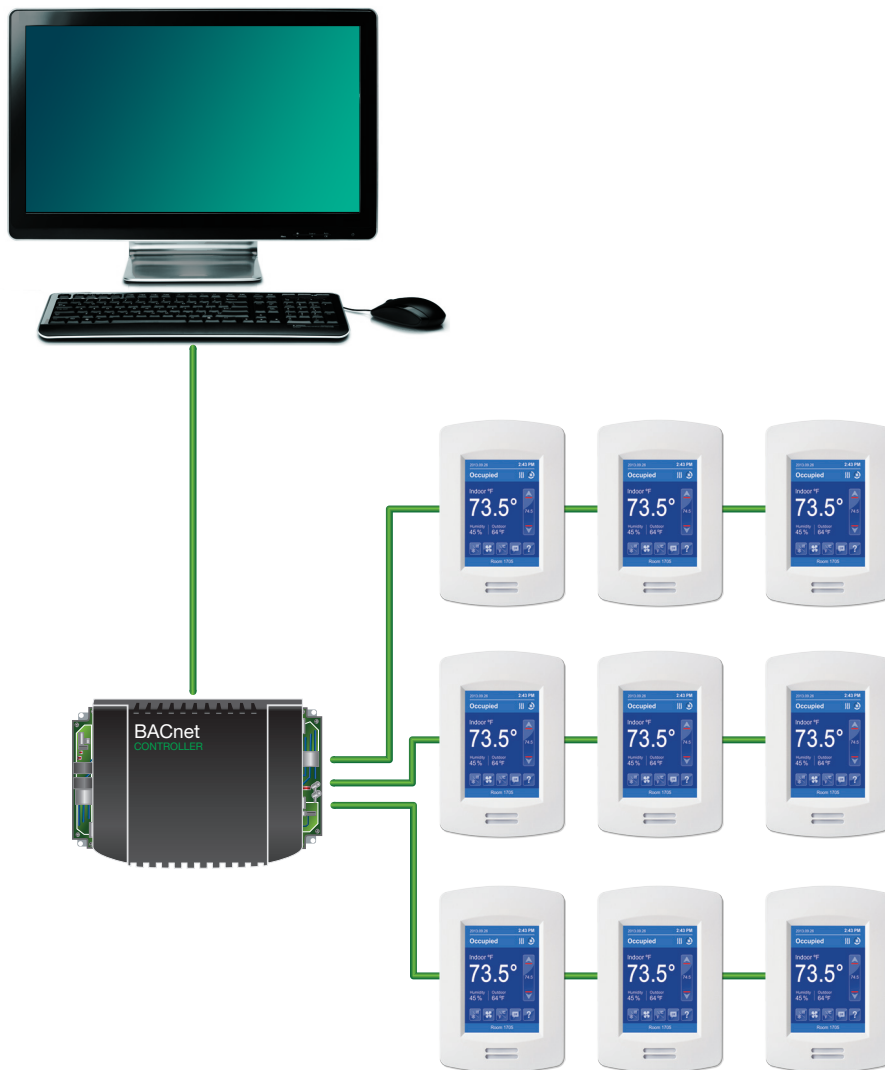


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VT8000 Series BACnet Compatibility Specifications

Note: This document contains BACnet compatibility specifications of the VT8300, VTR8300, and VT8600 Series Room Controllers and follows the BACnet PICS format. Objects common to all three models appear in one table, where are objects which are model specific appear in separate tables.

Supported BACnet® Services: The BACnet® communicating controller meets all requirements for designation as an Application Specific Controller (B-ASC). The BACnet controller supports the following BACnet Interoperability Building Blocks (BIBBs).

Application Service	Designation
Data Sharing-COV-B	DS-COV-B
Data Sharing – Read Property - B	DS-RP-B
Data Sharing – Read Property Multiple - B	DS-RPM-B
Data Sharing – Write Property - B	DS-WP-B
Data Sharing – Write Property Multiple Service - B	DS-WPM-B
Device Management - Time Synchronization - B	DM-TS-B
Device Management - Device Communication Control - B	DM-DCC-B
Device Management – Dynamic Device Binding - B	DM-DDB-B
Device Management – Dynamic Object Binding - B	DM-DOB-B
Scheduling-Internal-B	SCHED-I-B

Note: The controller does not support segmented requests or responses

Object Name	Type and Instance	Object Property	Controller Parameter
VT8X00UXBXX	Device	Object_Identifier Property 75 (R,W)	Unique ID number of a device on a network
		Object_Name Property 77 (R,W)	Unique name of a device on a network
		Model Name Property 70 (R)	Controller model number
		Firmware Revision Property 44 (R)	Current BACnet® firmware revision used by controller
		Protocol Version Property 98 (R)	Current BACnet® firmware protocol version Default is Version 1
		Protocol Revision Property 139 (R)	Current BACnet® firmware protocol revision Default is Version 2
		Max ADPU Length Property 62 (R)	Maximum ADPU Length accepted Default is 480
		ADPU Timeout Property 10 (R)	ADPU timeout value Default is 3000 ms
		Application-Software-Version Property 12 (R)	Controller base application software version Default is based on current released version
		Max_Master (R,W)	Maximum master devices allowed to be part of network. 0 to 127, default is 127
		Description Property 28 (R,W)	String of printable characters (Same as "Long Screen Message" CSV2)
		Location Property 58 (R,W)	String of printable characters (Same as "Short Screen Message" CSV1)
		Local Date Property 56 (R)	Indicates date to best of device knowledge
		Local Time Property 57 (R)	Indicated time of day best of the device knowledge

Object Properties

Analog Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input AI	Output AO	Values AV		
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) the physical input object represents is not in service
Read / Write*	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
Read Only	Read Only	Read Only	Reliability Property 103	Indicates if Present_Value is "reliable"
N/A	Read Only	Read / Write †	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read Only	Read Only	Read Only	Units Property 177	Indicates measurement units of Present_Value
N/A	Read Only	N/A	Hight Limit Property 1101	Specifies a limit Present_Value must exceed before an event is generated
N/A	Read Only	N/A	Low Limit Property 1100	Specifies a limit Present_Value must fall below before an event is generated

N/A = Not Applicable, property not used for objects of that type

* The Present_Value is only writeable when Out_Of_Service is TRUE.

† Relinquish default is Read Only for AV100+

Binary Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input BI	Output BO	Values BV		
Read Only	Read Only	Read Only	Active Text Property 4	Characterizes intended effect of the ACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Inactive Text Property 46	Characterizes intended effect of INACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read Only	Read / Write	N/A	Polarity Property 84	Indicates relationship between physical state of input and Present_Value
Read / Write	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
N/A	Read Only	Read Only	Relinquish Default Property 104	Default value to be used for Present Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type

Multi-state Objects

Object Type Read/Write Settings		Object Property	Controller Parameter
Input MSI	Values MV		
Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Number of States Property 74	Defines number of states Present_Value may have
Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read / Write*	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Priority Array Property 87	Indicates relationship between physical state of input and Present_Value
N/A	Read / Write	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	State Text Property 110	Represents descriptions of all possible states of Present_Value
Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type

*The Present_Value is only writeable when Out_Of_Service is TRUE.

CSV Objects

Read/Write	Object Property	Controller Parameter
Read Only	Event State Property 36	Indicates object has an active event state associated with it
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

PG Objects

Read/Write	Object Property	Controller Parameter
Read / Write	Description Property 28	String of printable characters whose content is not restricted. Contains the LUA program script (max size = 480 bytes)
Read Only	Description Of Halt Property 29	Describes the reason why a program has been halted Text is also displayed in the HMI debug log
Read Only	Instance Of Property 48	Local name of the application program being executed by this process
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read Only	Out Of Service Property 81	Indicates whether (TRUE/FALSE) the process this object represents is not in service
Write Only	Program Change Property 90	Used to request changes to the operating state of the program. Writing to property affects all 10 PG objects
Read Only	Program State Property 92	Current logical state of all 10 PG objects executing application programs
Read Only	Reason For Halt Property 100	If program halts, this property reflects the reason for halt for all 10 PG objects
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

CAL Object Properties

Read/Write	Object Property	Controller Parameter
Read / Write	Date List Property 23	List of calendar entries.
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read Only	Present Value Property 85	This property is TRUE when current date matches an entry.

SCH Object Properties

Read/Write	Object Property	Controller Parameter
Read Only	Effective Period Property 32	Range of dates within which the Schedule object is active. All dates are in range, so always Effective
Read / Write	Exception Schedule Property 38	Sequence of schedule actions that takes precedence over normal behavior on a specific day or days. By default, this property refers to the calendar.
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Present Value Property 85	Contains the current value of the schedule (0:unoccupied, 1:occupied) Only writeable when Out Of Service is TRUE
Read / Write	Out Of Service Property 81	Indicates whether (TRUE/FALSE) the internal calculations of the schedule object are used to determine the value of the Present Value property
Read Only	Reliability Property 103	Indicates if Present Value is "reliable"
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read / Write	Weekly Schedule Property 123	7 elements that describe the sequence of schedule actions for each day of the week.
Read Only	Schedule Default Property 174	Default value to be used when no other scheduled value is in effect. Always Unoccupied

Common to VT8000 & VTR8000 Series

AI Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Light Sensor Level	AI	2	0	0	30000
Wireless Zone 1 IEEE Address	AI	210	0	-32768	32767
Wireless Zone 10 IEEE Address	AI	300	0	-32768	32767
Wireless Zone 2 IEEE Address	AI	220	0	-32768	32767
Wireless Zone 3 IEEE Address	AI	230	0	-32768	32767
Wireless Zone 4 IEEE Address	AI	240	0	-32768	32767
Wireless Zone 5 IEEE Address	AI	250	0	-32768	32767
Wireless Zone 6 IEEE Address	AI	260	0	-32768	32767
Wireless Zone 7 IEEE Address	AI	270	0	-32768	32767
Wireless Zone 8 IEEE Address	AI	280	0	-32768	32767
Wireless Zone 9 IEEE Address	AI	290	0	-32768	32767

AO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
PI Cooling Demand	AO	22	0	0	100
PI Heating Demand	AO	21	0	0	100
UO12 Analog Output	AO	124	0	0	10

AV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
* Calibrate Humidity Sensor	AV	8	0	-15	15
* Dehumidification Hysteresis	AV	72	5	2	20
BACnet Stack Poll Rate	AV	16	4	1	5
Calibrate Room Temperature Sensor	AV	7	0	-5	5
COM Address	AV	10	254	0	254
Cooling Demand Limit	AV	89	0	0	100
Cooling Setpoint Limit	AV	59	54	54	100
Default Heating Setpoint	AV	45	72	65	80
Heating Demand Limit	AV	88	0	0	100
Heating Setpoint Limit	AV	58	90	40	90
Keyboard Value	AV	92	0	0	35
Low Backlight	AV	3	60	0	100
Lua Parameter A (AV25)	AV	25	0	-32768	32767

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Lua Parameter B (AV26)	AV	26	0	-32768	32767
Lua Parameter C (AV27)	AV	27	0	-32768	32767
Lua Parameter D (AV28)	AV	28	0	-32768	32767
Lua Parameter E (AV29)	AV	29	0	-32768	32767
Lua Parameter F (AV30)	AV	30	0	-32768	32767
Main Password	AV	56	0	0	9999
Minimum Deadband	AV	63	30	20	50
Night Backlight	AV	4	5	0	100
Number of Pipes	AV	52	2	2	4
Occupied Cool Setpoint	AV	40	75	54	100
Occupied Heat Setpoint	AV	39	72	40	90
Outdoor Temperature	AV	101	0	-40	150
Proportional Band	AV	65	3	3	10
Purge Open	AV	6	2	1	3
Purge Sample Period	AV	5	20	0	40
Room Temperature	AV	100	0	-40	122
Standby Cool Setpoint	AV	42	78	54	100
Standby Heat Setpoint	AV	41	69	40	90
Standby Temperature Differential	AV	46	4	1	5
Standby Time	AV	67	0.5	0.5	24
Temporary Occupancy Time	AV	62	2	0	24
Unoccupied Cool Setpoint	AV	44	80	54	100
Unoccupied Heat Setpoint	AV	43	62	40	90
Unoccupied Time	AV	68	0	0	24
User HMI	AV	2	0	0	11
User Password	AV	57	0	0	9999

CSV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
External Memory Revision	CSV	3	N/A	N/A	N/A
Long Screen Message Text	CSV	2	N/A	N/A	N/A
Short Screen Message Text	CSV	1	N/A	N/A	N/A

BV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
* Dehumidification Status	BV	38	0	Off	On
Clock Alarm	BV	8	0	Off	On
Display Long Screen Message	BV	7	0	Off	On
Door Contact Installed	BV	2	0	No	Yes
Door Contact Status	BV	1	0	Closed	Opened
Exception Status	BV	10	0	Off	On
Filter Alarm	BV	36	0	Off	On
Force High Backlight	BV	6	0	Off	On
Low Battery Alarm	BV	5	0	Off	On
PIR Local Motion	BV	32	0	No motion	Motion
Service Alarm	BV	37	0	Off	On
Smart Recovery Status	BV	40	0	Off	On
Window Alarm	BV	35	0	Off	On
Window Contact Installed	BV	4	0	No	Yes
Window Contact Status	BV	3	0	Closed	Opened
ZigBee PIR Sensor Installed	BV	200	0	Off	On
ZigBee Sensor Motion	BV	201	0	No motion	Motion

MSI Property Value Ranges

Object Name	Object Type	Instance	Index	Text
Effective Occupancy	MSI	33	3	Occupied / Unoccupied / Override / Standby
Wireless Zone 1 Battery	MSI	211	2	None / Low
Wireless Zone 1 Paired	MSI	212	2	No / Yes / Invalid
Wireless Zone 1 Status	MSI	210	4	None / Closed / Opened / No motion / Motion
Wireless Zone 10 Battery	MSI	301	2	None / Normal / Low
Wireless Zone 10 Paired	MSI	302	2	No / Yes / Invalid
Wireless Zone 10 Status	MSI	300	4	None / Closed / Opened / No motion / Motion
Wireless Zone 2 Battery	MSI	221	2	None / Normal / Low
Wireless Zone 2 Paired	MSI	222	2	No / Yes / Invalid
Wireless Zone 2 Status	MSI	220	4	None / Closed / Opened / No motion / Motion
Wireless Zone 3 Battery	MSI	231	2	None / Normal / Low
Wireless Zone 3 Paired	MSI	232	2	No / Yes / Invalid
Wireless Zone 3 Status	MSI	230	4	None / Closed / Opened / No motion / Motion
Wireless Zone 4 Battery	MSI	241	2	None / Normal / Low
Wireless Zone 4 Paired	MSI	242	2	No / Yes / Invalid
Wireless Zone 4 Status	MSI	240	4	None / Closed / Opened / No motion / Motion
Wireless Zone 5 Battery	MSI	251	2	None / Normal / Low
Wireless Zone 5 Paired	MSI	252	2	No / YesInvalid
Wireless Zone 5 Status	MSI	250	4	None / Closed / Opened / No motion / Motion
Wireless Zone 6 Battery	MSI	261	2	None / Normal
Wireless Zone 6 Paired	MSI	262	2	No / Yes
Wireless Zone 6 Status	MSI	260	4	None / Closed Opened / No motion / Motion

Object Name	Object Type	Instance	Index	Text
Wireless Zone 7 Battery	MSI	271	2	None / Normal
Wireless Zone 7 Paired	MSI	272	2	No / Yes
Wireless Zone 7 Status	MSI	270	4	None / Closed / Opened / No motion / Motion
Wireless Zone 8 Battery	MSI	281	2	None
Wireless Zone 8 Paired	MSI	282	2	No / Yes
Wireless Zone 8 Status	MSI	280	4	None / Closed / Opened / No motion / Motion
Wireless Zone 9 Battery	MSI	291	2	None / Normal / Low
Wireless Zone 9 Paired	MSI	292	2	No / Yes / Invalid
Wireless Zone 9 Status	MSI	290	4	None / Closed / Opened / No motion / Motion
ZigBee Status	MSI	2	4	Not det. / Pwr on / No NWK / Joined / Online

MV Property Value Ranges

Object name	Object Type	Instance	Default Value	Index	Text
* Dehumidification Lockout	MV	13	1	1	Disabled / Enabled
* Room Humidity Display	MV	70	0	1	Disabled / Enabled
Arabic	MV	120	0	1	Disabled / Enabled
Auto Mode Enable	MV	50	1	1	Disabled / Enabled
Auto Mode Fan Function	MV	66	0	1	AS / AS/AD
BACnet Baud Rate	MV	8	7	7	9600 / 19200 / 38400 / 57600 / 76800 / 115200 / Auto
Chinese	MV	103	1	1	Disabled / Enabled
Control Status	MV	112	0	2	Off / Cool / Heat
Custom button behavior	MV	115	0	11	Default function / No function / System mode function / Fan function / Override function / Schedule function / Units function / Help function / Language function / Configuration function / Custom function / Standby function
Custom button icon	MV	114	0	16	Default Button / No Button / System Mode Heat/Cool / System Mode On/Off / Fan Mode / Override Button / Units Button / Help Button / Language Button / Schedule Button / Lighting Button / Blind Button / Lamp Button / Energy Button / Make Room Button / Setting Button / Timer Button
Czech	MV	122	0	1	Disabled / Enabled
Danish	MV	123	0	1	Disabled / Enabled
Display Language	MV	4	0	20	English / French / Spanish / Chinese / Russian / Arabic / Bulgarian / Czech / Danish / Dutch / Finnish / German / Hungarian / Indonesian. / Italian / Norwegian / Polish / Portuguese. / Slovak / Swedish / Turkish
Dutch	MV	124	0	1	Disabled / Enabled
Enable Smart Recovery	MV	71	0	1	Off / On
Fan Mode	MV	17	3	4	Low / Med / High / Auto / On

Object name	Object Type	Instance	Default Value	Index	Text
Fan Sequence	MV	57	4	4	L-M-H / L-H / L-M-H-A / L-H-A / On-Auto
Finnish	MV	125	0	1	Disabled / Enabled
French	MV	101	1	1	Disabled / Enabled
German	MV	126	0	1	Disabled / Enabled
HMI Color	MV	2	0	4	White / Green / Blue / Grey / Dark grey
Hungarian	MV	127	0	1	Disabled / Enabled
Indonesian	MV	128	0	1	Disabled / Enabled
Italian	MV	129	0	1	Disabled / Enabled
Long Message Background Color	MV	1	0	6	White / Green / Blue / Grey / Dark grey / Red
Main Display	MV	3	0	1	Temp. / Setpoint
Mode Button	MV	111	0	1	Normal / Off-Auto
Network Language	MV	7	0	2	English / French / Spanish
Network Units	MV	6	0	1	SI / Imperial
No Activity Sleep Mode Time	MV	9	0	1	Disabled / Enabled
Norwegian	MV	130	0	1	Disabled / Enabled
Occupancy Command	MV	10	0	2	Loc occ. / Occupied / Unocc. tt
Occupancy Source	MV	110	0	1	Motion / Schedule
Polish	MV	131	0	1	Disabled / Enabled
Portuguese	MV	132	0	1	Disabled / Enabled
Russian	MV	104	1	1	Disabled / Enabled
Schedule Menu	MV	73	1	3	Disabled / Enabled / Dis. no.clk / En.no.clk
Schedule Type	MV	136	0	2	7 days / 5+2 days / 5+1+1 days
Sequence of Operation	MV	15	1	4	Cool only / Heat only / Cool/Heat / Heat-Rht / Reheat
Setpoint Function	MV	58	1	1	Dual SP / Attach SP
Slovak	MV	133	0	1	Disabled / Enabled
Spanish	MV	102	1	1	Disabled / Enabled
Standby Mode Configuration	MV	11	0	1	Absolute / Offset
Swedish	MV	134	0	1	Disabled / Enabled
System Mode	MV	16	3	3	Off / Auto / Cool / Heat
Temperature Scale	MV	51	0	1	°C / °F
Time Format	MV	5	0	1	AM-PM / 24 Hours
Turkish	MV	135	0	1	Disabled / Enabled
Use Standby Screen	MV	32	0	1	No / Yes
Wireless Zone 1 Set Function	MV	210	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 2 Set Function	MV	220	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 3 Set Function	MV	230	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 4 Set Function	MV	240	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 5 Set Function	MV	250	5	6	None / Window / Door / Motion / Status / Remove / TE2

Object name	Object Type	Instance	Default Value	Index	Text
Wireless Zone 6 Set Function	MV	260	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 7 Set Function	MtV	270	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 8 Set Function	MV	280	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 9 Set Function	MV	290	5	6	None / Window / Door / Motion / Status / Remove / TE2
Wireless Zone 10 Set Function	MV	300	5	6	None / Window / Door / Motion / Status / Remove / TE2

VT8600 Series

AI Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
UI19 Raw Value	AI	31	0	0	4095
UI20 Raw Value	AI	5	0	0	4095
UI22 Raw Value	AI	8	0	0	4095
UI23 Raw Value	AI	7	0	0	4095
UI24 Raw Value	AI	9	0	0	4095

AO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Analog Output Heat Demand	AO	24	0	0	100
Economizer Demand	AO	23	0	0	100
UO10 Analog Output	AO	126	0	0	10
UO11 Analog Output	AO	123	0	0	10
UO9 Analog Output	AO	125	0	0	10
UO12 Analog Output	AO	124	0	0	10

AV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
* Dehumidification Setpoint	AV	71	50	30	95
Airflow Level	AV	107	0	0	20000
Anti Short Cycle Time	AV	86	2	0	5
Calibrate Humidity Sensor	AV	8	0	-15	15
Calibrate Outside Temperature Sensor	AV	74	0	-5	5
Changeover Setpoint	AV	95	55	14	70
CO2 Level	AV	106	0	0	2000
Cooling CPH	AV	85	4	3	4
Cooling Lockout	AV	93	-40	-40	95
Dehumidification Hysteresis	Av	72	5	2	20
Dehumidification Max Cooling Limit	AV	73	100	20	100
Dehumidification Setpoint	AV	71	50	30	95
Discharge High Limit	AV	99	12	70	150
Discharge Low Limit	AV	20	45	35	65
Economizer Maximum Position	AV	81	100	0	100

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Economizer Minimum Position	AV	78	0	0	100
Floating Actuator Timing	AV	90	1.5	0.5	9
Fresh Air Range Upper Limit	AV	96	0	0	20000
Get from COM	AV	15	0	0	254
Heating CPH	AV	84	4	3	8
Heating Lockout from Outside Air Temperature	AV	91	120	-15	120
High balance point	AV	82	90	34	90
Low Balance Point	AV	83	-12	-40	30
Maximum CO2	AV	24	1200	0	2000
Maximum Fresh Air	AV	22	0	0	20000
Minimum CO2	AV	23	800	0	2000
Minimum Fresh Air	AV	21	0	0	20000
Minimum Supply Heat	AV	97	64	50	72
Number of Cooling Stages	AV	75	2	1	2
Number of Heating Stages	AV	87	2	0	2
Outdoor Temperature	AV	101			
Power-up Delay	AV	76	10	10	120
Room Humidity	AV	103			
Supply Air Setpoint	AV	94	55	50	90
Supply Heat Lockout	AV	98	32	-15	120
UI19 Analog Input	AV	108	0	0	100
UI19 Lua	AV	202	0	-32768	32767
UI19 Temperature	AV	104	0	-40	150
UI20 Lua	AV	203	0	-32768	32767
UI20 Remote Temperature	AV	105	0	-40	150
UI22 Lua	AV	204	0	-32768	32767
UI22 Supply Temperature	AV	102	0	-40	122
UI23 Lua	AV	205	0	-32768	32767
UI24 Lua	AV	206	0	-32768	32767
UI24 Temperature	AV	109	0	-400	1500
ZigBee Channel	AV	12	10	10	25
ZigBee IEEE Address	AV	14	0	-32768	32767
ZigBee PAN ID	AV	11	0	-32768	32767
ZigBee Short Address	AV	13	0	-32768	32767

BI Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
UI16 Binary Input	BI	29	Not activ.	Not activ.	Activated
UI17 Binary Input	BI	30	Not activ.	Not activ.	Activated
UI19 Binary Input	BI	91	Not activ.	Not activ.	Activated
UI20 Binary Input	BI	94	Not activ.	Not activ.	Activated
UI22 Binary Input	BI	95	Not activ.	Not activ.	Activated
UI23 Binary Input	BI	96	Not activ.	Not activ.	Activated
UI24 Binary Input	BI	97	Not activ.	Not activ.	Activated

BO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
BO1 Auxiliary Binary Output	BO	98	Off	Off	On
BO2 Low Speed Fan Output	BO	97	Off	Off	On
BO3 Medium Speed Fan Output	BO	96	Off	Off	On
BO4 High Speed Fan Output	BO	95	Off	Off	On
G Fan Status	BO	25	Off	Off	On
UO10 Binary Output	BO	94	Off	Off	On
UO11 Binary Output	BO	101	Off	Off	On
UO12 Binary Output	BO	102	Off	Off	On
UO9 Binary Output	BO	93	Off	Off	On
W1 Status	BO	28	Off	Off	On
W2 Status	BO	29	Off	Off	On
Y1 Status	BO	26	Off	Off	On
Y2 Status	BO	27	Off	Off	On

BV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
CO2 Alarm	BV	41	Off	Off	On
Dehumidification Status	BV	38	Off	Off	On
Fan Lock Alarm	BV	39	Off	Off	On
Frost Protection Alarm	BV	43	Off	Off	On
Low Fresh Air Alarm	BV	42	Off	Off	On

MV Property Value Ranges

Object name	Object Type	Instance	Default Value	Index	Text
* Room Humidity Display	MV	70	0	1	Disabled / Enabled
Application	MV	119	0	1	Rooftop / Heatpump
BACnet Module Present	MV	0	1	1	No / Yes
BO1 Auxiliary Output Configuration	MV	92	0	1	NO / NC
BO8 Aux Output Time Base	MV	91	0	1	15 min. / 10 sec.
Bulgarian	MV	121	0	0	Disabled
Comfort or economy mode	MV	116	0	1	Comfort / Economy
Compressor - auxiliary interlock	MV	118	0	1	Off / On
Control Type	MV	81	1	2	On/Off / Floating / Analog
Dehumidification Lockout	MV	13	0	1	Disabled / Enabled
Economizer Configuration	MV	72	0	1	Off / On
Fan Control in Heating Mode	MV	95	0	1	Off / On
Fan Delay	MV	12	1	1	Off / On
Fan Mode	MV	17	1	2	On / Auto / Smart
Frost Protection	MV	55	0	1	Off / On
Keypad Lockout	MV	19	0	5	Level 0 / Level 1 / Level 2 / Level 3 / Level 4 / Level 5
Mechanical Cooling Allowed	MV	79	0	1	Off / On
Node type	MV	113	0	1	Router / Coord.
Reversing Valve Operation	MV	117	0	1	O / B
Room Humidity Display	MV	70	0	1	Disabled / Enabled
Room Temperature Sensor	MV	145	0	1	Remote / Local
Schedule Events	MV	137	2	2	2 per day / 4 per day / 6 per day
Sequence of Operation	MV	15	1	5	Cool only / Heat only / Cool- rht / Heat-rht / Cool/Heat / Cl/ht-rht
UI16 Configuration	MV	46	0	5	None / Rem NSB / Motion NO / Motion NC / Window / Fan lock
UI16 Input Type	MV	138	1	1	Binary
UI17 Configuration	MV	47	0	4	None / Door dry / Override / Filter / Service
UI17 Input Type	MV	139	1	1	Binary
UI19 Configuration	MV	49	0	1	None / CO2
UI19 Input Type	MV	140	2	2	Thermistor Binary Voltage
UI20 Input Type	MV	141	0	2	Thermistor Binary Voltage
UI22 Input Type	MV	142	0	2	Thermistor Binary Voltage
UI23 Input Type	MV	143	0	2	Thermistor / Binary / Voltage
UI24 Input Type	MV	144	2	2	Thermistor / Binary / Voltage
UO9 Configuration	MV	96	3	3	Analog / Binary / Relay RC / Relay RH
UO10 Configuration	MV	97	0	2	Analog / Binary / Relay RC
UO11 Configuration	MV	98	0	1	Analog / Binary
UO12 Configuration	MV	99	1	1	Analog / Binary

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AI Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
UI19 Raw Value	AI	31	0	0	4095
UI20 Raw Value	AI	5	0	0	4095
UI22 Raw Value	AI	8	0	0	4095
UI23 Raw Value	AI	7	0	0	4095
UI24 Raw Value	AI	9	0	0	4095

AO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
UO9	AO	125	0	0	10
UO10	AO	126	0	0	10
UO11	AO	123	0	0	10
UO12	AO	124	0	0	10

AV Property Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
* Room Humidity	AV	103	0	5	95
Calibrate Humidity Sensor	AV	8	0	-5	5
CPH	AV	84	4	3	8
Dehumidification Max Cooling Limit	AV	73	100	20	100
Dehumidification Setpoint	AV	71	50	30	95
Floating Actuator Timing	AV	90	1.5	0.5	9
Terminal24 10V	AV	107	0	0	100
UI19 Changeover Temperature	AV	104	0	-400	1500
UI19 Lua	AV	202	0	-32768	32767
UI20 Remote Temperature	AV	105	0	-40	150
UI20 Lua	AV	203	0	-40	150
UI22 Supply Temperature	AV	102	0	-40	150
UI22 Lua	AV	204	0	-40	150
UI23 Lua	AV	205	0	-40	150
UI24 temperature	AV	109	0	-40	150
UI24 Lua	AV	206	0	-40	150

BO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
BO2 Low Speed Fan Output	BO	97	Off	Off	On
BO3 Medium Speed Fan Output	BO	96	Off	Off	On
BO4 High Speed Fan Output	BO	95	Off	Off	On
BO8 Auxiliary Binary Output	BO	98	Off	Off	On
UO9 Binary Output	BO	93	Off	Off	On
UO10 Binary Output	BO	94	Off	Off	On
UO11 Binary Output	BO	101	Off	Off	On
UO12 Binary Output	BO	102	Off	Off	On

BI Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
UI16 Binary Input	BI	29	Off	Off	On
UI17 Binary Input	BI	30	Off	Off	On
UI19 Binary Input	BI	91	Off	Off	On
UI20 Binary Input	BI	94	Off	Off	On
UI22 Binary Input	BI	95	Off	Off	On
UI23 Binary Input	BI	96	Off	Off	On
UI24 Binary Input	BI	97	Off	Off	On

BV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Dehumidification Status	BV	38	Off	Off	ON

MV Property Value Ranges

Object name	Object Type	Instance	Default Value	Index	Text
Action	MV	94	0	1	DA / RA
BO8 Aux Output Time Base	MV	91	0	1	15 min / 10 sec
Control Type	MV	81	0	2	On/off, Floating, Analog
Dehumidification Lockout	MV	13	0	1	Disabled / Enabled
Room Humidity Display	MV	70	0	1	Disabled / Enabled
Room Temperature Sensor	MV	145	0	1	Remote / Local
BO8 Aux Output Configuration	MV	92	0	4	Reheat / Aux NO / Aux NC / Aux F&NO / Aux F&NC
UI16 Configuration	MV	46	0	4	None / Rem NSB / Motion NO / Motion NC / Window
UI16 Input Type	MV	138	1	1	Binary

Object name	Object Type	Instance	Default Value	Index	Text
UI17 Configuration	MV	47	0	4	None, Door. dry, Override, Filter, Service
UI17 Input Type	MV	139	0	1	Binary
UI19 Configuration	MV	49	0	3	None / COC/NH / COC/NC / COS
UI19 Input Type	MV	140	0	2	Thermistor / Binary / Voltage
UI20 Input Type	MV	141	0	2	Thermistor / Binary / Voltage
UI22 Input Type	MV	142	0	2	Thermistor / Binary / Voltage
UI23 Input Type	MV	143	1	2	Binary / Voltage
UI24 Input Type	MV	144	1	2	Thermistor / Binary / Voltage
UO9 Configuration	MV	96	1	3	Analog / Binary / Relay RC / Relay RH
UO10 Configuration	MV	97	1	2	Analog / Binary / Relay RC
UO11 Configuration	MV	98	1	1	Analog / Binary
UO12 Configuration	MV	99	1	1	Analog / Binary

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AO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Pulsed Heating Demand	AO	90	0	0	100

AV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
* Dehumidification Max Cooling Limit	AV	73	100	20	100
* Room Humidity	AV	103	0	5	95
Calibrate Humidity Sensor	AV	8	0	-15	15
Changeover Temperature	AV	104	0	-40	122
Cooling CPH	AV	85	4	3	8
Dehumidification Hysteresis	AV	72	5	2	20
Dehumidification Setpoint	AV	71	50	30	95
Heating CPH	AV	84	4	3	8
Supply Temperature	AV	102	0	-40	122
Outdoor Temperature	AV	72	0	-40	150

BI Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
BI1 Binary Input	BI	29	0	Activated	Not activ.
BI2 Binary Input	BI	30	0	Activated	Not activ.
RBI2 Binary Input	BI	92	0	Activated	Not activ.
RUI1 Binary Input	BI	91	0	Activated	Not activ.

BO Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
Cooling Output	BO	93	0	Off	On
Heating Output	BO	94	0	Off	On
High Speed Fan Output	BO	95	0	Off	On
Low Speed Fan Output	BO	97	0	Off	On
Medium Speed Fan Output	BO	96	0	Off	On

BV Property Value Ranges

Object name	Object Type	Instance	Default Value	Minimum Range Value	Maximum Range Value
* Dehumidification Status	BV	38	0	Off	On

MV Property Value Ranges

Object name	Object Type	Instance	Default Value	Index	Text
BI1 Configuration	MV	46	0	4	None / Rem NSB / Motion NO / Motion NC / Window
BI2 Configuration	MV	47	0	2	None / Door dry / Override
Cooling Valve	MV	87	1	1	NO / NC
Dehumidification Lockout	MV	13	1	1	Disabled / Enabled
English	MV	100	1	1	Enabled
Fan Control in Heating Mode	MV	95	0	2	On / Off-Auto / Off-All
Heating Valve	MV	86	1	1	NO / NC
Pulsed Heating	MV	90	0	2	Off / On / Occ out
Room Humidity Display	MV	70	0	1	Disabled / Enabled
RBI2 Configuration	MV	83	0	2	None / Filter / Service
RUI1 Configuration	MV	82	0	5	None / Filter / Service / COC/NH / COC/NC / COS