



Date: **11/07/2016**

Vendor Name: **Carrier**

Product Name: **VVT Zone Controller**

Product Model Number: **OPN-VVTZC**

Applications Software Version: **<depends on application>** Firmware Revision: **6.00a**

BACnet Protocol Revision: **9**

Product Description:

The VVT Zone Controller provides zone level temperature and air quality control for a variety of pressure-dependent VVT applications. This advanced controller features an integral actuator for easy installation onto single duct and parallel fan-powered air terminals. It also features native BACnet communications and plug-and-play connectivity to the Carrier i-Vu Building Automation System.

BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Display (B-OD)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)

List all BACnet Interoperability Building Blocks Supported (Annex K):

DS-RP-A	AE-N-I-B	SCHED-I-B	T-VMT-I-B	DM-DDB-A
DS-RP-B	AE-ACK-B	SCHED-E-B	T-ATR-B	DM-DDB-B
DS-RPM-A	AE-ASUM-B			DM-DOB-A
DS-RPM-B	AE-ESUM-B			DM-DOB-B
DS-RR-B	AE-INFO-B			DM-DCC-B
DS-WP-A				DM-PT-A
DS-WP-B				DM-PT-B
DS-WPM-A				DM-TS-B
DS-WPM-B				DM-UTC-B
DS-COV-A				DM-RD-B
DS-COV-B				DM-LM-B
DS-COVU-A				DM-R-B
DS-COVU-B				

Segmentation Capability:

- Able to transmit segmented messages
- Able to receive segmented messages

Window Size 1
 Window Size 1



Standard Object Types Supported:

An object type is supported if it may be present in the device. For each standard Object Type supported provide the following data:

- 1) Whether objects of this type are dynamically creatable using the CreateObject service
- 2) Whether objects of this type are dynamically deletable using the DeleteObject service
- 3) List of the optional properties supported
- 4) List of all properties that are writable where not otherwise required by this standard
- 5) List of all properties that are conditionally writable where not otherwise required by this standard.
- 6) List of proprietary properties and for each its property identifier, datatype, and meaning
- 7) List of any property range restrictions

(List of object types starts on page 4 ...)



Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, EIA-485 ARCNET (Clause 8), baud rate(s) _____
- MS/TP master (Clause 9), baud rate(s): **9600, 19200, 38400, 76800** _
- MS/TP slave (Clause 9), baud rate(s): _____
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____
- Point-To-Point, modem, (Clause 10), baud rate(s): _____
- LonTalk, (Clause 11), medium: _____
- BACnet/Zigbee (Annex O) _____
- Other: _____

Device Address Binding:

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.) Yes No

Networking Options:

- Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
 - Does the BBMD support registrations by Foreign Devices? Yes No
 - Does the BBMD support network address translation? Yes No

Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

- ANSI X3.4
- IBM™/Microsoft™ DBCS
- ISO 8859-1
- ISO 10646 (UCS-2)
- ISO 10646 (UCS-4)
- JIS C 6226

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports: None.

Network Security Options:

- Non-secure Device – is capable of operating without BACnet Network Security
- Secure Device – is capable of using BACnet Network Security (NS-SD BIBB)
 - Multiple Application-Specific Keys
 - Supports encryption (NS-ED BIBB)
 - Key Server (NS-KS BIBB)



Analog Input:

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - event-time-stamps
 - high-limit
 - limit-enable
 - low-limit
 - max-pres-value
 - min-pres-value
 - notification-class
 - notify-type
 - reliability
 - resolution
 - time-delay
 - update-interval
4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
 - units
5. Proprietary properties: None
6. Range restrictions:

description	limited to 50 octets in length
device-type	limited to 50 octets in length
present-value	limited by min-pres-value and max-pres-value properties
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Analog Input (ASVI_CS):



1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - event-time-stamps
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - reliability
 - resolution
 - time-delay
4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
 - units
5. Proprietary properties:

4168	cs-comb-algorithm	optional/writable
4169	cs-disp-source	optional/writable
4170	cs-sens-enable-arr	optional/writable
4173	cs-corrected-value-arr	optional/
4171	cs-sens-status-arr	optional
4172	cs-sens-calib-arr	optional/writable
6. Range restrictions:

description	limited to 50 octets in length
device-type	limited to 50 octets in length
notification-class	must be valid notification-class
time-delay	0 to 4294967295



Analog Input (TLO):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - event-time-stamps
 - high-limit
 - limit-enable
 - low-limit
 - max-pres-value
 - min-pres-value
 - notification-class
 - notify-type
 - reliability
 - resolution
 - time-delay
 - update-interval
4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
 - units
5. Proprietary properties: None
6. Range restrictions:

description	limited to 50 octets in length
device-type	limited to 50 octets in length
present-value	limited by min-pres-value and max-pres-value properties
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Analog Input (PTA):

1. Creatable? NO



2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - device-type
 - Event-enable
 - Event-time-stamps
 - high-limit
 - limit-enable
 - low-limit
 - max-pres-value
 - min-pres-value
 - notification-class
 - notify-type
 - reliability
 - resolution
 - time-delay
 - update-interval
4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
 - units
5. Proprietary properties: None
6. Range restrictions:

description	limited to 50 octets in length
device-type	limited to 50 octets in length
present-value	limited by min-pres-value and max-pres-value properties
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Analog Input (RS):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions



- cov-increment
- deadband
- description
- device-type
- event-enable
- event-time-stamps
- high-limit
- limit-enable
- low-limit
- max-pres-value
- min-pres-value
- notification-class
- notify-type
- reliability
- resolution
- time-delay
- update-interval
- 4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
 - units
- 5. Proprietary properties: None
- 6. Range restrictions:
 - description limited to 50 octets in length
 - device-type limited to 50 octets in length
 - present-value limited by min-pres-value and max-pres-value properties
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Analog Output:

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description



- device-type
- event-enable
- event-time-stamps
- high-limit
- limit-enable
- low-limit
- max-pres-value
- min-pres-value
- notification-class
- notify-type
- reliability
- resolution
- time-delay
- 4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
 - units
- 5. Proprietary properties: None
- 6. Range restrictions:

description	limited to 50 octets in length
device-type	limited to 50 octets in length
present-value	limited by min-pres-value and max-pres-value properties
relinquish-default	limited by min-pres-value and max-pres-value properties
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Analog Output (FM):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - device-type



- event-enable
- event-time-stamps
- high-limit
- limit-enable
- low-limit
- max-pres-value
- min-pres-value
- notification-class
- notify-type
- reliability
- resolution
- time-delay
- 4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
 - units
- 5. Proprietary properties: None
- 6. Range restrictions:
 - description limited to 50 octets in length
 - device-type limited to 50 octets in length
 - present-value limited by min-pres-value and max-pres-value properties
 - relinquish-default limited by min-pres-value and max-pres-value properties
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Analog Output (PWM):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable



- event-time-stamps
- high-limit
- limit-enable
- low-limit
- max-pres-value
- min-pres-value
- notification-class
- notify-type
- reliability
- resolution
- time-delay
- 4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - device-type
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
 - units
- 5. Proprietary properties: None
- 6. Range restrictions:
 - description limited to 50 octets in length
 - device-type limited to 50 octets in length
 - present-value limited by min-pres-value and max-pres-value properties
 - relinquish-default limited by min-pres-value and max-pres-value properties
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Analog Value (AVP_CS):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - event-enable
 - event-time-stamps
 - high-limit



- limit-enable
- low-limit
- notification-class
- notify-type
- priority-array
- reliability
- relinquish-default
- time-delay
- 4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
 - units
- 5. Proprietary properties: None
- 6. Range restrictions:
 - description limited to 50 octets in length
 - present-value limited by min and max set via the microblock
 - relinquish-default limited by min and max set via the microblock
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Analog Value (AVP_CS_Setpoint):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - cov-increment
 - description
 - reliability
- 4. Writeable properties:
 - cov-increment
 - description
 - out-of-service
 - present-value
 - units



- 5. Proprietary properties:
 - 4174 Private-edit-range-min optional
 - 4175 Private-edit-range-max optional

- 6. Range restrictions:
 - description limited to 50 octets in length
 - present-value limited by min and max set via the microblock

Analog Value (AVS_CS_Setpoint):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - cov-increment
 - description
 - reliability

- 4. Writeable properties:
 - cov-increment
 - description
 - out-of-service
 - units

- 5. Proprietary properties: None
- 6. Range restrictions:
 - description limited to 50 octets in length

Analog Value (PAR):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - event-enable
 - event-time-stamps
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - priority-array
 - reliability
 - relinquish-default
 - time-delay



4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
 - units
5. Proprietary properties: None
6. Range restrictions:
 - description limited to 50 octets in length
 - present-value limited by min-pres-value and max-pres-value properties
 - relinquish-default limited by min-pres-value and max-pres-value properties
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Analog Value (RS):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - reliability
 - cov-increment
4. Writeable properties:
 - out-of-service
 - present-value
 - units
 - cov-increment
5. Proprietary properties: None
6. Range restrictions: None

Analog Value (PID):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - description
 - reliability
4. Writeable properties:
 - description
5. Proprietary properties: None
6. Range restrictions: None



Analog Value (STAT):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - cov-increment
 - deadband
 - description
 - event-enable
 - event-time-stamps
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - reliability
 - time-delay
4. Writeable properties:
 - cov-increment
 - deadband
 - description
 - event-enable
 - high-limit
 - limit-enable
 - low-limit
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
 - units
5. Proprietary properties: None
6. Range restrictions:

description	limited to 50 octets in length
notification-class	must be valid notification-class
time-delay	0 to 4294967295



Binary Input:

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - alarm-value
 - change-of-state-count
 - change-of-state-time
 - description
 - device-type
 - elapsed-active-time
 - event-enable
 - event-time-stamps
 - inactive-text
 - notification-class
 - notify-type
 - reliability
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
4. Writeable properties:
 - active-text
 - alarm-value
 - change-of-state-count
 - description
 - device-type
 - elapsed-active-time
 - event-enable
 - inactive-text
 - notification-class
 - notify-type
 - out-of-service
 - polarity
 - time-delay
5. Proprietary properties: None
6. Range restrictions:

active-text	limited to 50 octets in length
change-of-state-count	0 to 4294967295
description	limited to 50 octets in length
device-type	limited to 50 octets in length
elapsed-active-time	0 to 4294967295
inactive-text	limited to 50 octets in length
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Binary Output:

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - change-of-state-count
 - change-of-state-time
 - description
 - device-type
 - elapsed-active-time
 - event-enable
 - event-time-stamps
 - feedback-value
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - reliability
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
4. Writeable properties:
 - active-text
 - change-of-state-count
 - description
 - device-type
 - elapsed-active-time
 - event-enable
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - out-of-service
 - polarity
 - present-value
 - relinquish-default
 - time-delay
5. Proprietary properties: None
6. Range restrictions:

active-text	limited to 50 octets in length
change-of-state-count	0 to 4294967295
description	limited to 50 octets in length
device-type	limited to 50 octets in length



elapsed-active-time	0 to 4294967295
inactive-text	limited to 50 octets in length
minimum-off-time	0 to 4294967295
minimum-on-time	0 to 4294967295
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Binary Value (BVP_CS):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - alarm-value
 - change-of-state-count
 - change-of-state-time
 - description
 - elapsed-active-time
 - event-enable
 - event-time-stamps
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - priority-array
 - reliability
 - relinquish-default
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
4. Writeable properties:
 - active-text
 - alarm-value
 - change-of-state-count
 - description
 - elapsed-active-time
 - event-enable
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default



time-delay

5. Proprietary properties: None
6. Range restrictions:
 - active-text limited to 50 octets in length
 - change-of-state-count 0 to 4294967295
 - description limited to 50 octets in length
 - elapsed-active-time 0 to 4294967295
 - inactive-text limited to 50 octets in length
 - minimum-off-time 0 to 4294967295
 - minimum-on-time 0 to 4294967295
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Binary Value (BVP_CS_Momentary):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - alarm-value
 - change-of-state-count
 - change-of-state-time
 - description
 - elapsed-active-time
 - event-enable
 - event-time-stamps
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - priority-array
 - reliability
 - relinquish-default
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
4. Writable properties:
 - active-text
 - alarm-value
 - change-of-state-count
 - description
 - elapsed-active-time
 - event-enable
 - inactive-text



notification-class
 notify-type
 out-of-service
 present-value
 relinquish-default
 time-delay

5. Proprietary properties:
 4176 cs_momentary_state optional
6. Range restrictions:

active-text	limited to 50 octets in length
change-of-state-count	0 to 4294967295
description	limited to 50 octets in length
elapsed-active-time	0 to 4294967295
inactive-text	limited to 50 octets in length
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Binary Value (CLOCK):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - alarm-value
 - change-of-state-count
 - change-of-state-time
 - description
 - elapsed-active-time
 - event-enable
 - event-time-stamps
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - priority-array
 - reliability
 - relinquish-default
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
4. Writeable properties:
 - active-text
 - alarm-value
 - change-of-state-count
 - description



- elapsed-active-time
- event-enable
- inactive-text
- minimum-off-time
- minimum-on-time
- notification-class
- notify-type
- out-of-service
- present-value
- relinquish-default
- time-delay
- 5. Proprietary properties: None
- 6. Range restrictions:
 - active-text limited to 50 octets in length
 - change-of-state-count 0 to 4294967295
 - description limited to 50 octets in length
 - elapsed-active-time 0 to 4294967295
 - inactive-text limited to 50 octets in length
 - minimum-off-time 0 to 4294967295
 - minimum-on-time 0 to 4294967295
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295

Binary Value (MODULE ALARM):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:
 - acked-transitions
 - alarm-value
 - description
 - event-enable
 - event-time-stamps
 - notification-class
 - notify-type
 - time-delay
- 4. Writeable properties:
 - alarm-value
 - event-enable
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
- 5. Proprietary properties: None
- 6. Range restrictions:
 - notification-class must be valid notification-class
 - time-delay 0 to 4294967295



Binary Value (PAR):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - alarm-value
 - change-of-state-count
 - change-of-state-time
 - description
 - elapsed-active-time
 - event-enable
 - event-time-stamps
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - priority-array
 - reliability
 - relinquish-default
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
4. Writeable properties:
 - active-text
 - alarm-value
 - change-of-state-count
 - description
 - elapsed-active-time
 - event-enable
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
5. Proprietary properties: None
6. Range restrictions:

active-text	limited to 50 octets in length
change-of-state-count	0 to 4294967295
description	limited to 50 octets in length
elapsed-active-time	0 to 4294967295



inactive-text	limited to 50 octets in length
minimum-off-time	0 to 4294967295
minimum-on-time	0 to 4294967295
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Binary Value (STAT):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - active-text
 - alarm-value
 - change-of-state-count
 - change-of-state-time
 - description
 - elapsed-active-time
 - event-enable
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - reliability
 - time-delay
 - time-of-active-time-reset
 - time-of-state-count-reset
 - event-time-stamp
4. Writeable properties:
 - active-text
 - alarm-value
 - change-of-state-count
 - description
 - elapsed-active-time
 - event-enable
 - inactive-text
 - minimum-off-time
 - minimum-on-time
 - notification-class
 - notify-type
 - out-of-service
 - time-delay
5. Proprietary properties: None
6. Range restrictions:

active-text	limited to 50 octets in length
change-of-state-count	0 to 4294967295
description	limited to 50 octets in length



elapsed-active-time	0 to 4294967295
inactive-text	limited to 50 octets in length
minimum-off-time	0 to 4294967295
minimum-on-time	0 to 4294967295
notification-class	must be valid notification-class
time-delay	0 to 4294967295

Calendar:

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - description
4. Writeable properties:
 - date-list
 - description
5. Proprietary properties: None
6. Range restrictions:
 - date-list limited to 30 BACnetCalendarEntries
 - description limited to 50 octets in length

Device:

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - active-cov-subscriptions
 - active-vt-sessions
 - align-intervals
 - apdu-segment-timeout
 - description
 - interval-offset
 - list-of-session-keys
 - local-date
 - local-time
 - location
 - max-segments-accepted
 - vt-classes-supported
 - utc-offset
 - max-master
 - max-info-frames
 - last-restart-reason
 - restart-notification-recipients
 - time-of-device-restart
 - time-synchronization-recipients
 - time-synchronization-interval
 - utc-time-synchronization-recipients
4. Writeable properties:
 - object-identifier



object-name
location
description
local-time
local-date
utc-offset
apdu-segment-timeout
apdu-timeout
number-of-apdu-retries
max-master
max-info-frames
last-restart-reason
restart-notification-recipients
align-intervals
time-synchronization-interval
interval-offset
time-synchronization-recipients
utc-time-synchronization-recipients
auto-identity-scheme
auto-identity-base
active-locale-code
module-configuration
archive-now-trigger
lon-works-enable-metric-conversion
ccn-address-element
ccn-address-bus

5. Proprietary properties:

Property no.	Property name	Data Type
4145	active-locale-index	unsigned
4149	auto-identity-scheme	enumerated
4150	auto-identity-base	unsigned
4151	supported-locale-codes	array of unsigned
4152	active-locale-code	unsigned
4153	serial-number	char string
4154	module-configuration	octet string
4161	array-of-mstp-baud-rates	array of unsigned
4162	test-mode	enumerated
4166	download-id	char string
4167	file-store-size	unsigned
4801	ccn-address-element	unsigned
4802	ccn-address-bus	unsigned
4901	archive-valid-status	enumerated
4902	archive-now-trigger	bool
4920	lon-works-enable-metric-conversion	bool

6. Range restrictions:

Property no.	Property name	Property Restrictions	Data Type
	object-identifier	must be a valid device identifier	object identifier
	object-name	limited to 50 octets in length	char string
	location	limited to 50 octets in length	char string
	description	limited to 50 octets in length	char string
	utc-offset	-780 to 780	integer
	apdu-segment-timeout	0 to 4294967295	unsigned



Bias

- 5. Proprietary properties:
 Continuous_proportional
 Deadband
 Ramp_time

- 6. Range Restriction:

Property no.	Property name	Property Restrictions	Data Type
4163	Continuous_proportional	Can only be 0 or 1	Boolean
4164	Deadband	Must be >=0	Real
4165	Ramp_time	Must be >=0	Real

Multi-State Value (PAR):

- 1. Creatable? NO
- 2. Deletable? NO
- 3. Optional properties supported:

acked-transitions
 alarm-values
 description
 event-enable
 event-time-stamps
 fault-values
 notification-class
 notify-type
 priority-array
 reliability
 relinquish-default
 state-text
 time-delay

- 4. Writeable properties:

alarm-values
 description
 event-enable
 fault-values
 notification-class
 notify-type
 out-of-service
 present-value
 relinquish-default
 time-delay

- 5. Proprietary properties: None

- 6. Range restrictions:

description limited to 50 octets in length
 notification-class must be valid notification-class
 present-value must be valid state
 relinquish-default must be valid state
 time-delay 0 to 4294967295



Multi-State Value (CLOCK):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - alarm-values
 - description
 - event-enable
 - event-time-stamps
 - fault-values
 - notification-class
 - notify-type
 - priority-array
 - reliability
 - relinquish-default
 - state-text
 - time-delay
4. Writeable properties:
 - alarm-values
 - description
 - event-enable
 - fault-values
 - notification-class
 - notify-type
 - out-of-service
 - present-value
 - relinquish-default
 - time-delay
5. Proprietary properties: None
6. Range restrictions:

description	limited to 50 octets in length
notification-class	must be valid notification-class
present-value	must be valid state
relinquish-default	must be valid state
time-delay	0 to 4294967295

Multi-State Value (MSVP_CS):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - alarm-values
 - description
 - event-enable
 - event-time-stamps
 - fault-values



description	
effective-period	
exception-schedule	
priority-for-writing	
weekly-schedule	
list-of-prop-reference	
schedule-default	
reliability	
out-of-service	
5. Proprietary properties:	
schedule-names	
6. Range restrictions:	
description	limited to 50 octets in length
exception-schedule	limited to 30 BACnetSpecialEvents, each being limited to 6 BACnetTimeValues
present-value	0 to 4294967295
relinquish-default	0 to 4294967295
weekly-schedule	limited to 6 BACnetTimeValues per BACnetDailySchedule
schedule-default	0 to 4294967295
reliability	limited to 4 BACnetReliability
out-of-service	limited to Boolean
(557) schedule-names	limited to 800 octets in length

Schedule (UNS):

1. Creatable? NO	
2. Deletable? NO	
3. Optional properties supported:	
description	
exception-schedule	
weekly-schedule	
4. Writeable properties:	
description	
effective-period	
exception-schedule	
priority-for-writing	
weekly-schedule	
list-of-prop-reference	
schedule-default	
reliability	
out-of-service	
5. Proprietary properties:	
schedule-names	
6. Range restrictions:	
description	limited to 50 octets in length
exception-schedule	limited to 30 BACnetSpecialEvents, each being limited to 6 BACnetTimeValues
present-value	0 to 4294967295
relinquish-default	0 to 4294967295



weekly-schedule	limited to 6 BACnetTimeValues per BACnetDailySchedule
schedule-default	0 to 4294967295
reliability	limited to 4 BACnetReliability
out-of-service	limited to Boolean
(557) schedule-names	limited to 800 octets in length

Trend-log (COV or polled):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - client-cov-increment
 - cov-resubscription-interval
 - description
 - event-enable
 - event-time-stamps
 - log-device-object-property
 - log-interval
 - notification-class
 - notification-threshold
 - notify-type
 - records-since-notification
 - start-time
 - stop-time
 - last-notify-record
 - align-intervals
 - interval-offset
 - reliability
4. Writeable properties:
 - buffer-size
 - client-cov-increment
 - cov-resubscription-interval
 - Description
 - event-enable
 - log-enable
 - log-interval
 - notification-class
 - notification-threshold
 - notify-type
 - record-count
 - start-time
 - stop-time
 - stop-when-full
5. Proprietary properties: None
6. Range restrictions:
 - description limited to 50 octets in length
 - log-interval 0 to 4294967295



notification-class	must be valid notification-class
notification-threshold	0 to 4294967295
record-count	can only be written to 0
total-record-count	can only be written to 0
reliability	limited to 4 BACnetReliability

Trend-log (of a non-BACnet property, COV or polled):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - client-cov-increment
 - cov-resubscription-interval
 - description
 - event-enable
 - event-time-stamps
 - last-notify-record
 - log-interval
 - notification-class
 - notification-threshold
 - notify-type
 - records-since-notification
 - start-time
 - stop-time
 - align-intervals
 - interval-offset
 - reliability
4. Writeable properties:
 - buffer-size
 - client-cov-increment
 - cov-resubscription-interval
 - description
 - event-enable
 - log-enable
 - log-interval
 - notification-class
 - notification-threshold
 - notify-type
 - record-count
 - start-time
 - stop-time
 - stop-when-full
5. Proprietary properties: None
6. Range restrictions:
 - description limited to 50 octets in length



log_interval	0 to 4294967295
notification_class	must be valid notification_class
notification_threshold	0 to 4294967295
record_count	can only be written to 0
logging-type	limited to 3 BACnetLoggingType
align-intervals	limited to Boolean
interval-offset	0 to 4294967295 in hundredths of seconds
trigger	limited to Boolean
reliability	limited to 4 BACnetReliability

Trend-log (of a non-BACnet property, triggered):

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
 - acked-transitions
 - client-cov-increment
 - cov-resubscription-interval
 - description
 - event-enable
 - event-time-stamps
 - last-notify-record
 - log-interval
 - notification-class
 - notification-threshold
 - notify-type
 - records-since-notification
 - start-time
 - stop-time
 - reliability
 - trigger
4. Writeable properties:
 - buffer-size
 - client-cov-increment
 - cov-resubscription-interval
 - description
 - event-enable
 - log-enable
 - notification-class
 - notification-threshold
 - notify-type
 - record-count
 - start-time
 - stop-time
 - stop-when-full
 - trigger



- 5. Proprietary properties: None
- 6. Range restrictions:
 - description limited to 50 octets in length
 - log_interval 0 to 4294967295
 - notification_class must be valid notification_class
 - notification_threshold 0 to 4294967295
 - record_count can only be written to 0
 - logging-type limited to 3 BACnetLoggingType
 - align-intervals limited to Boolean
 - interval-offset 0 to 4294967295 in hundredths of seconds
 - trigger limited to Boolean
 - reliability limited to 4 BACnetReliability

Proprietary Object, Collector:

- 1. Creatable? No
- 2. Deletable? No
- 3. Optional properties supported:
 - application-id
 - application-instance
 - update-time
 - expiration-time
 - coll-max-number-of-providers
 - coll-number-of-providers
 - coll-number-of-provider-values
 - coll-feedback-values
- 4. Writable properties:
 - application-instance
 - coll-number-of-providers
- 5. Proprietary properties:
 - application-id
 - application-instance
 - update-time
 - expiration-time
 - coll-max-number-of-providers
 - coll-number-of-providers
 - coll-number-of-provider-values
 - coll-feedback-values

6. Range Restriction:

Property no.	Property name	Property Restrictions	Data Type
4155	application-id	1 to 65535	Unsigned
4156	application-instance	1 to 65535	Unsigned
4157	update-time	0 to 65535	Unsigned
4158	expiration-time	0 to 65535	Unsigned
4601	coll-max-number-of-providers	1 to 64	Unsigned
4602	coll-number-of-providers	0 to 64	Unsigned
4603	coll-number-of-provider-values	1 to 24	Unsigned
4604	coll-feedback-values	1 to 8	Unsigned



Proprietary Object, Provider:

- 4. Creatable? No
- 5. Deletable? No
- 6. Optional properties supported:
 - application-id
 - application-instance
 - update-time
 - expiration-time
 - prov-number-of-output-elements
 - prov-number-of-feedback-elements
 - prov-collector-network
 - prov-collector-address
- 4. Writable properties:
 - application-instance
 - prov-collector-network
 - prov-collector-address
- 5. Proprietary properties:
 - application-id
 - application-instance
 - update-time
 - expiration-time
 - prov-number-of-output-elements
 - prov-number-of-feedback-elements
 - prov-collector-network
 - prov-collector-address
- 6. Range Restriction:

Property no.	Property name	Property Restrictions	Data Type
4155	application-id	1 to 65535	Unsigned
4156	application-instance	1 to 65535	Unsigned
4157	update-time	0 to 65535	Unsigned
4158	expiration-time	0 to 65535	Unsigned
4611	prov-number-of-output-elements	1 to 24	Unsigned
4612	prov-number-of-feedback-elements	1 to 8	Unsigned
4613	prov-collector-network	0 to 65535	Unsigned
4614	prov-collector-address	0 to 255	Unsigned

Proprietary Object, Pressure Dependent AirFlow:

- 1. Creatable? No
- 2. Deletable? No
- 3. Optional properties supported:
 - description
 - device-type
 - profile-name
 - tab-tech-name
 - tab-org-name
 - display-name
 - min-cool-position
 - min-cool-position-ovr
 - max-cool-position
 - max-cool-position-ovr
 - min-reheat-position



min-reheat-position-ovr
min-heat-position
min-heat-position-ovr
max-heat-position
max-heat-position-ovr
vent-position
vent-position-ovr
tabs-pars-seal
lock-flags
reheat-lock
damper-lock
fan-lock
auto-zero
tab-mode
last-tab-date
loop-config
damp-config
application-instance
status-flags
reliability
fan-outpt
cooling
heating
rh
iaq
ahu-mode
terminal-type
heat-type
use-supply-air
fan-outpt
reheat
terminal-mode
airflow-mode
heat-enable
damper
own-prg-obj-id
moves-today
moves-yesterday
prop-stat-flags
ovr-flags
lock-flags-bool
prop-stat-flags-bool
bpd-version
air-source-obj-id
air-source-dev-id

4. Writable properties:
- description
 - device-type
 - profile-name
 - tab-tech-name
 - tab-org-name
 - display-name
 - min-cool-position
 - min-cool-position-ovr
 - max-cool-position
 - max-cool-position-ovr



min-reheat-position
min-reheat-position-ovr
min-heat-position
min-heat-position-ovr
max-heat-position
max-heat-position-ovr
vent-position
vent-position-ovr
tabs-pars-seal
lock-flags
reheat-lock
damper-lock
fan-lock
auto-zero
tab-mode
last-tab-date
application-instance
reliability
lock-flags-bool

5. Proprietary properties:

application-instance
min-cool-position
max-cool-position
min-reheat-position
min-heat-position
max-heat-position
vent-position
reheat-lock
damper-lock
auto-zero
tab-mode
use-supply-air
cooling
heating
reheat
damper
rh
iaq
ahu-mode
terminal-type
heat-type
terminal-mode
airflow-mode
heat-enable
lock-flags
loop-config
damp-config
moves-today
moves-yesterday
fan-lock
fan-outpt
prop-stat-flags
tab-tech-name
tab-org-name
last-tab-date
display-name



own-prg-obj-id
ovr-flags
min-cool-position-ovr
max-cool-position-ovr
min-reheat-position-ovr
min-heat-position-ovr
max-heat-position-ovr
vent-position-ovr
tab-pars-seal
lock-flags-bool
prop-stat-flags-bool
bpd-version

6. Range Restriction:

Property no.	Property name	Property Restrictions	Data Type
4156	application-instance	1 - 255	Unsigned
4501	min-cool-position	0 to 100.0	Real
4502	max-cool-position	0 to 100.0	Real
4503	min-reheat-position	0 to 100.0	Real
4504	min-heat-position	0 to 100.0	Real
4505	max-heat-position	0 to 100.0	Real
4506	vent-position	0 to 100.0	Real
4507	reheat-lock	0 to 100.0	Real
4508	damper-lock	0 to 100.0	Real
4509	auto-zero	Boolean	
4510	tab-mode	0 to 255	Unsigned
4511	use-supply-air	Boolean	
4512	cooling	0 to 100.0	Real
4513	heating	0 to 100.0	Real
4514	reheat	0 to 100.0	Real
4515	damper	0 to 100.0	Real
4516	rh	0 to 100.0	Real
4517	iaq	0 to 100.0	Real
4518	ahu-mode	0 to 255	Unsigned
4519	terminal-type	0 to 255	Unsigned
4520	heat-type	0 to 255	Unsigned
4521	terminal-mode	0 to 255	Unsigned
4522	airflow-mode	0 to 255	Unsigned
4523	heat-enable	Boolean	
4525	lock-flags	BitStr	
4526	loop-config	0 to 255	Unsigned
4527	damp-config	0 to 255	Unsigned
4528	moves-today	0 to 65535	Unsigned
4529	moves-yesterday	0 to 65535	Unsigned
4530	fan-lock	Boolean	
4531	fan-outpt	Boolean	
4532	prop-stat-flags	BitStr	
4533	tab-tech-name	limited to 50 octets in length	ChrStr
4534	tab-org-name	limited to 50 octets in length	ChrStr
4535	last-tab-date	Date/Time	
4536	display-name	limited to 50 octets in length	ChrStr
4537	own-prg-obj-id	Object ID	
4538	ovr-flags	0 to 255	Unsigned
4539	min-cool-position-ovr	0 to 100.0	Real
4540	max-cool-position-ovr	0 to 100.0	Real
4541	min-reheat-position-ovr	0 to 100.0	Real
4542	min-heat-position-ovr	0 to 100.0	Real



4543	max-heat-position-ovr	0 to 100.0	Real
4544	vent-position-ovr	0 to 100.0	Real
4545	tab-pars-seal	Date/Time	
4546	lock-flags-bool	Boolean	
4547	prop-stat-flags-bool	Boolean	
4548	bpd-version	0 to 65535	Unsigned
	description	limited to 50 octets in length	ChrStr
	device-type	limited to 50 octets in length	ChrStr
	profile-name	limited to 50 octets in length	ChrStr

Proprietary Object, Network Port:

1. Creatable? No
2. Deletable? No
3. Optional properties supported:
 - ip-multicast-address
 - ip-subnet-mask
 - ip-default-gateway
 - max-master
 - max-info-frames
 - time-sync-interval
4. Writable properties:
 - network-number
 - mac-address
 - ip-multicast-address
 - ip-subnet-mask
 - ip-default-gateway
 - instance-of
 - auto-identity-base
 - auto-identity-scheme
 - network-port-base
 - max-master
 - max-info-frames
 - device-time-sync-mode
 - time-sync-interval
5. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties:
 - network-type
 - network-number
 - mac-address
 - ip-multicast-address
 - ip-subnet-mask
 - ip-default-gateway
 - auto-identity-base
 - auto-identity-scheme
 - network-port-base
 - device-time-sync-mode
7. Range Restriction:

Property no.	Property name	Property Restrictions	Data Type
624	network-type		Unsigned
622	network-number	0 – 65535	Unsigned
621	mac-address	limited to 6 octets in length	Chrstr



607	ip-multicast-address	limited to 4 octets in length	Chrstr
608	ip-subnet-mask	limited to 4 octets in length	Chrstr
601	ip-default-gateway	limited to 4 octets in length	Chrstr
4150	auto-identity-base	0 - 4294967295	Unsigned
4149	auto-identity-scheme	0 - 255	Enum
600	network-port-base		Chrstr
660	device-time-sync-mode	0 - 2	Enum