

Date: **07/22/2020**

Vendor Name: **Automated Logic**

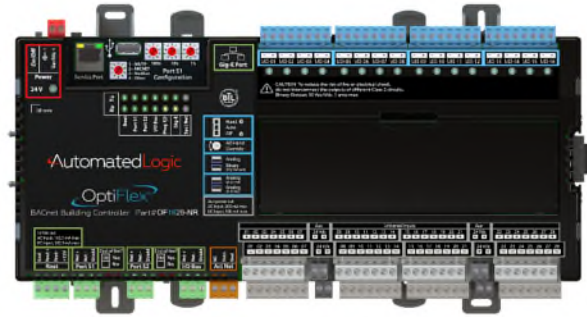
Product Name: **OptiFlex BACnet Building Controller**

Product Model Number: **OF1628-NR**

Applications Software Version: **N/A**

Firmware Revision: **104.00.2182**

BACnet Protocol Revision: **14**



### Product Description:

A powerful, high-speed controller that provides multi-purpose monitoring and control for a variety of HVAC system applications. It supports BACnet/IP, BACnet-over-Ethernet, ARCNET 156 kbps, and MS/TP communications. Fully programmable, it can execute complex control strategies for high-level system integration, monitoring, and control. Flexible and versatile, the OF1628-NR supports multiple I/O configurations via an I/O bus and Act Net actuator bus. It can support up to a total of 9 FIO expanders (12 inputs, 8 outputs) and 16 Act Net devices. Combined, the OF1628-NR can support up to 224 total points.

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

### Segmentation Capability:

☒ Able to transmit segmented messages

Window Size \_\_\_\_\_100 - 1\_\_\_\_\_

☒ Able to receive segmented messages

Window Size \_\_\_\_\_100 - 1\_\_\_\_\_

#### 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) **156k baud**
- ☒ MS/TP master (Clause 9), baud rate(s): **9600, 19200, 38400, 57600, 78600, 115200**
- ☐ 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.

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> ANSI X3.4         | <input checked="" type="checkbox"/> IBM™/Microsoft™ DBCS | <input checked="" type="checkbox"/> ISO 8859-1 |
| <input checked="" type="checkbox"/> ISO 10646 (UCS-2) | <input checked="" type="checkbox"/> ISO 10646 (UCS-4)    | <input checked="" type="checkbox"/> JIS C 6226 |

**If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:** \_\_\_\_\_

#### 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)

#### 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

1. Creadable? 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. Conditionally writeable properties where not otherwise required by the standard:
  - reliability                      writable if out-of-service is TRUE
6. Proprietary properties: None
7. 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

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.	Conditionally writeable properties where not otherwise required by the standard:	
	reliability	writable if out-of-service is TRUE
6.	Proprietary properties:	
	4168	optional/writable cs-comb-algorithm
	4169	optional/writable cs-disp-source
	4170	optional/writable cs-sens-enable-arr
	4173	optional cs-corrected-value-arr
	4171	optional cs-sens-status-arr
	4172	optional/writable cs-sens-calib-arr
7.	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 (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
5. Conditionally writeable properties where not otherwise required by the standard:

reliability	writable if out-of-service is TRUE
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6. Proprietary properties: None
7. 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

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.	Conditionally writeable properties where not otherwise required by the standard:	
	reliability	writable if out-of-service is TRUE
6.	Proprietary properties:	None
7.	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. Conditionally writeable properties where not otherwise required by the standard:

reliability	writable if out-of-service is TRUE
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6. Proprietary properties: None
7. 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



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. Conditionally writeable properties where not otherwise required by the standard:
  - reliability                                  writable if out-of-service is TRUE
6. Proprietary properties:

4174	Private-edit-range-min	optional
4175	Private-edit-range-max	optional
7. 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. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. 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. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. 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

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
  - cov-increment
  - description
  - reliability
4. Writeable properties:
  - description
5. Conditionally writeable properties where not otherwise required by the standard:
  - reliability
  - writable if out-of-service is TRUE
6. Proprietary properties: None
7. Range restrictions:
  - description
  - limited to 50 octets in length

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. Conditionally writeable properties where not otherwise required by the standard:
  - reliability                      writable if out-of-service is TRUE
6. Proprietary properties: None
7. 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
  - present-value
  - reliability
  - time-delay
  - units
5. Conditionally writeable properties where not otherwise required by the standard:

present-value	writable if out-of-service is TRUE
reliability	writable if out-of-service is TRUE
6. Proprietary properties: None
7. 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. Conditionally writeable properties where not otherwise required by the standard:

reliability	writable if out-of-service is TRUE
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6. Proprietary properties: None
7. 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

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. Conditionally writeable properties where not otherwise required by the standard:
  - reliability                      writable if out-of-service is TRUE
6. Proprietary properties: None
7. 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

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. Conditionally writeable properties where not otherwise required by the standard:
  - reliability                      writable if out-of-service is TRUE
6. Proprietary properties: None
7. 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

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	
	notification-class	
	notify-type	
	out-of-service	
	present-value	
	relinquish-default	
	time-delay	
5.	Conditionally writeable properties where not otherwise required by the standard:	
	reliability	writable if out-of-service is TRUE
6.	Proprietary properties:	
	4176	cs_momentary_state
7.	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 (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. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. Range restrictions:

notification-class	must be valid notification-class
time-delay	0 to 4294967295

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.	Conditionally writeable properties where not otherwise required by the standard:	
	present-value	writable if out-of-service is TRUE
	reliability	writable if out-of-service is TRUE
6.	Proprietary properties:	None
7.	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

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:  
description
4. Writeable properties:  
date-list  
description
5. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. Range restrictions:  
date-list limited to 30 BACnetCalendarEntrys  
description limited to 50 octets in length

**Device:**

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
  - active-cov-subscriptions
  - align-intervals
  - apdu-segment-timeout
  - backup-and-restore-state
  - backup-failure-timeout
  - backup-preparation-time
  - configuration-files
  - daylight-savings-status
  - description
  - interval-offset
  - last-restart-reason
  - last-restore-time
  - local-date
  - local-time
  - location
  - max-segments-accepted
  - max-master
  - max-info-frames
  - restart-notification-recipients
  - time-of-device-restart
  - time-synchronization-interval
  - time-synchronization-recipients
  - restart-notification-recipients
  - utc-offset
  - utc-time-synchronization-recipients
4. Writeable properties:
  - align-intervals
  - apdu-segment-timeout
  - apdu-timeout
  - backup-failure-timeout
  - backup-preparation-time
  - description
  - device-address-binding
  - interval-offset
  - last-restart-reason
  - location
  - number-of-apdu-retries
  - max-master
  - max-info-frames
  - number-of-apdu-retries
  - object-identifier
  - object-name
  - restart-notification-recipients
  - time-synchronization-interval
  - time-synchronization-recipients
  - utc-offset
  - utc-time-synchronization-recipients
5. Conditionally writeable properties where not otherwise required by the standard: None



6. Proprietary properties:

Property no.	Property name	Data Type
661	product-type	unsigned
662	ram-size	unsigned
663	upgrade-status	char string
664	alc-release	char string
665	data-partition-version	char string
4145	active-locale-index	unsigned
4149	auto-identity-scheme	enumerated
4150	auto-identity-base	unsigned
4151	supported-locale-codes	array of unsigned
4152	active-local-code	unsigned
4153	serial-number	char string
4161	array-of-mstp-baud-rates	array of unsigned
4162	test-mode	enumerated
4166	download-id	char string
4167	file-store-size	unsigned
4901	archive-valid-status	enumerated
4902	archive-now-trigger	bool
4920	lonworks-enable-metric-conversion	bool

7. Range restrictions:

description	limited to 50 octets in length
location	limited to 50 octets in length
max-master	1 to 127
object-identifier	must be a valid device identifier
object-name	limited to 50 octets in length
utc-offset	-780 to 780
last-restart-reason	limited to BACnetRestartReason
restart-notification-recipients	0 to 10 BACnetRecipients
auto-identity-scheme	0 or 1
auto-identity-base	0 to 4294967295
active-locale-index	0 to 255
archive-now-trigger	0 or 1
lonworks-enable-metric-conversion	0 or 1

**File:**

1. Creatable? YES
2. Deletable? NO
3. Optional properties supported:  
    description
4. Writeable properties:  
    archive  
    description  
    file-type  
    file-size  
    modification-date  
    read-only
5. Conditionally writeable properties where not otherwise required by the standard:  
    file-size                      only writeable as part of file creation  
    modification-date            only writeable as part of file creation
6. Proprietary properties: None
7. Range restrictions:  
    description                    limited to 50 octets in length  
    file-type                      limited to 50 octets in length

**Loop Object (BACnet PID):**

1. Creatable? No
2. Deletable? No
3. Optional properties supported:
  - bias
  - cov-increment
  - derivative-constant
  - derivative-constant-units
  - description
  - integral-constant
  - integral-constant-units
  - proportional-constant
  - proportional-constant-units
  - update-interval
4. Writable properties:
  - action
  - bias
  - cov-increment
  - derivative-constant
  - description
  - integral-constant
  - proportional-constant
  - update-interval
5. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties:

Property no.	Property name	DataType
4163	continuous-proportional	Boolean
4164	deadband	Real
4165	ramp-time	Real

7. Range Restriction:

Property name	Property Restrictions
continuous-proportional	Can only be 0 or 1
deadband	Must be $\geq 0$
ramp-time	Must be $\geq 0$

1. Creadable? 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. Conditionally writeable properties where not otherwise required by the standard:
  - reliability writable if out-of-service is TRUE
6. Proprietary properties: None
7. 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 (STAT):**

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
  - reliability
  - state-text
  - time-delay
4. Writeable properties:
  - alarm-values
  - description
  - event-enable
  - fault-values
  - notification-class
  - notify-type
  - out-of-service
  - time-delay
5. Conditionally writeable properties where not otherwise required by the standard:

present-value	writable if out-of-service is TRUE
reliability	writable if out-of-service is TRUE
6. Proprietary properties: None
7. Range restrictions:

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

**Notification Class:**

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:  
    description
4. Writeable properties:  
    ack-required  
    description  
    priority  
    recipient-list
5. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. Range restrictions: None  
    description                      limited to 50 octets in length  
    recipient-list                  limited to 5 BACnetDestinations

**Program:**

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
  - description
  - description-of-halt
  - instance-of
  - program-location
  - reason-for-halt
  - reliability
4. Writeable properties:
  - description
  - program-change
  - program-location
5. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. Range restrictions:

description	limited to 50 octets in length
program-location	limited to 50 octets in length

**Schedule (ENUM):**

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
  - description
  - exception-schedule
  - weekly-schedule
4. Writeable properties:
  - description
  - effective-period
  - exception-schedule
  - list-of-prop-reference
  - out-of-service
  - priority-for-writing
  - schedule-default
  - weekly-schedule
5. Conditionally writeable properties where not otherwise required by the standard:
 

present-value	writable if out-of-service is TRUE
reliability	writable if out-of-service is TRUE

6. Proprietary properties:

Property no.	Property name	Data Type
557	schedule-names	char string

7. 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
schedule-names	Limited to 50 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
  - list-of-prop-reference
  - out-of-service
  - priority-for-writing
  - schedule-default
  - weekly-schedule
5. Conditionally writeable properties where not otherwise required by the standard:
 

present-value	writable if out-of-service is TRUE
reliability	writable if out-of-service is TRUE
6. Proprietary properties:
 

Property no.	Property name	Data Type
557	schedule-names	char string
7. 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

**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
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. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. 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
stop-when-full	limited to Boolean

**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
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. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. 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
stop-when-full	limited to Boolean

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

1. Creatable? NO
2. Deletable? NO
3. Optional properties supported:
  - acked-transitions
  - 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
  - description
  - event-enable
  - log-enable
  - notification-class
  - notification-threshold
  - notify-type
  - record-count
  - start-time
  - stop-time
  - stop-when-full
  - trigger
5. Conditionally writeable properties where not otherwise required by the standard: None
6. Proprietary properties: None
7. 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
stop-when-full	limited to Boolean
reliability	limited to 4 BACnetReliability