

BACnet Application Map for Network Management Card 4

Application: Galaxy VS
Version: 24.9.0

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Introduction

This document details the BACnet objects and properties supported by the Network Management Card 4 for the Galaxy VS unit. This document contains Analog Input Objects, Analog Value Objects, Binary Input Objects, Binary Value Objects, CharacterString Value Objects, Integer Value Objects, Multi-state Value Objects, and Notification Class Objects.

Additional Information

1. Information on the BACnet protocol specification can found at www.bacnet.org.
2. Schneider Electric recommends [EcoStruxure Building Operation](#) software (formerly known as StruxureWare Building Operation/SBO) for integrated monitoring, control and management of BACnet-enabled devices.
3. Units column: The units displayed adhere to the BACnet standard and include the corresponding enumerated codes defined within the specification.
4. Access values column: **RO** is Read Only, **RW** is Read/Write.
5. Options column: all possible values that can be returned for a UPS "multi-state value" Present_Value property.
6. Alarm column:
Yes indicates that the binary value property is a UPS event alarm, for which a notification will be sent to the recipients in the notification class defined in the Notification Class Object. UPS events are model-specific, and only events supported by the UPS model are accessible via the Building Management System used.
No indicates a binary property representing a data point or state, rather than an alarm condition.
7. Both BACnet/IP and BACnet MS/TP communication protocols are supported by the application.
8. BACnet/IP functionality includes support for communication over both IPv4 and IPv6 networks.

Note: This BACnet Application Map is compatible with Galaxy VS firmware version 24.9.0 and higher.

Analog Input Objects

Analog Input Objects provide information on UPS data properties made available via the BACnet protocol.

No.	Index	BACnet ID	Name	Description	Units	Access
1	0	0	General - Operation statistics time	Time since Operational Statistics timer reset (in minutes).	minutes (72)	RO
2	1	1	General - Battery statistics time	Time since battery statistics timer reset (in minutes).	minutes (72)	RO
3	2	2	General - Time in normal mode	Total time for UPS in normal operation since Operational Statistics timer reset (in minutes).	minutes (72)	RO
4	3	3	General - Time in battery mode	Total time for UPS in battery operation since battery statistics timer reset (in minutes).	minutes (72)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
5	4	4	General - Time in bypass mode	Total time for UPS in bypass operation since Operational Statistics timer reset (in minutes).	minutes (72)	RO
6	5	5	General - Time in eConversion mode	Total time for UPS in eConversion mode since Operational Statistics timer reset (in minutes).	minutes (72)	RO
7	6	6	General - Time since battery replacement	Time since the Battery was last replaced (in minutes).	minutes (72)	RO
8	7	7	General - Input energy timer	Time since Input Energy Counter timer reset (in minutes).	minutes (72)	RO
9	8	8	General - Output energy timer	Time since Output Energy Counter timer reset (in minutes).	minutes (72)	RO
10	1000	1000	Input System - Apparent power	The present total apparent power input (for all three phases) in kVA	kilovolt-amperes (9)	RO
11	1001	1001	Input System - Apparent power - Phase 1	The present apparent input power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
12	1002	1002	Input System - Apparent power - Phase 2	The present apparent input power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
13	1003	1003	Input System - Apparent power - Phase 3	The present apparent input power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
14	1004	1004	Input System - Current - Phase 1	The present input current for each phase in A	amperes (3)	RO
15	1005	1005	Input System - Current - Phase 2	The present input current for each phase in A	amperes (3)	RO
16	1006	1006	Input System - Current - Phase 3	The present input current for each phase in A	amperes (3)	RO
17	1007	1007	Input System - Energy	The total energy consumption from the time of installation or since the counter was reset.	kilowatt-hours (19)	RO
18	1008	1008	Input System - Frequency	The present input frequency in Hz	hertz (27)	RO
19	1009	1009	Input System - Power factor - Phase 1	The ratio of the active power to the apparent power	power-factor (15)	RO
20	1010	1010	Input System - Power factor - Phase 2	The ratio of the active power to the apparent power	power-factor (15)	RO
21	1011	1011	Input System - Power factor - Phase 3	The ratio of the active power to the apparent power	power-factor (15)	RO
22	1012	1012	Input System - Real power	The present total real power (or active power) input (for all three phases) in kW	kilowatts (48)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
23	1013	1013	Input System - Real power - Phase 1	The present active (or real) input power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
24	1014	1014	Input System - Real power - Phase 2	The present active (or real) input power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
25	1015	1015	Input System - Real power - Phase 3	The present active (or real) input power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
26	1016	1016	Input System - Voltage Ph-N - Phase 1	The present input voltage for each phase	volts (5)	RO
27	1017	1017	Input System - Voltage Ph-N - Phase 2	The present input voltage for each phase	volts (5)	RO
28	1018	1018	Input System - Voltage Ph-N - Phase 3	The present input voltage for each phase	volts (5)	RO
29	1019	1019	Input System - Voltage Ph-Ph - Phase 1	The present phase-to-phase input RMS voltage	volts (5)	RO
30	1020	1020	Input System - Voltage Ph-Ph - Phase 2	The present phase-to-phase input RMS voltage	volts (5)	RO
31	1021	1021	Input System - Voltage Ph-Ph - Phase 3	The present phase-to-phase input RMS voltage	volts (5)	RO
32	2000	2000	Output System - Apparent power	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
33	2001	2001	Output System - Apparent power percentage	Output current as percentage of total available current (highest phase)	percent (98)	RO
34	2002	2002	Output System - Apparent power - Phase 1	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
35	2003	2003	Output System - Apparent power - Phase 2	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
36	2004	2004	Output System - Apparent power - Phase 3	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
37	2008	2008	Output System - Current crest factor - Phase 1	The present output crest factor for each phase. The output crest factor is the ratio of the peak value of the output current to the RMS (root mean square) value	no-units (95)	RO
38	2009	2009	Output System - Current crest factor - Phase 2	The present output crest factor for each phase. The output crest factor is the ratio of the peak value of the output current to the RMS (root mean square) value	no-units (95)	RO
39	2010	2010	Output System - Current crest factor - Phase 3	The present output crest factor for each phase. The output crest factor is the ratio of the peak value of the output current to the RMS (root mean square) value	no-units (95)	RO
40	2011	2011	Output System - Current - Phase 1	The present output current for each phase in A	amperes (3)	RO
41	2012	2012	Output System - Current - Phase 2	The present output current for each phase in A	amperes (3)	RO
42	2013	2013	Output System - Current - Phase 3	The present output current for each phase in A	amperes (3)	RO
43	2014	2014	Output System - Energy	The total energy supplied since the time of installation or since the counter was reset	kilowatt-hours (19)	RO
44	2015	2015	Output System - Frequency	The present output frequency in Hz	hertz (27)	RO
1	0	0	General - Operation statistics time	Time since Operational Statistics timer reset (in minutes).	minutes (72)	RO
2	1	1	General - Battery statistics time	Time since battery statistics timer reset (in minutes).	minutes (72)	RO
3	2	2	General - Time in normal mode	Total time for UPS in normal operation since Operational Statistics timer reset (in minutes).	minutes (72)	RO
4	3	3	General - Time in battery mode	Total time for UPS in battery operation since battery statistics timer reset (in minutes).	minutes (72)	RO
5	4	4	General - Time in bypass mode	Total time for UPS in bypass operation since Operational Statistics timer reset (in minutes).	minutes (72)	RO
6	5	5	General - Time in eConversion mode	Total time for UPS in eConversion mode since Operational Statistics timer reset (in minutes).	minutes (72)	RO
7	6	6	General - Time since battery replacement	Time since the Battery was last replaced (in minutes).	minutes (72)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
8	7	7	General - Input energy timer	Time since Input Energy Counter timer reset (in minutes).	minutes (72)	RO
9	8	8	General - Output energy timer	Time since Output Energy Counter timer reset (in minutes).	minutes (72)	RO
10	1000	1000	Input System - Apparent power	The present total apparent power input (for all three phases) in kVA	kilovolt-amperes (9)	RO
11	1001	1001	Input System - Apparent power - Phase 1	The present apparent input power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
12	1002	1002	Input System - Apparent power - Phase 2	The present apparent input power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
13	1003	1003	Input System - Apparent power - Phase 3	The present apparent input power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
14	1004	1004	Input System - Current - Phase 1	The present input current for each phase in A	amperes (3)	RO
15	1005	1005	Input System - Current - Phase 2	The present input current for each phase in A	amperes (3)	RO
16	1006	1006	Input System - Current - Phase 3	The present input current for each phase in A	amperes (3)	RO
17	1007	1007	Input System - Energy	The total energy consumption from the time of installation or since the counter was reset.	kilowatt-hours (19)	RO
18	1008	1008	Input System - Frequency	The present input frequency in Hz	hertz (27)	RO
19	1009	1009	Input System - Power factor - Phase 1	The ratio of the active power to the apparent power	power-factor (15)	RO
20	1010	1010	Input System - Power factor - Phase 2	The ratio of the active power to the apparent power	power-factor (15)	RO
21	1011	1011	Input System - Power factor - Phase 3	The ratio of the active power to the apparent power	power-factor (15)	RO
22	1012	1012	Input System - Real power	The present total real power (or active power) input (for all three phases) in kW	kilowatts (48)	RO
23	1013	1013	Input System - Real power - Phase 1	The present active (or real) input power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
24	1014	1014	Input System - Real power - Phase 2	The present active (or real) input power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
25	1015	1015	Input System - Real power - Phase 3	The present active (or real) input power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
26	1016	1016	Input System - Voltage Ph-N - Phase 1	The present input voltage for each phase	volts (5)	RO
27	1017	1017	Input System - Voltage Ph-N - Phase 2	The present input voltage for each phase	volts (5)	RO
28	1018	1018	Input System - Voltage Ph-N - Phase 3	The present input voltage for each phase	volts (5)	RO
29	1019	1019	Input System - Voltage Ph-Ph - Phase 1	The present phase-to-phase input RMS voltage	volts (5)	RO
30	1020	1020	Input System - Voltage Ph-Ph - Phase 2	The present phase-to-phase input RMS voltage	volts (5)	RO
31	1021	1021	Input System - Voltage Ph-Ph - Phase 3	The present phase-to-phase input RMS voltage	volts (5)	RO
32	2000	2000	Output System - Apparent power	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
33	2001	2001	Output System - Apparent power percentage	Output current as percentage of total available current (highest phase)	percent (98)	RO
34	2002	2002	Output System - Apparent power - Phase 1	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
35	2003	2003	Output System - Apparent power - Phase 2	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
36	2004	2004	Output System - Apparent power - Phase 3	The present apparent output power for each phase in kVA. Apparent power is the product of RMS (root mean square) volts and RMS amperes	kilovolt-amperes (9)	RO
37	2005	2005	Output System - Current THD - Phase 1	The THD (total harmonic distortion) for each phase, as a percentage, for the present output current	percent (98)	RO
38	2006	2006	Output System - Current THD - Phase 2	The THD (total harmonic distortion) for each phase, as a percentage, for the present output current	percent (98)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
39	2007	2007	Output System - Current THD - Phase 3	The THD (total harmonic distortion) for each phase, as a percentage, for the present output current	percent (98)	RO
40	2008	2008	Output System - Current crest factor - Phase 1	The present output crest factor for each phase. The output crest factor is the ratio of the peak value of the output current to the RMS (root mean square) value	no-units (95)	RO
41	2009	2009	Output System - Current crest factor - Phase 2	The present output crest factor for each phase. The output crest factor is the ratio of the peak value of the output current to the RMS (root mean square) value	no-units (95)	RO
42	2010	2010	Output System - Current crest factor - Phase 3	The present output crest factor for each phase. The output crest factor is the ratio of the peak value of the output current to the RMS (root mean square) value	no-units (95)	RO
43	2011	2011	Output System - Current - Phase 1	The present output current for each phase in A	amperes (3)	RO
44	2012	2012	Output System - Current - Phase 2	The present output current for each phase in A	amperes (3)	RO
45	2013	2013	Output System - Current - Phase 3	The present output current for each phase in A	amperes (3)	RO
46	2014	2014	Output System - Energy	The total energy supplied since the time of installation or since the counter was reset	kilowatt-hours (19)	RO
47	2015	2015	Output System - Frequency	The present output frequency in Hz	hertz (27)	RO
48	2016	2016	Output System - Neutral current	The present output neutral current in A	amperes (3)	RO
49	2017	2017	Output System - Power factor - Phase 1	The present output power factor for each phase. Power factor is the ratio of active power to apparent power	power-factor (15)	RO
50	2018	2018	Output System - Power factor - Phase 2	The present output power factor for each phase. Power factor is the ratio of active power to apparent power	power-factor (15)	RO
51	2019	2019	Output System - Power factor - Phase 3	The present output power factor for each phase. Power factor is the ratio of active power to apparent power	power-factor (15)	RO
52	2020	2020	Output System - Real power	The present total active (or real) output power (for all three phases) in kW	kilowatts (48)	RO
53	2021	2021	Output System - Real power - Phase 1	The present active (or real) output power for each phase in kW. Active power	kilowatts (48)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
				is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction		
54	2022	2022	Output System - Real power - Phase 2	The present active (or real) output power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
55	2023	2023	Output System - Real power - Phase 3	The present active (or real) output power for each phase in kW. Active power is the portion of power flow that, averaged over a complete cycle of the AC waveform, results in net transfer of energy in one direction	kilowatts (48)	RO
56	2024	2024	Output System - Voltage Ph-N - Phase 1	The present output voltage for each phase	volts (5)	RO
57	2025	2025	Output System - Voltage Ph-N - Phase 2	The present output voltage for each phase	volts (5)	RO
58	2026	2026	Output System - Voltage Ph-N - Phase 3	The present output voltage for each phase	volts (5)	RO
59	2027	2027	Output System - Voltage Ph-Ph - Phase 1	The present phase-to-phase output RMS voltage	volts (5)	RO
60	2028	2028	Output System - Voltage Ph-Ph - Phase 2	The present phase-to-phase output RMS voltage	volts (5)	RO
61	2029	2029	Output System - Voltage Ph-Ph - Phase 3	The present phase-to-phase output RMS voltage	volts (5)	RO

Analog Value Objects

Analog Value Objects provide information on UPS data properties made available via the BACnet protocol.

No.	Index	BACnet ID	Name	Description	Units	Access
1	0	8388608	General - Current ramp in time	Ramp in timer for mains current limitation during transfer from Battery to online operation	seconds (73)	RO
2	2000	8390608	Output System - Acceptable voltage setting	Acceptable voltage as percent of nominal voltage (Voltage tolerance)	percent (98)	RO
3	2001	8390609	Output System - Apparent power rating	Current UPS power rating (kW).	kilowatts (48)	RO
4	2002	8390610	Output System - Apparent power rating setting	The UPS power rating(kVA).	kilowatts (48)	RO
5	2003	8390611	Output System - Overload threshold	Set customer threshold for output overload status.	percent (98)	RO
6	2004	8390612	Output System - Transformer voltage compensation	Setting for adjusting the output voltage to compensate for load dependent transformer voltage drop. It must be synchronized in parallel systems.	percent (98)	RO
7	2005	8390613	Output System - Voltage compensation setting	Voltage Compensation. Increase voltage to compensate for different cable lengths	percent (98)	RO
8	3000	8391608	Bypass System - Out of sync bypass transfer delay	Setting to configure break duration in ms when shifting to an asynchronous bypass.	milliseconds (159)	RO
9	4000	8392608	Energy Storage - Charge current rate setting	Setting for charge current rate by user	no-units (95)	RO
10	4001	8392609	Energy Storage - Charger capacity setting	The charging capacity based on system kW rating	percent (98)	RO
11	4002	8392610	Energy Storage - Lower temperature alarm setting	Setting for minimum allowed temperature	degrees-Celsius (62)	RO
12	4003	8392611	Energy Storage - Temperature	The highest battery temperature from the connected temperature sensors	degrees-Celsius (62)	RO
13	4004	8392612	Energy Storage - Upper temperature alarm setting	Setting for maximum allowed temperature	degrees-Celsius (62)	RO

No.	Index	BACnet ID	Name	Description	Units	Access
14	10000	8398608	Network Management Card - Reboot count	Number of times the NMC has rebooted since last reset	no-units (95)	RO

Binary Input Objects

Binary Input objects represent UPS data properties that report two-state (on/off) status information through the BACnet protocol.

No.	Index	BACnet ID	BACnet Name	Description	Alarm	Access
1	4000	12586912	Energy Storage - DC relay status	Modular battery DC relay status	No	RO
2	4001	12586913	Energy Storage - Mixed cartridge vendor status	Status that indicates if there are battery cartridges from different vendors installed in the modular battery system (not on string level but on system level)	No	RO
3	5000	12587912	Switchgear System - IMB status	Internal Maintenance Bypass Breaker Status	No	RO
4	5001	12587913	Switchgear System - MBB status	Maintenance Bypass Breaker Setting	No	RO
5	5002	12587914	Switchgear System - RIMB status	Redundant Internal Maintenance Bypass Breaker Status	No	RO
6	5003	12587915	Switchgear System - SIB status	System Isolation Breaker Status	No	RO
7	5004	12587916	Switchgear System - SSIB status	Static Switch Input Breaker Status	No	RO
	5005	12587917	Switchgear System - UOB status	Unit Output Breaker Status	No	RO
	5006	12587918	Switchgear System - UIB status	Unit Input Breaker Status	No	RO
	6000	12588912	Parallel System - Minimum number of units status	Status to indicate whether there are enough number of UPS units for the parallel system to enter the inverter operation mode.	No	RO
	7000	12589912	Unit Controller - UPS base model number check	UPS base model number check	No	RO

Binary Value Objects

Binary Value Objects represent UPS data properties that can be set to one of two discrete states through the BACnet protocol.

No.	Index	BACnet ID	Name	Description	Alarm	Access
1	500	20972020	General - Activation code is not valid for UPS	The activation code is not valid for the UPS	Yes	RO
2	501	20972021	General - Activation code missing	The activation code is missing	Yes	RO
3	502	20972022	General - Air filter technical check recommended	The air filters need to be checked as preventive maintenance is recommended	Yes	RO
4	503	20972023	General - Ambient temperature high	Ambient temperature is high	Yes	RO
5	504	20972024	General - Ambient temperature out of tolerance	Ambient temperature is out of tolerance	Yes	RO
6	505	20972025	General - Available UPS power lower than configured UPS power rating	The available power from inverter is lower than the configured UPS power rating	Yes	RO
7	506	20972026	General - Configured UPS power rating exceeds frame power rating	The configured UPS power rating is higher than the power rating of the frame	Yes	RO
8	507	20972027	General - Controller box disabled	Controller box has been disabled by user	Yes	RO
9	508	20972028	General - Display communication lost - connected	Communication link between display and SLC is lost. HMI is connected	Yes	RO
10	509	20972029	General - Display communication lost - disconnected	Communication link between display and SLC is lost. HMI is disconnected	Yes	RO
11	510	20972030	General - Display communication not authenticated	Communication link between display and SLC is not authenticated	Yes	RO
12	511	20972031	General - EPO switch activated	An emergency power off (EPO) switch is activated	Yes	RO
13	513	20972033	General - High efficiency mode disabled by system	High efficiency mode has been disabled by the system	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
14	516	20972036	General - Incorrect 3-wire configuration detected	The UPS is not allowed to operate as a 3-wire system at the configured UPS system voltage	Yes	RO
15	517	20972037	General - Incorrect UPS base model number detected	The UPS base model does not match the installed frame type, power module type, and/or SBS type	Yes	RO
16	518	20972038	General - Incorrect UPS model number detected	The UPS model number does not match the UPS base model number	Yes	RO
17	519	20972039	General - Incorrect system voltage configuration detected	The configured UPS system voltage is not within the allowed range	Yes	RO
18	521	20972041	General - Internal power module redundancy lost	The configured internal power module redundancy is lost because there are not enough power modules available	Yes	RO
19	522	20972042	General - Inverter is off due to a request by the user	The inverter is off due to a request by the user	Yes	RO
20	523	20972043	General - Inverter output is not in phase with bypass input	The UPS inverter output is not in phase with the bypass input	Yes	RO
21	524	20972044	General - Multiple NTP server connections enabled	Multiple NTP server connections are enabled	Yes	RO
22	525	20972045	General - No SBS present	No SBS present	Yes	RO
23	526	20972046	General - No power module(s) present	No power module(s) present	Yes	RO
24	527	20972047	General - PFC AC current limitation threshold lowered due to high temperature	The AC current limitation threshold of the PFC has been lowered due to high ambient temperature	Yes	RO
25	528	20972048	General - Product not registered	Your UPS is not registered	Yes	RO
26	529	20972049	General - RFID tag has changed	The RFID tag has changed	Yes	RO
27	530	20972050	General - SBS power rating lower than configured UPS power rating	The SBS power rating is lower than the configured UPS power rating. UPS power rating has been derated to match SBS power rating	Yes	RO
28	531	20972051	General - Settings file not accepted	The settings file is not valid or not intended for this UPS	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
29	533	20972053	General - Synchronization unavailable - system is free running	UPS is unable to synchronize to the bypass input, external source or parallel system	Yes	RO
30	534	20972054	General - System locked in bypass operation	The system is locked in bypass operation	Yes	RO
31	535	20972055	General - System operation mode - Forced static bypass	The system is in bypass in response to a critical event or an inverter off request	Yes	RO
32	536	20972056	General - System operation mode - Maintenance bypass	The system load is supplied through maintenance bypass breaker (MBB)	Yes	RO
33	537	20972057	General - System operation mode - Off	The system output power is turned off	Yes	RO
34	538	20972058	General - System operation mode - Requested static bypass	The system is in bypass in response to the UPS front-panel or a user-initiated software command, typically for maintenance	Yes	RO
35	539	20972059	General - System operation mode - Static bypass standby	The system is in static bypass standby operation in response to a critical event or an inverter off request	Yes	RO
36	540	20972060	General - Technical check recommended	The product and its batteries need to be checked as preventive maintenance is recommended	Yes	RO
37	541	20972061	General - UPS operation mode - Battery	On battery power in response to an input power problem or due to a transfer out of eConversion	Yes	RO
38	542	20972062	General - UPS operation mode - Battery test	On battery power in response to a test of the performance of the batteries	Yes	RO
39	543	20972063	General - UPS operation mode - Forced static bypass	The UPS is in forced static bypass	Yes	RO
40	544	20972064	General - UPS operation mode - Initialization	The UPS is initializing	Yes	RO
41	545	20972065	General - UPS operation mode - Inverter standby	The UPS is ready to enter battery operation but awaits permission from the system. UPS output is off	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
42	546	20972066	General - UPS operation mode - Maintenance bypass	The UPS load is supplied through maintenance bypass breaker (MBB)	Yes	RO
43	547	20972067	General - UPS operation mode - Off	The output power is turned off	Yes	RO
44	548	20972068	General - UPS operation mode - Requested static bypass	The UPS is in bypass in response to the UPS front-panel or a user-initiated software command, typically for maintenance	Yes	RO
45	549	20972069	General - UPS operation mode - Static bypass standby	The UPS is ready to enter static bypass but awaits permission from the system. UPS output is off	Yes	RO
46	550	20972070	General - UPS output load is too low to allow eConversion	UPS output load is too low to allow eConversion	Yes	RO
47	551	20972071	General - UPS output load power factor is too low to allow eConversion	UPS output load power factor is too low to allow eConversion	Yes	RO
48	552	20972072	General - UPS surveillance detected fault	UPS surveillance detected a fault	Yes	RO
49	554	20972074	General - Unsupported SBS module type detected	The detected SBS module type is not supported by the current UPS power configuration	Yes	RO
50	555	20972075	General - Unsupported power frame type detected	The detected UPS power frame type is not supported by the current UPS power configuration	Yes	RO
51	556	20972076	General - Unsupported power module type detected	The detected power module type is not supported by the current UPS power configuration	Yes	RO
52	557	20972077	General - Warranty expiring soon	The product is reaching the end of warranty	Yes	RO
53	563	20972083	General - NMC only firmware update in progress	NMC only firmware update in progress	Yes	RO
54	1500	20973020	Input System - Bonding between neutral and ground missing	Bonding between neutral and ground is missing	Yes	RO
55	1506	20973026	Input System - Input frequency out of tolerance	Input frequency is out of tolerance	Yes	RO
56	1507	20973027	Input System - Input phase missing	Input is missing a phase	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
57	1508	20973028	Input System - Input phase sequence incorrect	The phase rotation on input is incorrect	Yes	RO
58	1509	20973029	Input System - Input voltage out of tolerance	Input voltage is out of tolerance	Yes	RO
59	1510	20973030	Input System - Neutral displacement detected	Neutral displacement detected	Yes	RO
60	1511	20973031	Input System - Customized input current limit is lower than minimum allowed level	The customized input current limit is configured to a value that is lower than the minimum current allowed. The minimum allowed input current limit will be used instead	Yes	RO
61	1513	20973033	Input System - Static bypass operation due to customized input current limit	UPS is in static bypass operation because the battery is discharged and the input current needed is above the customized input current limit	Yes	RO
62	2000	20973520	Output System - Autostart enable	Delay time before autostart of the inverter after mains returns after an outage	No	RO
63	2500	20974020	Output System - Load on UPS is above warning level	Load on UPS has exceeded the warning level	Yes	RO
64	2501	20974021	Output System - Output frequency out of tolerance	Output frequency is out of tolerance	Yes	RO
65	2502	20974022	Output System - Output voltage out of tolerance	The output voltage is out of tolerance	Yes	RO
66	2504	20974024	Output System - Overload on UPS due to high ambient temperature	The load exceeds the rated UPS capacity when running in high ambient temperature	Yes	RO
67	2506	20974026	Output System - Overload or short circuit on UPS	The load exceeds 100% of rated capacity or there is a short circuit on the output	Yes	RO
68	2507	20974027	Output System - Load exceeds 100% of rated capacity but is within the continuous overload range	The load exceeds 100% of rated capacity but is within the continuous overload range	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
69	3501	20975021	Bypass System - Bypass frequency out of tolerance	Bypass frequency is out of tolerance	Yes	RO
70	3502	20975022	Bypass System - Bypass phase missing	Bypass is missing a phase	Yes	RO
71	3503	20975023	Bypass System - Bypass phase sequence incorrect	The phase rotation on bypass is incorrect	Yes	RO
72	3504	20975024	Bypass System - Bypass voltage out of tolerance	Bypass voltage is out of tolerance and UPS is prevented from going into requested bypass mode	Yes	RO
73	4000	20975520	Energy Storage - Auto boost charge	Settings for auto boost mode of the charger	No	RO
74	4001	20975521	Energy Storage - Auto cyclic charge setting	Setting for auto cyclic mode charge mode	No	RO
75	4002	20975522	Energy Storage - Battery breaker 1 setting	Configuration of breakers	No	RO
76	4003	20975523	Energy Storage - Battery breaker 2 setting	Configuration of breakers	No	RO
77	4004	20975524	Energy Storage - Deep discharge setting	Battery deep discharge settings.	No	RO
78	4500	20976020	Energy Storage - BMC communication lost - connected	Communication link between BMC and SLC is lost. BMC is connected	Yes	RO
79	4501	20976021	Energy Storage - BMC communication lost - disconnected	Communication link between BMC and SLC is lost. BMC is disconnected	Yes	RO
80	4502	20976022	Energy Storage - BMC communication not authenticated	Communication link between BMC and SLC is not authenticated	Yes	RO
81	4503	20976023	Energy Storage - Batteries are discharging	The load is drawing more power than the UPS can draw from the input, causing the UPS to draw power from the batteries	Yes	RO
82	4504	20976024	Energy Storage - Battery breaker BB1 open	Battery breaker BB1 is open	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
83	4505	20976025	Energy Storage - Battery breaker BB2 open	Battery breaker BB2 is open	Yes	RO
84	4508	20976028	Energy Storage - Battery capacity is below minimum acceptable level	The battery capacity is below the minimum acceptable value according to UPS power rating. Risk of battery damage	Yes	RO
85	4509	20976029	Energy Storage - Battery condition is poor	Battery capacity is lower than 50%	Yes	RO
86	4510	20976030	Energy Storage - Battery condition is weak	Battery capacity is between 50% to 75%	Yes	RO
87	4511	20976031	Energy Storage - Battery configuration is incorrect	The configuration of the settings for number of batteries in series, number of cells in battery and nominal cell voltage does not match the battery voltage range of the UPS	Yes	RO
88	4512	20976032	Energy Storage - Battery float charge current exceeds expected value	The battery float charge current exceeds the expected value and has been limited to avoid thermal runaway	Yes	RO
89	4513	20976033	Energy Storage - Battery is below minimum acceptable runtime	The battery runtime is below configured minimum acceptable value	Yes	RO
90	4514	20976034	Energy Storage - Battery is not working correctly	A battery is not working correctly	Yes	RO
91	4515	20976035	Energy Storage - Battery module temperature out of tolerance	Battery module temperature is out of tolerance	Yes	RO
92	4516	20976036	Energy Storage - Battery module temperature sensor not working correctly	Battery module temperature sensor is not working correctly	Yes	RO
93	4517	20976037	Energy Storage - Battery module type unknown	Battery module type is unknown	Yes	RO
94	4518	20976038	Energy Storage - Battery voltage does not match battery configuration	Battery voltage does not match the battery configuration settings	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
95	4519	20976039	Energy Storage - Charge power is reduced	The battery charge power has been reduced	Yes	RO
96	4520	20976040	Energy Storage - Charger shutdown due to high battery temperature	The charger has been shut down due to a high battery temperature	Yes	RO
97	4521	20976041	Energy Storage - High Battery Temperature Level	The battery temperature is above the Alarm setting	Yes	RO
98	4522	20976042	Energy Storage - High battery discharge current shutdown	The energy storage surveillance has detected a battery discharge current above shutdown limit	Yes	RO
99	4523	20976043	Energy Storage - High battery temperature shutdown	The energy storage surveillance has detected a battery temperature above shutdown limit	Yes	RO
100	4524	20976044	Energy Storage - Incomplete battery string detected	Incomplete battery string detected	Yes	RO
101	4525	20976045	Energy Storage - Incorrect battery monitor controller (BMC) configuration detected	Incorrect battery monitor controller (BMC) configuration detected	Yes	RO
102	4526	20976046	Energy Storage - Low Battery Temperature Level	The battery temperature is below the Alarm setting	Yes	RO
103	4527	20976047	Energy Storage - Mixed battery brands on string level detected	The battery modules in the string are not of the same brand	Yes	RO
104	4528	20976048	Energy Storage - Mixed battery module commercial references on system level detected	Mixed battery module commercial references on system level detected	Yes	RO
105	4529	20976049	Energy Storage - Mixed battery solution detected	The UPS is configured for a classic battery solution but one or more battery modules are detected present	Yes	RO
106	4530	20976050	Energy Storage - Modular battery DC relay open	Modular battery DC relay open	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
107	4531	20976051	Energy Storage - Modular battery breaker open	Modular battery breaker is open	Yes	RO
108	4532	20976052	Energy Storage - Modular battery cabinet commercial reference unknown	Modular battery cabinet commercial reference is unknown	Yes	RO
109	4533	20976053	Energy Storage - Modular battery cabinet fuse blown	Modular battery cabinet fuse blown	Yes	RO
110	4534	20976054	Energy Storage - Modular battery string temperature out of tolerance	Modular battery string temperature is out of tolerance	Yes	RO
111	4535	20976055	Energy Storage - Modular battery temperature out of tolerance	Modular battery temperature is out of tolerance	Yes	RO
112	5001	20976521	Switchgear System - MBB setting	Maintenance Bypass Breaker Setting	No	RO
113	5002	20976522	Switchgear System - RIMB setting	Redundant Internal Maintenance Bypass Breaker Setting	No	RO
114	5003	20976523	Switchgear System - SIB setting	System Isolation Breaker Setting	No	RO
115	5004	20976524	Switchgear System - SSIB setting	Static Switch Input Breaker Setting	No	RO
116	5005	20976525	Switchgear System - UOB setting	Unit Output Breaker Setting	No	RO
117	5006	20976526	Switchgear System - UIB setting	Unit Input breaker Setting	No	RO
118	5500	20977020	Switchgear System - Battery room ventilation inoperable	Input contact indicates that the battery room ventilation is not working correctly	Yes	RO
119	5501	20977021	Switchgear System - Breaker IMB closed	Internal maintenance bypass breaker IMB is closed, supplying the load with unprotected power from bypass	Yes	RO
120	5503	20977023	Switchgear System - Breaker MBB closed	Maintenance bypass breaker MBB is closed, supplying the load with unprotected power from bypass	Yes	RO
121	5504	20977024	Switchgear System - Breaker RIMB closed	Remote internal maintenance bypass breaker RIMB is closed, supplying the load with unprotected power from bypass	Yes	RO
122	5505	20977025	Switchgear System - Breaker SIB open	System isolation breaker SIB is open, and system cannot supply the load	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
123	5506	20977026	Switchgear System - Breaker SSIB open	Static switch input breaker SSIB is open, preventing static bypass operation	Yes	RO
124	5507	20977027	Switchgear System - Breaker UIB open	Unit input breaker UIB is open, and the UPS is prevented from running in normal operation	Yes	RO
125	5508	20977028	Switchgear System - Breaker UOB open	Unit output breaker UOB is open, and the UPS is prevented from supplying the load	Yes	RO
126	5509	20977029	Switchgear System - External battery monitoring detected fault	Input contact indicates external battery monitoring detected fault	Yes	RO
127	5510	20977030	Switchgear System - External energy storage monitoring: Major alarm	Input contact indicates that the external energy storage monitoring has detected a major alarm	Yes	RO
128	5511	20977031	Switchgear System - External energy storage monitoring: Minor alarm	Input contact indicates that the external energy storage monitoring has detected a minor alarm	Yes	RO
129	5512	20977032	Switchgear System - External signal turns charger off: Activated	Input contact for charger off is activated	Yes	RO
130	5513	20977033	Switchgear System - Genset is supplying the UPS	Input contact indicates that a genset is supplying the UPS	Yes	RO
131	5514	20977034	Switchgear System - Ground fault detected	Input contact indicates that a ground wire fault has been detected	Yes	RO
132	5515	20977035	Switchgear System - High efficiency mode disabled	High efficiency mode is disabled from an input contact	Yes	RO
133	5516	20977036	Switchgear System - IMB redundant monitoring not working correctly	The two redundant AUX switches of IMB do not report the same status	Yes	RO
134	5517	20977037	Switchgear System - MBB redundant monitoring not working correctly	The two redundant AUX switches of MBB do not report the same status	Yes	RO
135	5518	20977038	Switchgear System - RIMB redundant monitoring not working correctly	The two redundant AUX switches of RIMB do not report the same status	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
136	5519	20977039	Switchgear System - Temperature of input, bypass and/or output transformer is too high	Temperature of input, bypass and/or output transformer is too high	Yes	RO
137	5520	20977040	Switchgear System - UOB redundant monitoring not working correctly	The two redundant AUX switches of UOB do not report the same status	Yes	RO
138	5521	20977041	Switchgear System - UPS locked in static bypass mode: Activated	Input contact for UPS locked in static bypass mode is activated	Yes	RO
139	5522	20977042	Switchgear System - User-defined input 1 activated	User-defined input contact 1 is activated	Yes	RO
140	5523	20977043	Switchgear System - User-defined input 2 activated	User-defined input contact 2 is activated	Yes	RO
141	6500	20978020	Parallel System - Confirm redundancy lost and/or transfer to forced static bypass	Inverter OFF button has been pushed and user must confirm that the redundancy will be lost and/or system will transfer to forced static bypass	Yes	RO
142	6501	20978021	Parallel System - Firmware versions in parallel UPS units are not identical	The firmware versions in parallel UPS units are not identical	Yes	RO
143	6502	20978022	Parallel System - General parallel system event	The parallel system is not configured correctly or is not working correctly	Yes	RO
144	6503	20978023	Parallel System - IMB closed in parallel system with MBB	IMB has been closed in parallel system with MBB	Yes	RO
145	6504	20978024	Parallel System - Not enough UPS units ready to turn on inverter	One or more parallel UPS units have been requested to turn on inverter, but not enough UPS units are ready for system to enter inverter on operation	Yes	RO
146	6505	20978025	Parallel System - Parallel breaker status inconsistency detected	The status of one or more common parallel breakers is not detected to be the same on all parallel UPSs	Yes	RO
147	6506	20978026	Parallel System - Parallel communication lost on PBUS cable 1	PBUS cable 1 may be damaged	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
148	6507	20978027	Parallel System - Parallel communication lost on PBUS cable 2	PBUS cable 2 may be damaged	Yes	RO
149	6508	20978028	Parallel System - Parallel mixed operation mode	One or more parallel UPS units are operating in battery operation, while others are operating in normal operation	Yes	RO
150	6509	20978029	Parallel System - Parallel redundancy lost	The configured parallel redundancy is lost, either because the output load is too high, or because there are not enough parallel UPS units available	Yes	RO
151	6510	20978030	Parallel System - Parallel unit not present	UPS is unable to communicate with parallel UPS %d. The UPS might have been powered down or PBUS cables may be damaged	Yes	RO
152	7500	20979020	Unit Controller - UC communication lost - connected	Communication link between UC and SLC is lost. UC is connected	Yes	RO
153	7501	20979021	Unit Controller - UC communication lost - disconnected	Communication link between UC and SLC is lost. UC is disconnected	Yes	RO
154	7502	20979022	Unit Controller - UC communication not authenticated	Communication link between UC and SLC is not authenticated	Yes	RO
155	7504	20979024	Unit Controller - UC in controller box is not working correctly	The UC in the controller box is not working correctly	Yes	RO
156	8500	20980020	Static Bypass Switch - SBS module disabled	The SBS module has been disabled by user	Yes	RO
157	8501	20980021	Static Bypass Switch - SBSC communication lost - connected	Communication link between SBSC and UC is lost. SBSC is connected	Yes	RO
158	8502	20980022	Static Bypass Switch - SBSC communication lost - disconnected	Communication link between SBSC and UC is lost. SBSC is disconnected	Yes	RO
159	8503	20980023	Static Bypass Switch - SBSC communication not authenticated	Communication link between SBSC and UC is not authenticated	Yes	RO
160	8504	20980024	Static Bypass Switch - Static bypass switch fan inoperable	Static Bypass Switch has one or more inoperable fans. Fan redundancy is lost	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
161	8505	20980025	Static Bypass Switch - Static bypass switch inoperable	Static bypass switch is inoperable. UPS is prevented from going into static bypass operation	Yes	RO
162	8506	20980026	Static Bypass Switch - Static bypass switch warning	The static bypass switch needs a technical check but is still fully operational	Yes	RO
163	9500	20981020	Power Module - PMC communication lost - connected	Communication link between PMC and UC is lost. PMC is connected	Yes	RO
164	9501	20981021	Power Module - PMC communication lost - disconnected	Communication link between PMC and UC is lost. PMC is disconnected	Yes	RO
165	9502	20981022	Power Module - PMC communication not authenticated	Communication link between PMC and UC is not authenticated	Yes	RO
166	9503	20981023	Power Module - Power module disabled	The power module has been disabled	Yes	RO
167	9504	20981024	Power Module - Power module fan inoperable	The power module has one or more inoperable fans. Fan redundancy is lost	Yes	RO
168	9505	20981025	Power Module - Power module inlet temperature high	The power module inlet temperature is high	Yes	RO
169	9506	20981026	Power Module - Power module inlet temperature out of tolerance	The power module inlet temperature is out of tolerance	Yes	RO
170	9507	20981027	Power Module - Power module inoperable	Power module is inoperable	Yes	RO
171	9508	20981028	Power Module - Power module overheated	Power module temperature exceeds critical level	Yes	RO
172	9509	20981029	Power Module - Power module surveillance detected fault	Power module surveillance detected a fault	Yes	RO
173	9510	20981030	Power Module - Power module temperature warning	Power module temperature exceeds warning level	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
174	10500	20982020	Network Management Card - High humidity threshold violation at remote sensor	A high humidity threshold violation exists for integrated environmental monitor sensor	Yes	RO
175	10501	20982021	Network Management Card - High temperature threshold violation at remote sensor	A high temperature threshold violation exists for integrated environmental monitor sensor	Yes	RO
176	10502	20982022	Network Management Card - Lost communication to remote sensor	Lost the local network management interface-to-integrated environmental monitor communication	Yes	RO
177	10503	20982023	Network Management Card - Low humidity threshold violation at remote sensor	A low humidity threshold violation exists for integrated environmental monitor sensor	Yes	RO
178	10504	20982024	Network Management Card - Low temperature threshold violation at remote sensor	A low temperature threshold violation exists for integrated environmental monitor sensor	Yes	RO
179	10505	20982025	Network Management Card - Maximum humidity threshold violation at remote sensor	A maximum humidity threshold violation exists for integrated environmental monitor sensor	Yes	RO
180	10506	20982026	Network Management Card - Maximum temperature threshold violation at remote sensor	A maximum temperature threshold violation exists for integrated environmental monitor sensor	Yes	RO
181	10507	20982027	Network Management Card - Minimum humidity threshold violation at remote sensor	A minimum humidity threshold violation exists for integrated environmental monitor sensor	Yes	RO
182	10508	20982028	Network Management Card - Minimum temperature threshold violation at remote sensor	A minimum temperature threshold violation exists for integrated environmental monitor sensor	Yes	RO
183	10509	20982029	Network Management Card - NMC communication lost - connected	Communication link between NMC and SLC is lost. NMC is connected	Yes	RO

No.	Index	BACnet ID	Name	Description	Alarm	Access
184	10510	20982030	Network Management Card - NMC communication lost - disconnected	Communication link between NMC and SLC is lost. NMC is disconnected	Yes	RO
185	10511	20982031	Network Management Card - NMC communication not authenticated	Communication link between NMC and SLC is not authenticated	Yes	RO
186	10512	20982032	Network Management Card - NMC firmware incompatible	Firmware version of the NMC is incompatible	Yes	RO
187	10513	20982033	Network Management Card - DCIO communication lost - connected	Communication link between DCIO and SLC is lost. DCIO is connected	Yes	RO
188	10514	20982034	Network Management Card - DCIO communication lost - disconnected	Communication link between DCIO and SLC is lost. DCIO is disconnected	Yes	RO
189	10515	20982035	Network Management Card - DCIO communication not authenticated	Communication link between DCIO and SLC is not authenticated	Yes	RO
190	10516	20982036	Network Management Card - DCIO firmware incompatible	Firmware version of the DCIO is incompatible	Yes	RO
191	11500	20983020	System Level Controller - SLC in controller box is not working correctly	The SLC in the controller box is not working correctly	Yes	RO

CharacterString Value Objects

CharacterString Value Objects represent UPS data properties that return text-based information through the BACnet protocol.

No.	Index	BACnet ID	Name	Description	Access
1	0	167772160	General - Firmware version	The FW package version of the UPS system	RO
2	1	167772161	General - Hardware version	The HW version number of the UPS System	RO
3	2	167772162	General - Model number	The model number (Commercial SKU number)	RO
4	3	167772163	General - Serial number	The UPS system serial number	RO
5	10000	167782160	Network Management Card - Firmware version	The Network Management Card FW version number	RO
6	10001	167782161	Network Management Card - Hardware version	The Network Management Card HW version number	RO
7	10002	167782162	Network Management Card - Model number	The model number (SKU number) of the Network Management Card	RO
8	10003	167782163	Network Management Card - Name	Define the name of the NMC system	RO
9	10004	167782164	Network Management Card - Serial number	The Network Management card serial number	RO

Integer Value Objects

Integer Value Objects provide information on UPS data properties that return whole-number values via the BACnet protocol.

No.	Index	BACnet ID	Name	Description	Units	Access
1	4000	88084384	Energy Storage - Modular battery setting	The number of modular battery cabinets connected to the UPS	no-units (95)	RO
2	4001	88084385	Energy Storage - Test time of day	Time of day when the battery test is scheduled to start. Minimum value: 0 and the Maximum value: 86399 (24 hours).	seconds (73)	RO
3	6000	88086384	Parallel System - Local address	The parallel UPS number of the operated UPS	no-units (95)	RO
4	6001	88086385	Parallel System - Minimum startup quantity	The minimum number of parallel units available starts up automatically.	no-units (95)	RO
5	6002	88086386	Parallel System - Remote address	Setting for which parallel UPS units are present in the system. Each UPS unit can be selected as present or not present.	no-units (95)	RO

Multi-State Value Objects

Multi-state Value Objects provide information on UPS data properties that return a list of options via the BACnet protocol.

No.	Index	BACnet ID	Name	Description	Options	Access
1	0	79691776	General - AC voltage setting	This is the configured AC voltage system setting. It also applies to the input if no specific setting is defined in the InputSystem.	1 - 380 V PhPh 2 - 400 V PhPh 3 - 415 V PhPh 4 - 480 V PhPh 5 - 208 V PhPh 6 - 200 V PhPh 7 - 220 V PhPh 8 - 440 V PhPh	RO

No.	Index	BACnet ID	Name	Description	Options	Access
2	1	79691777	General - AC wiring configuration	Defines the AC wiring of the system. 3 Wire does not include neutral where 4 wire includes neutral	1 - 3 wire 2 - 4 wire	RO
3	2	79691778	General - Energy storage type	Energy storage type	1 - No Energy Storage 2 - Battery/Batteries 3 - Flywheel 4 - Ultra Capacitors	RO
4	3	79691779	General - Mains configuration	Setting for single or dual mains supply	1 - Single 2 - Dual	RO
5	4	79691780	General - Unit alarm status	Alarm status of the unit	1 - No alarms present 2 - Informational alarm present 3 - Warning alarm present 4 - Critical alarm present	RO
6	2000	79693776	Output System - Acceptable frequency setting	This is the output frequency setting including the tolerance. This drives whether the output is in sync with the input.	1 - 50 Hz +/- 1.0 Hz 2 - 50 Hz +/- 3.0 Hz 3 - 60 Hz +/- 1.0 Hz 4 - 60 Hz +/- 3.0 Hz 5 - 50 Hz +/- 10.0 Hz 6 - 60 Hz +/- 10.0 Hz	RO
7	2001	79693777	Output System - Frequency slew rate	Slew rate of the inverter	1 - 0.25 Hz/s 2 - 0.50 Hz/s 3 - 1 Hz/s 4 - 2 Hz/s 5 - 4 Hz/s 6 - 6 Hz/s	RO

No.	Index	BACnet ID	Name	Description	Options	Access
8	4000	79695776	Energy Storage - Battery breaker status	Combined status for battery breakers	1 - Open 2 - Closed	RO
9	4001	79695777	Energy Storage - Battery charging mode	Status of the charging mode of the system. Is it charging or discharging or resting.	1 - Idle 2 - Charging 3 - Discharging	RO
10	4002	79695778	Energy Storage - Battery condition	The result from the last battery self-test	1 - OK 2 - Unknown 3 - Weak 4 - Poor 5 - Initialization	RO
11	4003	79695779	Energy Storage - Battery setting	Battery Solution setting for predefined battery solutions	1 - Custom 2 - GVSCBC7A 3 - GVSCBC7B 4 - GVSCBC7C 5 - GVSCBC10A/GVSCBC10A2 6 - GVSCBC10B/GVSCBC10B2 7 - GVSCBT1ST 8 - GVSCBT2ST 9 - GVSCBT3ST 10 - GVSCBT4ST 11 - GVSCBT5ST 12 - LIBATTSMGEIEC 13 - LIBATTSMGEUL 14 - Modular Battery Solution 15 - GVSCBT6/GVSCBT6ST	RO

No.	Index	BACnet ID	Name	Description	Options	Access
					16 - GVSCBT7/GVSCBT7ST 17 - LIBATTSMGSIEC 18 - LIBATTSMGSUL 19 - LIBSESMG13IEC 20 - LIBSESMG13UL 21 - LIBSMG95SIEC 22 - LIBSMG95SUL 23 - LIBSMG95SIEC1PH 24 - LIBSMG95SUL1PH 25 - LIBSESMG16IEC 26 - LIBSESMG16UL 27 - LIBSESMG17IEC 28 - LIBSESMG17UL 29 - LIBSMG95GUL 30 - LIBSMG95GIEC 31 - LIBSMG95EUL 32 - LIBSMG95EIEC 33 - LIBSMG95GUL1PH 34 - LIBSMG95GIEC1PH 35 - LIBSMG95EUL1PH 36 - LIBSMG95EIEC1PH 37 - LIBATTSMGGUL 38 - LIBATTSMGGIEC 39 - LIBCAT2W9X80 40 - LIBCAT2W10X80 41 - LIBCAT2W11X80 42 - GVSCBT1	

No.	Index	BACnet ID	Name	Description	Options	Access
					43 - GVSCBT2 44 - GVSCBT3 45 - GVSCBT4 46 - GVSCBT5 47 - GVSCBC7D 48 - GVSCBC7E 49 - LIBSEGLA8X54 50 - LIBSEGLA10X54 51 - LIBSEGLA12X54 52 - LIBAMP2W9X104 53 - LIBAMP2W10X104 54 - LIBAMP2W11X104 55 - LIBAMP2W12X104	
12	4004	79695780	Energy Storage - Battery type	Battery type of the connected batteries	1 - Valve regulated Lead-Acid 2 - Vented / Flooded / Wet 3 - Lithium Ion 4 - NiCd	RO

No.	Index	BACnet ID	Name	Description	Options	Access
13	4005	79695781	Energy Storage - Charger status	The general condition of the charger	1 - Float charging 2 - Boost charging 3 - Charger off (algorithm decision) 4 - Charger off (UPS state or charger fault) 5 - Equalization charging 6 - Test in progress 7 - Cyclic float charging 8 - V1_State 9 - V2_State	RO
14	4006	79695782	Energy Storage - Replace battery test status	Status of battery self-test. Can indicate the battery test status triggered by manual or scheduled test.	1 - Inactive 2 - Running 3 - Aborted - Critical alarm detected 4 - Aborted - User initiated 5 - Completed	RO
15	4007	79695783	Energy Storage - Test day of week	Day of week when the battery test is scheduled to start.	1 - Monday 2 - Tuesday 3 - Wednesday 4 - Thursday 5 - Friday 6 - Saturday 7 - Sunday	RO

No.	Index	BACnet ID	Name	Description	Options	Access
16	4008	79695784	Energy Storage - Test interval	Test interval for battery test start	1 - Autotest disabled 2 - Autotest every 1 week 3 - Autotest every 2 weeks 4 - Autotest every 4 weeks 5 - Autotest every 8 weeks 6 - Autotest every 12 weeks 7 - Autotest every 26 weeks 8 - Autotest every 52 weeks	RO
17	6000	79697776	Parallel System - Redundancy setting	The selected number of redundant UPSs in the parallel system	1 - N+0 2 - N+1 3 - N+2 4 - N+3 5 - N+4 6 - N+5	RO
18	12000	79703776	Status - System status	The current operation mode of the complete UPS system	1 - Off Operation 2 - Inverter Operation 3 - Forced Static Bypass Operation 4 - Requested Static Bypass Operation 5 - Maintenance Static Bypass Operation 6 - Static Bypass Standby Operation 7 - eConversion mode 8 - ECO mode	RO

No.	Index	BACnet ID	Name	Description	Options	Access
19	12001	79703777	Status - UPS mode	Show mode of operation of the UPS and indicate power flow such as from mains or bypass or battery or other sources.	1 - Initialize Operation 2 - Off Operation 3 - Battery Operation 4 - Normal Operation 5 - Forced Static Bypass Operation 6 - Requested Static Bypass Operation 7 - Maintenance Bypass Operation 8 - Emergency Static Bypass Operation 9 - Inverter Standby Operation 10 - Static Bypass Standby Operation 11 - Battery Test 12 - Inverter SPoT mode 13 - Charger SPoT mode 14 - Battery SPoT mode 15 - eConversion mode 16 - ECO mode	RO

No.	Index	BACnet ID	Name	Description	Options	Access
20	13000	79704776	Firmware Update - Firmware update status	Status of the FW upgrade process	1 - FW Update: Initializing 2 - FW Update: IDLE 3 - FW Update: Downloading Package 4 - FW Update: Installing Package 5 - FW Update: Rebooting 6 - FW Update: System Update Failed 7 - FW Update: System Update Complete 8 - FW Update: System Update Aborted 9 - FW Update: Spare Part Update in Progress 10 - FW Update: Partial Failure	RO

Notification Class Objects

A Notification Class Object defines how alarms and events are routed within a BACnet system. It specifies the recipients, priority levels, and delivery method used when devices generate event notifications. BACnet objects with intrinsic alarming—such as Analog Input, Analog Value, Binary Input and Binary Value—use their assigned Notification Class to communicate alarm conditions, ensuring events are delivered in a consistent and standards-compliant manner across the system.

No.	Index	BACnet ID	Name	Description	Access
1	0	62914560	NOTIFICATION CLASS 0	NOTIFICATION CLASS 0	RW
2	1	62914561	NOTIFICATION CLASS 1	NOTIFICATION CLASS 1	RW
3	2	62914562	NOTIFICATION CLASS 2	NOTIFICATION CLASS 2	RW
4	3	62914563	NOTIFICATION CLASS 3	NOTIFICATION CLASS 3	RW
5	4	62914564	NOTIFICATION CLASS 4	NOTIFICATION CLASS 4	RW
6	5	62914565	NOTIFICATION CLASS 5	NOTIFICATION CLASS 5	RW
7	6	62914566	NOTIFICATION CLASS 6	NOTIFICATION CLASS 6	RW
8	7	62914567	NOTIFICATION CLASS 7	NOTIFICATION CLASS 7	RW
9	8	62914568	NOTIFICATION CLASS 8	NOTIFICATION CLASS 8	RW
10	9	62914569	NOTIFICATION CLASS 9	NOTIFICATION CLASS 9	RW

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