Network Management Card 2 BACnet Application Map for Smart-UPS v6.5.6 and higher

Introduction

This document details the BACnet objects and properties supported by the Network Management Card 2 firmware v6.5.6 and higher (v6.5.6+) for Smart-UPS, available on the APC website.

What's in This Document?

Additional Information

- Information on the BACnet protocol specification can found at www.bacnet.org.
- APC recommends EcoStruxure Building Operation software (formerly known as StruxureWare Building Operation/SBO) for integrated monitoring, control and management of BACnet-enabled devices.
- See the Network Management Card 2 User Guide available on the APC website for more information on configuring the NMC 2 for BACnet.
- The Network Management Card 2 firmware v6.5.6+ for Smart-UPS supports BACnet/IP only.
- BACnet/IP is supported with v6.5.6 "sumx" application firmware and higher for Smart-UPS UPS devices.
- Object tables specify UPS model support, identified by Smart-UPS model prefix (e.g. SMT/SMX/SRT/SURT/SURTD):
    - You can find your UPS model prefix on the label of your UPS.

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- – Support for UPS models **SRC2KUXI**, **SRC3KUXI**, and **SRC3KUXIX709** is indicated in the object tables under the SRT column. Support for all other SRC models is indicated by the 'All other UPS models' column.

Index of BACnet Objects

Use the table index numbers to find a BACnet object name and type. The table index values refer to the unique index number of each object property - see Analog Value Objects, Binary Value Objects, Character String Value Objects, and Multi-State Value Objects.

BACnet Name	BACnet Object Type	Table Offset
AbnormaOutputVoltage	Binary Value	90
AdConverterInoperable	Binary Value	118
Audible Alarm	Multi-State Value	3
AuxCommCondition	Binary Value	189
AuxTerminationCondition	Binary Value	192
AvrRelayInoperable	Binary Value	89
s	Binary Value	120

BACnet Name	BACnet Object Type	Table Offset
BadBattery	Binary Value	80
Basic low battery duration	Analog Value	53
BattBusSoftStartInoperable	Binary Value	104
BattTempSensorIssue	Binary Value	103
BattVoltageHigh	Binary Value	101
BattVoltageSenseIssue	Binary Value	105
Battery Temperature	Analog Value	1

BACnet Name	BACnet Object Type	Table Offset
Battery current	Analog Value	67
Battery state of charge	Analog Value	66
BatteryChargerInoperable	Binary Value	91
BatteryCommLost	Binary Value	131
BatteryDisconnected	Binary Value	93
BatteryFirmwareMismatch	Binary Value	133
BatteryGeneralCondition	Binary Value	130

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
BatteryInoperable	Binary Value	151	Bypass input voltage 2	Analog Value	61	ChangeDustFilterNow	Binary Value	197
BatteryLifeExceeded	Binary Value	128	Bypass input voltage 3	Analog Value	62	ChangeDustFilterSoon	Binary Value	196
BatteryMeasureLifeNearEnd	Binary Value	127	Bypass lower limit	Analog Value	51	Controlled Early Shutdown Battery Capacity	Analog Value	71
BatteryNearEndOfLife	Binary Value	126	Bypass upper limit	Analog Value	50	Controlled Early Shutdown Battery Capacity Enable	Binary Value	30
BatteryNotInstalledProperly	Binary Value	162	BypassDueToInternalHardwareCondition	Binary Value	154	Controlled Early Shutdown Load Percentage	Analog Value	72
BatteryPackDisconnected	Binary Value	132	BypassDueToMaintenance	Binary Value	156	Controlled Early Shutdown Load Percentage Enable	Binary Value	31
BatteryTempSensorNotOperating	Binary Value	134	BypassDueToOverload	Binary Value	155	Controlled Early Shutdown Runtime Remaining	Analog Value	70
BatteryTempWarning	Binary Value	129	BypassPfcRelayInoperable	Binary Value	112	Controlled Early Shutdown Runtime Remaining Enable	Binary Value	29
BatteryVoltageExceedsNominal	Binary Value	163	BypassPowerSupplyProblem	Binary Value	84	Controlled Early Shutdown Stay Off After Power Return Enable	Binary Value	32
Bypass input frequency	Analog Value	59	BypassRelayInoperable	Binary Value	97	Controlled Early Shutdown Time On Battery	Analog Value	69
Bypass input voltage 1	Analog Value	60	Cancel Test	Binary Value	27	Controlled Early Shutdown Time On Battery Enable	Binary Value	28

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
DcBusCondition	Binary Value	116	ExtendedRunFramesIncreased	Binary Value	167	FanProblem	Binary Value	85
DcBusOvervoltage	Binary Value	109	ExternalSwitchQ0010Closed	Binary Value	178	FirmwareMismatch	Binary Value	138
DcBusSoftStartInoperable	Binary Value	113	ExternalSwitchQ001Closed	Binary Value	169	FirmwareTransferToUpsDidNotSucceed	Binary Value	122
DcImbalance	Binary Value	95	ExternalSwitchQ002Closed	Binary Value	170	GeneralSubsystemCondition	Binary Value	141
DcOutputCondition	Binary Value	115	ExternalSwitchQ003Closed	Binary Value	171	GracefulShutdownInProgress	Binary Value	88
DefaultNotifier		0	ExternalSwitchQ004Closed	Binary Value	172	GreenRelayCondition	Binary Value	114
EepromInoperable	Binary Value	102	ExternalSwitchQ005Closed	Binary Value	173	HighBatteryTemperature	Binary Value	184
EpoActive	Binary Value	137	ExternalSwitchQ006Closed	Binary Value	174	HighInputVoltage	Binary Value	75
EpoActive2	Binary Value	179	ExternalSwitchQ007Closed	Binary Value	175	InBypassBypassSwitch	Binary Value	83
ExtendedRunFrameInoperable	Binary Value	159	ExternalSwitchQ008Closed	Binary Value	176	InBypassFrontPanelSoftware	Binary Value	82
ExtendedRunFramesDecreased	Binary Value	168	ExternalSwitchQ009Closed	Binary Value	177	InBypassInternalHardwareCondition	Binary Value	81

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
InTemporaryBypass	Binary Value	149	LostParallelRedundancy	Binary Value	186	Maximum required delay	Analog Value	58
InputVoltageFreqPreventsBypass	Binary Value	153	LostUPSComm	Binary Value	69	MeasureMismatch	Binary Value	140
InternalBattTempHigh	Binary Value	92	LostUPSCommOnBat	Binary Value	98	Minimum return capacity	Analog Value	56
InternalMechanicalBypass	Binary Value	185	Low Battery duration	Analog Value	52	Negative battery voltage	Analog Value	64
InverterInoperable	Binary Value	110	LowBattery	Binary Value	72	Next battery replacement date	Character String	16
Last battery transfer	Multi-State Value	0	LowBattery2	Binary Value	77	NoMasterPresent	Binary Value	193
LoadKvaAlarmViolation	Binary Value	152	LowInputVoltage	Binary Value	74	Nominal battery voltage	Analog Value	65
LocalDisplayButtonIssue	Binary Value	135	Main Outlet Group control	Multi-State Value	7	NumBatteriesIncreased	Binary Value	165
LogicPowerSupplyInoperable	Binary Value	119	MainInputBad	Binary Value	76	NumBatteryDecreased	Binary Value	166
LogicPowerSuppyRelayCondition	Binary Value	142	MainRelayInoperable	Binary Value	96	Number of external batteries	Analog Value	68
LostBattComm	Binary Value	86	MaintenanceModeForFan	Binary Value	144	OnBattery	Binary Value	73

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
OscillatorInoperable	Binary Value	139	Outlet group main reboot duration	Analog Value	28	Outlet group switched 1 power off delay	Analog Value	25
Outlet group main load shed runtime remaining	Analog Value	40	Outlet group main state	Binary Value	0	Outlet group switched 1 power on delay	Analog Value	33
Outlet group main load shed runtime remaining enable	Binary Value	4	Outlet group switched 1 load shed overload	Binary Value	20	Outlet group switched 1 reboot duration	Analog Value	29
Outlet group main load shed skip off delay	Binary Value	12	Outlet group switched 1 load shed runtime remaining	Analog Value	41	Outlet group switched 1 state	Binary Value	1
Outlet group main load shed stay off after power returns	Binary Value	16	Outlet group switched 1 load shed runtime remaining enable	Binary Value	5	Outlet group switched 2 load shed overload	Binary Value	21
Outlet group main load shed time on battery	Analog Value	44	Outlet group switched 1 load shed skip off delay	Binary Value	13	Outlet group switched 2 load shed runtime remaining	Analog Value	42
Outlet group main load shed time on battery enable	Binary Value	8	Outlet group switched 1 load shed stay off after power returns	Binary Value	17	Outlet group switched 2 load shed runtime remaining enable	Binary Value	6
Outlet group main minimum return runtime	Analog Value	36	Outlet group switched 1 load shed time on battery	Analog Value	45	Outlet group switched 2 load shed skip off delay	Binary Value	14
Outlet group main name	Character String	10	Outlet group switched 1 load shed time on battery enable	Binary Value	9	Outlet group switched 2 load shed stay off after power returns	Binary Value	18
Outlet group main power off delay	Analog Value	24	Outlet group switched 1 minimum return runtime	Analog Value	37	Outlet group switched 2 load shed time on battery	Analog Value	46
Outlet group main power on delay	Analog Value	32	Outlet group switched 1 name	Character String	11	Outlet group switched 2 load shed time on battery enable	Binary Value	10

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BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
Outlet group switched 2 minimum return runtime	Analog Value	38	Outlet group switched 3 load shed time on battery enable	Binary Value	11	Output VA phase 3	Analog Value	15
Outlet group switched 2 name	Character String	12	Outlet group switched 3 minimum return runtime	Analog Value	39	Output efficiency	Analog Value	22
Outlet group switched 2 power off delay	Analog Value	26	Outlet group switched 3 name	Character String	13	Output energy usage	Analog Value	23
Outlet group switched 2 power on delay	Analog Value	34	Outlet group switched 3 power off delay	Analog Value	27	Output frequency	Analog Value	9
Outlet group switched 2 reboot duration	Analog Value	30	Outlet group switched 3 power on delay	Analog Value	35	Output frequency setting	Character String	14
Outlet group switched 2 state	Binary Value	2	Outlet group switched 3 reboot duration	Analog Value	31	Output load current 1	Analog Value	16
Outlet group switched 3 load shed overload	Binary Value	22	Outlet group switched 3 state	Binary Value	3	Output load current 2	Analog Value	17
Outlet group switched 3 load shed runtime remaining enable	Binary Value	7	Outlet group switched 3load shed runtime remaining	Analog Value	43	Output load current 3	Analog Value	18
Outlet group switched 3 load shed skip off delay	Binary Value	15	OutletGroupOff	Binary Value	94	Output lower limit	Analog Value	49
Outlet group switched 3 load shed stay off after power returns	Binary Value	19	Output VA phase 1	Analog Value	13	Output upper limit	Analog Value	48
Outlet group switched 3 load shed time on battery	Analog Value	47	Output VA phase 2	Analog Value	14	Output voltage 1	Analog Value	10

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BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
Output voltage 2	Analog Value	11	PFCInputRelayInoperable	Binary Value	99	PowerSystemCondition	Binary Value	143
Output voltage 3	Analog Value	12	ParallelCommCondition1	Binary Value	187	PowerSystemSensorCondition	Binary Value	117
Output watts phase 1	Analog Value	19	ParallelConfigCondition	Binary Value	195	PsuInoperable	Binary Value	182
Output watts phase 2	Analog Value	20	ParallelOverload	Binary Value	194	Rated Output voltage setting	Multi-State Value	1
Output watts phase 3	Analog Value	21	ParallelTerminationCondition1	Binary Value	190	Return Delay	Analog Value	57
OutputOff	Binary Value	78	ParallelTerminationCondition2	Binary Value	191	Run UPS alarm test	Binary Value	24
OutputRelayInoperable	Binary Value	107	ParalletlCommCondition2	Binary Value	188	Run UPS alarm test continuous	Binary Value	25
OutputShortCircuit	Binary Value	106	PfcInoperable	Binary Value	108	Run UPS runtime calibration	Binary Value	26
OutputVoltageOutsideLimits	Binary Value	160	PhaseSyncCondition	Binary Value	161	Run UPS self test	Binary Value	23
OvercurrentTrip	Binary Value	111	Positive battery voltage	Analog Value	63	Runtime calibration result	Character String	18
Overload	Binary Value	70	PowerModuleInoperable	Binary Value	150	Runtime remaining	Analog Value	0

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
RuntimeAlarmViolation	Binary Value	158	ShutdownWaitingForPowerReturn	Binary Value	79	UIO probe 1 contact 1 name	Character String	21
RuntimeCalStarted	Binary Value	87	SiteWiringFault	Binary Value	164	UIO probe 1 contact 1 severity	Binary Value	47
Self test result	Character String	17	Sleep time	Analog Value	54	UIO probe 1 contact 1enable	Binary Value	41
Self test schedule	Multi-State Value	4	StaticBypassSwitchInoperable	Binary Value	180	UIO probe 1 contact 2 enable	Binary Value	42
SelfTestFailed	Binary Value	71	Switched Outlet group 1 control	Multi-State Value	8	UIO probe 1 contact 2 location	Character String	24
Sensitivity	Multi-State Value	2	Switched Outlet group 2 control	Multi-State Value	9	UIO probe 1 contact 2 name	Character String	22
ServiceBypassDisconnected	Binary Value	146	Switched Outlet group 3 control	Multi-State Value	10	UIO probe 1 contact 2 severity	Binary Value	48
ServiceBypassInBypass	Binary Value	145	SystemFanInoperable	Binary Value	157	UIO probe 1 contact status	Multi-State Value	12
ServiceBypassInternalCondition	Binary Value	148	SystemStartupConfigProblem	Binary Value	181	UIO probe 1 humidity	Analog Value	74
ServiceBypassOutputCondition	Binary Value	147	TechnicalCheckRecommended	Binary Value	125	UIO probe 1 humidity high	Analog Value	81
Shutdown Delay	Analog Value	55	UIO probe 1 contact 1 location	Character String	23	UIO probe 1 humidity high enable	Binary Value	38

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
UIO probe 1 humidity hysteresis	Analog Value	84	UIO probe 1 output relay 1 delay	Analog Value	85	UIO probe 1 temperature high enable	Binary Value	34
UIO probe 1 humidity low	Analog Value	82	UIO probe 1 output relay 1 hold	Analog Value	86	UIO probe 1 temperature hysteresis	Analog Value	79
UIO probe 1 humidity low enable	Binary Value	39	UIO probe 1 output relay 1 location	Character String	26	UIO probe 1 temperature low	Analog Value	77
UIO probe 1 humidity maximum	Analog Value	80	UIO probe 1 output relay 1 name	Character String	25	UIO probe 1 temperature low enable	Binary Value	35
UIO probe 1 humidity maximum enable	Binary Value	37	UIO probe 1 output relay 1 normal state	Binary Value	50	UIO probe 1 temperature maximum	Analog Value	75
UIO probe 1 humidity minimum	Analog Value	83	UIO probe 1 output relay 1 state	Binary Value	49	UIO probe 1 temperature maximum enable	Binary Value	33
UIO probe 1 humidity minimum enable	Binary Value	40	UIO probe 1 temperature	Analog Value	73	UIO probe 1 temperature minimum	Analog Value	78
UIO probe 1 input contact 1 normal state	Binary Value	45	UIO probe 1 temperature and humidity location	Character String	20	UIO probe 1 temperature minimum enable	Binary Value	36
UIO probe 1 input contact 1 state	Binary Value	43	UIO probe 1 temperature and humidity name	Character String	19	UIO probe 2 contact 1 location	Character String	31
UIO probe 1 input contact 2	Binary Value	44	UIO probe 1 temperature and humidity status	Multi-State Value	11	UIO probe 2 contact 1 name	Character String	29
UIO probe 1 input contact 2 normal state	Binary Value	46	UIO probe 1 temperature high	Analog Value	76	UIO probe 2 contact 1 severity	Binary Value	65

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
UIO probe 2 contact 1enable	Binary Value	59	UIO probe 2 humidity low enable	Binary Value	57	UIO probe 2 output relay 1 location	Character String	34
UIO probe 2 contact 2 enable	Binary Value	60	UIO probe 2 humidity maximum	Analog Value	94	UIO probe 2 output relay 1 name	Character String	33
UIO probe 2 contact 2 location	Character String	32	UIO probe 2 humidity maximum enable	Binary Value	55	UIO probe 2 output relay 1 normal state	Binary Value	68
UIO probe 2 contact 2 name	Character String	30	UIO probe 2 humidity minimum	Analog Value	97	UIO probe 2 output relay 1 state	Binary Value	67
UIO probe 2 contact 2 severity	Binary Value	66	UIO probe 2 humidity minimum enable	Binary Value	58	UIO probe 2 temperature	Analog Value	87
UIO probe 2 contact status	Multi-State Value	14	UIO probe 2 input contact 1 normal state	Binary Value	63	UIO probe 2 temperature and humidity location	Character String	28
UIO probe 2 humidity	Analog Value	88	UIO probe 2 input contact 1 state	Binary Value	61	UIO probe 2 temperature and humidity name	Character String	27
UIO probe 2 humidity high	Analog Value	95	UIO probe 2 input contact 2 normal state	Binary Value	64	UIO probe 2 temperature and humidity status	Multi-State Value	13
UIO probe 2 humidity high enable	Binary Value	56	UIO probe 2 input contact 2 state	Binary Value	62	UIO probe 2 temperature high	Analog Value	90
UIO probe 2 humidity hysteresis	Analog Value	98	UIO probe 2 output relay 1 delay	Analog Value	99	UIO probe 2 temperature high enable	Binary Value	52
UIO probe 2 humidity low	Analog Value	96	UIO probe 2 output relay 1 hold	Analog Value	100	UIO probe 2 temperature hysteresis	Analog Value	93

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BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
UIO probe 2 temperature low	Analog Value	91	UPS external battery SKU	Character String	6	UioHumidLowThresholdViolation1	Binary Value	212
UIO probe 2 temperature low enable	Binary Value	53	UPS manufacture date	Character String	2	UioHumidLowThresholdViolation2	Binary Value	213
UIO probe 2 temperature maximum	Analog Value	89	UPS model	Character String	0	UioHumidMaxThresholdViolation1	Binary Value	216
UIO probe 2 temperature maximum enable	Binary Value	51	UPS name	Character String	15	UioHumidMaxThresholdViolation2	Binary Value	217
UIO probe 2 temperature minimum	Analog Value	92	UPS real power rating	Character String	5	UioHumidMinThresholdViolation1	Binary Value	210
UIO probe 2 temperature minimum enable	Binary Value	54	UPS serial number	Character String	1	UioHumidMinThresholdViolation2	Binary Value	211
UPS Control	Multi-State Value	6	UPS state	Multi-State Value	5	UioInputContact1Critical1	Binary Value	198
UPS Firmware Revision	Character String	8	UPSTempCritical	Binary Value	100	UioInputContact1Critical2	Binary Value	199
UPS Internal Battery SKU	Character String	9	UioCriticalFault	Binary Value	220	UioInputContact1Warning1	Binary Value	223
UPS SKU	Character String	7	UioHumidHighThresholdViolation1	Binary Value	214	UioInputContact1Warning2	Binary Value	224
UPS apparent power rating	Character String	4	UioHumidHighThresholdViolation2	Binary Value	215	UioInputContact2Critical1	Binary Value	200

BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset	BACnet Name	BACnet Object Type	Table Offset
UioInputContact2Critical2	Binary Value	201	UioTempMaxThresholdViolation1	Binary Value	208	Utility current 3	Analog Value	7
UioInputContact2Warning1	Binary Value	225	UioTempMaxThresholdViolation2	Binary Value	209	Utility voltage 1	Analog Value	2
UioInputContact2Warning2	Binary Value	226	UioTempMinThresholdViolation1	Binary Value	202	Utility voltage 2	Analog Value	3
UioLostComm1	Binary Value	218	UioTempMinThresholdViolation2	Binary Value	203	Utility voltage 3	Analog Value	4
UioLostComm2	Binary Value	219	UpsInternalCommError	Binary Value	121	WarrantyExpiringSoon	Binary Value	124
UioOutputRelayAbnormalState1	Binary Value	221	UpsInvalidFirmware	Binary Value	123	WeakBattery	Binary Value	183
UioOutputRelayAbnormalState2	Binary Value	222	UpsNeedsFactorySetup	Binary Value	136			
UioTempHighThresholdViolation1	Binary Value	206	User-specified battery replacement date	Character String	3			
UioTempHighThresholdViolation2	Binary Value	207	Utility Input frequency	Analog Value	8			
UioTempLowThresholdViolation1	Binary Value	204	Utility current 1	Analog Value	5			
UioTempLowThresholdViolation2	Binary Value	205	Utility current 2	Analog Value	6			

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Analog Value Objects

Analog value objects provide information on UPS data properties made available via the BACnet protocol:

- The BACnet ID is formed using the BACnet object type number (analog value is 2), and the index number.
- BACnet Units – the format of the analog (numeric) values returned. The unit format complies with the BACnet standard, and includes the enumerated code defined in the standard, which is used to represent it.
- COV Increment – the degree (in decimal places) by which a property value can vary before a Change of Value is reported to BACnet clients subscribed to COV notifications.
- Access values – **RO** is Read Only, **RW** is Read/Write.

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
0	8388608	Runtime remaining	How long the UPS can support its present load while running on battery power.	seconds (73)	60	RO	x	x	x	x
1	8388609	Battery Temperature	Temperature as reported by the sensor in the battery compartment, in Degrees C.	degrees-Celsius (62)	1.0	RO	x	x	x	x
2	8388610	Utility voltage 1	The AC voltage (VAC) being received by the UPS.	volts (5)	1.0	RO			x	x
3	8388611	Utility voltage 2	The AC voltage (VAC) being received by the UPS.	volts (5)	1.0	RO			x	x
4	8388612	Utility voltage 3	The AC voltage (VAC) being received by the UPS.	volts (5)	1.0	RO				x
5	8388613	Utility current 1	The current, in Amps, being received by the UPS.	amperes (3)	1.00	RO				x
6	8388614	Utility current 2	The current, in Amps, being received by the UPS.	amperes (3)	1.00	RO				x
7	8388615	Utility current 3	The current, in Amps, being received by the UPS.	amperes (3)	1.00	RO				x
8	8388616	Utility Input frequency	The frequency in Hertz (Hz) of the voltage being received by the UPS.	hertz (27)	0.5	RO		x		
9	8388617	Output frequency	The frequency in Hertz (Hz) of the output voltage.	hertz (27)	0.5	RO		x		
10	8388618	Output voltage 1	The AC voltage (VAC) that the UPS is supplying to its load.	volts (5)	1.0	RO	x	x	x	x
11	8388619	Output voltage 2	The AC voltage (VAC) that the UPS is supplying to its load.	volts (5)	1.0	RO	x	x	x	x

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
12	8388620	Output voltage 3	The AC voltage (VAC) that the UPS is supplying to its load.	volts (5)	1.0	RO				x
13	8388621	Output VA phase 1	The UPS load as a percentage of available VA.	percent (98)	1.0	RO			x	x
14	8388622	Output VA phase 2	The UPS load as a percentage of available VA.	percent (98)	1.0	RO			x	x
15	8388623	Output VA phase 3	The UPS load as a percentage of available VA.	percent (98)	1.0	RO				x
16	8388624	Output load current 1	The current, in Amps, supplied to the load.	amperes (3)	1.00	RO	x	x	x	x
17	8388625	Output load current 2	The current, in Amps, supplied to the load.	amperes (3)	1.00	RO			x	x
18	8388626	Output load current 3	The current, in Amps, supplied to the load.	amperes (3)	1.00	RO				x
19	8388627	Output watts phase 1	The UPS load as a percentage of available Watts.	percent (98)	1.0	RO	x	x	x	x
20	8388628	Output watts phase 2	The UPS load as a percentage of available Watts.	percent (98)	1.0	RO			x	x
21	8388629	Output watts phase 3	The UPS load as a percentage of available Watts.	percent (98)	1.0	RO				x
22	8388630	Output efficiency	The percentage of the input power going directly out to the load. Input power not going to the load is consumed by the UPS.	percent (98)	10	RO	x	x		
23	8388631	Output energy usage	The energy used by the load, starting from when the UPS was last reset to defaults.	kilowatt-hours (19)	0.10	RO	x	x		
24	8388632	Outlet group main power off delay	When this outlet group is on, it waits this delay in seconds before turning off. By setting different times here for outlets, you can sequence their turn-offs, specifying the order in which they turn off.	seconds (73)	0	RW	x	x		
25	8388633	Outlet group switched 1 power off delay	When this outlet group is on, it waits this delay in seconds before turning off. By setting different times here for outlets, you can sequence their turn-offs, specifying the order in which they turn off.	seconds (73)	0	RW	x	x		

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Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
26	8388634	Outlet group switched 2 power off delay	When this outlet group is on, it waits this delay in seconds before turning off. By setting different times here for outlets, you can sequence their turn-offs, specifying the order in which they turn off.	seconds (73)	0	RW	x	x		
27	8388635	Outlet group switched 3 power off delay	When this outlet group is on, it waits this delay in seconds before turning off. By setting different times here for outlets, you can sequence their turn-offs, specifying the order in which they turn off.	seconds (73)	0	RW	x	x		
28	8388636	Outlet group main reboot duration	The outlet waits this amount of time before turning back on after a reboot command.	seconds (73)	0	RW	x	x		
29	8388637	Outlet group switched 1 reboot duration	The outlet waits this amount of time before turning back on after a reboot command.	seconds (73)	0	RW	x	x		
30	8388638	Outlet group switched 2 reboot duration	The outlet waits this amount of time before turning back on after a reboot command.	seconds (73)	0	RW	x	x		
31	8388639	Outlet group switched 3 reboot duration	The outlet waits this amount of time before turning back on after a reboot command.	seconds (73)	0	RW	x	x		
32	8388640	Outlet group main power on delay	When this outlet group is off and receives a signal to turn on, it waits this delay in seconds before turning on. By setting different times here for outlets, you can sequence their turn-ons.	seconds (73)	0	RW	x	x		
33	8388641	Outlet group switched 1 power on delay	When this outlet group is off and receives a signal to turn on, it waits this delay in seconds before turning on. By setting different times here for outlets, you can sequence their turn-ons.	seconds (73)	0	RW	x	x		
34	8388642	Outlet group switched 2 power on delay	When this outlet group is off and receives a signal to turn on, it waits this delay in seconds before turning on. By setting different times here for outlets, you can sequence their turn-ons.	seconds (73)	0	RW	x	x		

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
35	8388643	Outlet group switched 3 power on delay	When this outlet group is off and receives a signal to turn on, it waits this delay in seconds before turning on. By setting different times here for outlets, you can sequence their turn-ons.	seconds (73)	0	RW	x	x		
36	8388644	Outlet group main minimum return runtime	How much runtime is required before the UPS will turn back on after a shutdown.	seconds (73)	0	RW	x	x		
37	8388645	Outlet group switched 1 minimum return runtime	How much runtime is required before the UPS will turn back on after a shutdown.	seconds (73)	0	RW	x	x		
38	8388646	Outlet group switched 2 minimum return runtime	How much runtime is required before the UPS will turn back on after a shutdown.	seconds (73)	0	RW	x	x		
39	8388647	Outlet group switched 3 minimum return runtime	How much runtime is required before the UPS will turn back on after a shutdown.	seconds (73)	0	RW	x	x		
40	8388648	Outlet group main load shed runtime remaining	When the Runtime remaining is less than or equal to this value, the outlet will turn off.	seconds (73)	0	RW	x	x		
41	8388649	Outlet group switched 1 load shed runtime remaining	When the Runtime remaining is less than or equal to this value, the outlet will turn off.	seconds (73)	0	RW	x	x		
42	8388650	Outlet group switched 2 load shed runtime remaining	When the Runtime remaining is less than or equal to this value, the outlet will turn off.	seconds (73)	0	RW	x	x		
43	8388651	Outlet group switched 3load shed runtime remaining	When the Runtime remaining is less than or equal to this value, the outlet will turn off.	seconds (73)	0	RW	x	x		

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
44	8388652	Outlet group main load shed time on battery	The time on battery that will cause the outlet to turn off.	seconds (73)	0	RW	x	x		
45	8388653	Outlet group switched 1 load shed time on battery	The time on battery that will cause the outlet to turn off.	seconds (73)	0	RW	x	x		
46	8388654	Outlet group switched 2 load shed time on battery	The time on battery that will cause the outlet to turn off.	seconds (73)	0	RW	x	x		
47	8388655	Outlet group switched 3 load shed time on battery	The time on battery that will cause the outlet to turn off.	seconds (73)	0	RW	x	x		
48	8388656	Output upper limit	This is the upper limit of the acceptable voltage. The "upper transfer point" (highest voltage load will see).	volts (5)	0	RW	x	x	x	x
49	8388657	Output lower limit	This is the lower limit of the acceptable voltage. The "lower transfer point" (lowest voltage load will see).	volts (5)	0	RW	x	x	x	x
50	8388658	Bypass upper limit	When operating in bypass, this is the highest voltage the UPS will supply to the connected load.	volts (5)	0	RW		x	x	x
51	8388659	Bypass lower limit	When operating in bypass, this is the lowest voltage the UPS will supply to the connected load.	volts (5)	0	RW		x	x	x
52	8388660	Low Battery duration	For a UPS on battery, this defines a runtime remaining threshold, below which a low battery condition is triggered on the UPS. For example, if the Low Battery Duration is set to ten minutes and the UPS predicted runtime remaining reaches ten minutes or below, a low battery condition is triggered. If input power is not restored to the UPS, it will turn off when the battery has exhausted.	seconds (73)	0	RW	x	x	x	x

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
53	8388661	Basic low battery duration	For a UPS on battery, this defines a runtime remaining threshold, below which a low battery condition is triggered on the UPS. The UPS will then: • Display the low battery notification on the UPS display. • Send the low battery notification from the UPS to connected devices via the simple signaling cable. If input power is not restored to the UPS, it will turn off when the battery has exhausted. • This duration is available for SMT, SMX, SRC, SURTD, and SRT Smart- UPS models only.	seconds (73)	0	RW	x	x	x	x
54	8388662	Sleep time	Defines how long the UPS keeps its output power turned off when you issue a UPS/Outlet Group Sleep command. When the UPS/Outlet Group turns off, it will turn back on following the Sleep Time defined here, plus the Return Time or Power On Delay for Outlet Groups. If utility power has not been restored at this point, the UPS will wait until it is restored to turn back on.	hours (71)	0.0	RW	x	x	x	x
55	8388663	Shutdown Delay	During a UPS shutdown this is the time the UPS waits before shutting off the output.	seconds (73)	0	RW				x
56	8388664	Minimum return capacity	Minimum percentage battery capacity before the UPS will repower the load after a shutdown.	percent (98)	0	RW				x
57	8388665	Return Delay	After a UPS shutdown, this is the time the UPS waits before turning power back on to the load.	seconds (73)	0	RW				x

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
58	8388666	Maximum required delay	Maximum required delay required for shutdown of the loads. This is parameter used for older model UPSs (those without outlet groups) to ensure that the load power is not turned off before the load has sufficient time to shutdown gracefully.	minutes (72)	0	RO				x
59	8388667	Bypass input frequency	Measured frequency on the bypass input for separate bypass feed.	hertz (27)	1.0	RO		x	x	x
60	8388668	Bypass input voltage 1	The AC voltage (VAC) used when the UPS is in bypass mode.

This option is not available for all UPS devices. | volts (5) | 1.0 | RO | | | | x |
| 61 | 8388669 | Bypass input voltage 2 | The AC voltage (VAC) used when the UPS is in bypass mode.

This option is not available for all UPS devices. | volts (5) | 1.0 | RO | | | | x |
| 62 | 8388670 | Bypass input voltage 3 | The AC voltage (VAC) used when the UPS is in bypass mode.

This option is not available for all UPS devices. | volts (5) | 1.0 | RO | | | | x |
63	8388671	Positive battery voltage	Measured battery voltage - positive battery bus. Or the battery voltage if there is no negative bus.	volts (5)	1.0	RO	x	x	x	x
64	8388672	Negative battery voltage	Measured battery voltage - negative battery bus.	volts (5)	1.0	RO		x		
65	8388673	Nominal battery voltage	The rated voltage capacity of the UPS batteries; the DC voltage that the batteries are rated to supply when the UPS uses its battery for output power.	volts (5)	0.0	RO				x
66	8388674	Battery state of charge	The percentage of the UPS battery capacity that is available to support the attached equipment.	percent (98)	1.0	RO	x	x	x	x
67	8388675	Battery current	The current being output from the battery.	amperes (3)	1.0	RO				x
68	8388676	Number of external batteries	The number of batteries, excluding built-in batteries, that the UPS has.	no-units (95)	0	RO				x

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
69	8388677	Controlled Early Shutdown Time On Battery	Controlled early shutdown for when on battery lasts longer than the specified time.	no-units (95)	0	RW				x
70	8388678	Controlled Early Shutdown Runtime Remaining	Controlled early shutdown for when runtime remaining is less than the specified time.	no-units (95)	0	RW				x
71	8388679	Controlled Early Shutdown Battery Capacity	Controlled early shutdown for when the battery capacity is less than the specified value.	no-units (95)	0	RW				x
72	8388680	Controlled Early Shutdown Load Percentage	Controlled early shutdown for when the load percentage is less than the specified value.	no-units (95)	0	RW				x
73	8388681	UIO probe 1 temperature	The temperature sensor value.	degrees-Celsius (62)	1.0	RO		**		
74	8388682	UIO probe 1 humidity	The humidity sensor value.	percent (98)	1	RO		**		
75	8388683	UIO probe 1 temperature maximum	If this sensor threshold for the maximum temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		**		
76	8388684	UIO probe 1 temperature high	If this sensor threshold for the high temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		**		
77	8388685	UIO probe 1 temperature low	If this sensor threshold for the low temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		**		
78	8388686	UIO probe 1 temperature minimum	If this sensor threshold for the minimum temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		**		

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
79	8388687	UIO probe 1 temperature hysteresis	This value specifies how far above or below a threshold the temperature must return to clear a threshold violation. For Maximum and High threshold violations, the clearing point is the threshold minus the hysteresis. For Minimum and Low threshold violations, the clearing point is the threshold plus the hysteresis.	degrees-Celsius (62)	0	RW			**	
80	8388688	UIO probe 1 humidity maximum	If this sensor threshold for the maximum humidity is exceeded, an alarm occurs.	percent (98)	0	RW			**	
81	8388689	UIO probe 1 humidity high	If this sensor threshold for the high humidity is exceeded, an alarm occurs.	percent (98)	0	RW			**	
82	8388690	UIO probe 1 humidity low	If this sensor threshold for the low humidity is exceeded, an alarm occurs.	percent (98)	0	RW			**	
83	8388691	UIO probe 1 humidity minimum	If this sensor threshold for the minimum humidity is exceeded, an alarm occurs.	percent (98)	0	RW			**	
84	8388692	UIO probe 1 humidity hysteresis	This value specifies how far above or below a threshold the humidity must return to clear a threshold violation. For Maximum and High threshold violations, the clearing point is the threshold minus the hysteresis. For Minimum and Low threshold violations, the clearing point is the threshold plus the hysteresis.	percent (98)	0	RW			**	
85	8388693	UIO probe 1 output relay 1 delay	The number of seconds a selected alarm condition must exist before the output relay is activated. Use this setting to avoid activating an alarm for brief transient conditions. Note: Even if additional mapped alarms occur after the delay begins, the delay does not restart but continues until the output relay is activated.	seconds (73)	0	RW			**	

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
86	8388694	UIO probe 1 output relay 1 hold	The minimum number of seconds the output relay remains activated after the alarm occurs. Even if the activating alarm condition is corrected, the output relay remains activated until this time period expires.	seconds (73)	0	RW		**		
87	8388695	UIO probe 2 temperature	The temperature sensor value.	degrees-Celsius (62)	1.0	RO		‡		
88	8388696	UIO probe 2 humidity	The humidity sensor value.	percent (98)	1	RO		‡		
89	8388697	UIO probe 2 temperature maximum	If this sensor threshold for the maximum temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		‡		
90	8388698	UIO probe 2 temperature high	If this sensor threshold for the high temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		‡		
91	8388699	UIO probe 2 temperature low	If this sensor threshold for the low temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		‡		
92	8388700	UIO probe 2 temperature minimum	If this sensor threshold for the minimum temperature is exceeded, an alarm occurs.	degrees-Celsius (62)	0	RW		‡		
93	8388701	UIO probe 2 temperature hysteresis	This value specifies how far above or below a threshold the temperature must return to clear a threshold violation. For Maximum and High threshold violations, the clearing point is the threshold minus the hysteresis. For Minimum and Low threshold violations, the clearing point is the threshold plus the hysteresis.	degrees-Celsius (62)	0	RW		‡		
94	8388702	UIO probe 2 humidity maximum	If this sensor threshold for the maximum humidity is exceeded, an alarm occurs.	percent (98)	0	RW		‡		
95	8388703	UIO probe 2 humidity high	If this sensor threshold for the high humidity is exceeded, an alarm occurs.	percent (98)	0	RW		‡		

Index	BACnet ID	BACnet Name	Description	BACnet Units	COV Increment (default)	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
96	8388704	UIO probe 2 humidity low	If this sensor threshold for the low humidity is exceeded, an alarm occurs.	percent (98)	0	RW			‡	
97	8388705	UIO probe 2 humidity minimum	If this sensor threshold for the minimum humidity is exceeded, an alarm occurs.	percent (98)	0	RW			‡	
98	8388706	UIO probe 2 humidity hysteresis	This value specifies how far above or below a threshold the humidity must return to clear a threshold violation. For Maximum and High threshold violations, the clearing point is the threshold minus the hysteresis. For Minimum and Low threshold violations, the clearing point is the threshold plus the hysteresis.	percent (98)	0	RW			‡	
99	8388707	UIO probe 2 output relay 1 delay	The number of seconds a selected alarm condition must exist before the output relay is activated. Use this setting to avoid activating an alarm for brief transient conditions. Note: Even if additional mapped alarms occur after the delay begins, the delay does not restart but continues until the output relay is activated.	seconds (73)	0	RW			‡	
100	8388708	UIO probe 2 output relay 1 hold	The minimum number of seconds the output relay remains activated after the alarm occurs. Even if the activating alarm condition is corrected, the output relay remains activated until this time period expires.	seconds (73)	0	RW			‡	

** This property is available only for UPS devices with an **AP9631** or **AP9635** Network Management Card inserted in the SmartSlot of the UPS (1 Universal Input/Output port available).

‡ This property is available only for UPS devices with an **AP9631** Network Management Card inserted in the SmartSlot of the UPS (2 Universal Input/Output ports available)

Binary Value Objects

Binary value objects provide information on UPS events (alarms) and binary data properties made available via the BACnet protocol:
- The BACnet ID is formed using the BACnet object type number (binary value is 5), and the index number.
- Alarm:
  - **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 are accessible via the Building Management System used.
  - **No** indicates a UPS data point property that has a binary value, e.g. a state.
- Access values - **RO** is Read Only, **RW** is Read/Write.

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
0	20971520	Outlet group main state	The present status of the outlet group.	No	RO	x	x		
1	20971521	Outlet group switched 1 state	The present status of the outlet group.	No	RO	x	x		
2	20971522	Outlet group switched 2 state	The present status of the outlet group.	No	RO	x	x		
3	20971523	Outlet group switched 3 state	The present status of the outlet group.	No	RO	x	x		
4	20971524	Outlet group main load shed runtime remaining enable	When operating on battery and the runtime remaining is less than or equal to this value, the outlet will turn off. This enables or disables this functionality.	No	RW	x	x		
5	20971525	Outlet group switched 1 load shed runtime remaining enable	When operating on battery and the runtime remaining is less than or equal to this value, the outlet will turn off. This enables or disables this functionality.	No	RW	x	x		
6	20971526	Outlet group switched 2 load shed runtime remaining enable	When operating on battery and the runtime remaining is less than or equal to this value, the outlet will turn off. This enables or disables this functionality.	No	RW	x	x		
7	20971527	Outlet group switched 3 load shed runtime remaining enable	When operating on battery and the runtime remaining is less than or equal to this value, the outlet will turn off. This enables or disables this functionality.	No	RW	x	x		
8	20971528	Outlet group main load shed time on battery enable	When operating on battery greater than this time, the outlet will turn off. This enables or disables this functionality.	No	RW	x	x		

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
9	20971529	Outlet group switched 1 load shed time on battery enable	When operating on battery greater than this time, the outlet will turn off. This enables or disables this functionality.	No	RW	x	x		
10	20971530	Outlet group switched 2 load shed time on battery enable	When operating on battery greater than this time, the outlet will turn off.	No	RW	x	x		
11	20971531	Outlet group switched 3 load shed time on battery enable	When operating on battery greater than this time, the outlet will turn off.	No	RW	x	x		
12	20971532	Outlet group main load shed skip off delay	Turn the outlet group off immediately, without waiting the number of seconds configured as Power Off Delay.	No	RW	x	x		
13	20971533	Outlet group switched 1 load shed skip off delay	Turn the outlet group off immediately, without waiting the number of seconds configured as Power Off Delay.	No	RW	x	x		
14	20971534	Outlet group switched 2 load shed skip off delay	Turn the outlet group off immediately, without waiting the number of seconds configured as Power Off Delay.	No	RW	x	x		
15	20971535	Outlet group switched 3 load shed skip off delay	Turn the outlet group off immediately, without waiting the number of seconds configured as Power Off Delay.	No	RW	x	x		
16	20971536	Outlet group main load shed stay off after power returns	Remain off when AC utility power returns.	No	RW	x	x		
17	20971537	Outlet group switched 1 load shed stay off after power returns	Remain off when AC utility power returns.	No	RW	x	x		
18	20971538	Outlet group switched 2 load shed stay off after power returns	Remain off when AC utility power returns.	No	RW	x	x		
19	20971539	Outlet group switched 3 load shed stay off after power returns	Remain off when AC utility power returns.	No	RW	x	x		
20	20971540	Outlet group switched 1 load shed overload	Turn off the outlet group when an overload occurs while on battery. This allows unnecessary loads to be shed quickly so they don't cause the UPS to shut down due to overload conditions.	No	RW	x	x		
21	20971541	Outlet group switched 2 load shed overload	Turn off the outlet group when an overload occurs while on battery. This allows unnecessary loads to be shed quickly so they don't cause the UPS to shut down due to overload conditions.	No	RW	x	x		

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
22	20971542	Outlet group switched 3 load shed overload	Turn off the outlet group when an overload occurs while on battery. This allows unnecessary loads to be shed quickly so they don't cause the UPS to shut down due to overload conditions.	No	RW	x	x		
23	20971543	Run UPS self test	Use this option to run a UPS self-test.	No	RW	x	x	x	x
24	20971544	Run UPS alarm test	Confirm that the audible alarm activates. When you initiate an audible alarm test, the UPS beeps for four seconds and the LEDs illuminate. This can be used to identify the position of the UPS in a rack with multiple UPSs.	No	RW	x	x	x	x
25	20971545	Run UPS alarm test continuous	Initiate a continuous alarm test - the UPS beeps and illuminates the LEDs until you cancel the test. This test is useful for locating a UPS.	No	RW	x	x		
26	20971546	Run UPS runtime calibration	A runtime calibration causes the UPS to recalculate its available runtime capacity based on its current load. This ensures that the runtime reported is more accurate. Because a calibration temporarily depletes the UPS batteries, you can perform a calibration only if battery capacity is at 100%. The load on your UPS must be at least 15% without fluctuating to guarantee that a calibration will be accepted.	No	RW	x	x	x	x
27	20971547	Cancel Test	Abort: Cancel the test.	No	RW	x	x		
28	20971548	Controlled Early Shutdown Time On Battery Enable	Enable/Disable controlled early shutdown for when on battery lasts longer than the specified time.	No	RW	x	x	x	x
29	20971549	Controlled Early Shutdown Runtime Remaining Enable	Enable/Disable controlled early shutdown for when runtime remaining is less than the specified time.	No	RW	x	x	x	x
30	20971550	Controlled Early Shutdown Battery Capacity Enable	Enable/Disable controlled early shutdown for when the battery capacity is less than the specified value.	No	RW	x	x	x	x
31	20971551	Controlled Early Shutdown Load Percentage Enable	Enable/Disable controlled early shutdown for when the load percentage is less than the specified value.	No	RW	x	x	x	x
32	20971552	Controlled Early Shutdown Stay Off After Power Return Enable	Enable/Disable controlled early shutdown stay off after power returns.	No	RW	x	x	x	x

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
33	20971553	UIO probe 1 temperature maximum enable	Enable or disable the maximum temperature threshold for this sensor.	No	RW			**	
34	20971554	UIO probe 1 temperature high enable	Enable or disable the high temperature threshold for this sensor.	No	RW			**	
35	20971555	UIO probe 1 temperature low enable	Enable or disable the low temperature threshold for this sensor.	No	RW			**	
36	20971556	UIO probe 1 temperature minimum enable	Enable or disable the minimum temperature threshold for this sensor.	No	RW			**	
37	20971557	UIO probe 1 humidity maximum enable	Enable or disable the maximum humidity threshold for this sensor.	No	RW			**	
38	20971558	UIO probe 1 humidity high enable	Enable or disable the high humidity threshold for this sensor.	No	RW			**	
39	20971559	UIO probe 1 humidity low enable	Enable or disable the low humidity threshold for this sensor.	No	RW			**	
40	20971560	UIO probe 1 humidity minimum enable	Enable or disable the minimum humidity threshold for this sensor.	No	RW			**	
41	20971561	UIO probe 1 contact 1enable	Enable or disable this input contact. When disabled, the contact will generate no alarm even when it is in the abnormal position.	No	RW			**	
42	20971562	UIO probe 1 contact 2 enable	Enable or disable this input contact. When disabled, the contact will generate no alarm even when it is in the abnormal position.	No	RW			**	
43	20971563	UIO probe 1 input contact 1 state	Closed or Open, indicating the current state of this input contact.	No	RO			**	
44	20971564	UIO probe 1 input contact 2	Closed or Open, indicating the current state of this input contact.	No	RO			**	
45	20971565	UIO probe 1 input contact 1 normal state	Closed or Open, indicating the normal (non-alarm) state of this input contact.	No	RW			**	
46	20971566	UIO probe 1 input contact 2 normal state	Closed or Open, indicating the normal (non-alarm) state of this input contact.	No	RW			**	

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Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
47	20971567	UIO probe 1 contact 1 severity	Configure the severity of the alarm that the abnormal state of this input contact will generate, either Warning or Critical.	No	RW		**		
48	20971568	UIO probe 1 contact 2 severity	Configure the severity of the alarm that the abnormal state of this input contact will generate, either Warning or Critical.	No	RW		**		
49	20971569	UIO probe 1 output relay 1 state	Closed or Open, indicating the current state of this output relay.	No	RO		**		
50	20971570	UIO probe 1 output relay 1 normal state	Closed or Open, indicating the normal state of this output relay.	No	RW		**		
51	20971571	UIO probe 2 temperature maximum enable	Enable or disable the maximum temperature threshold for this sensor.	No	RW		‡		
52	20971572	UIO probe 2 temperature high enable	Enable or disable the high temperature threshold for this sensor.	No	RW		‡		
53	20971573	UIO probe 2 temperature low enable	Enable or disable the low temperature threshold for this sensor.	No	RW		‡		
54	20971574	UIO probe 2 temperature minimum enable	Enable or disable the minimum temperature threshold for this sensor.	No	RW		‡		
55	20971575	UIO probe 2 humidity maximum enable	Enable or disable the maximum humidity threshold for this sensor.	No	RW		‡		
56	20971576	UIO probe 2 humidity high enable	Enable or disable the high humidity threshold for this sensor.	No	RW		‡		
57	20971577	UIO probe 2 humidity low enable	Enable or disable the low humidity threshold for this sensor.	No	RW		‡		
58	20971578	UIO probe 2 humidity minimum enable	Enable or disable the minimum humidity threshold for this sensor.	No	RW		‡		
59	20971579	UIO probe 2 contact 1enable	Enable or disable this input contact. When disabled, the contact will generate no alarm even when it is in the abnormal position.	No	RW		‡		
60	20971580	UIO probe 2 contact 2 enable	Enable or disable this input contact. When disabled, the contact will generate no alarm even when it is in the abnormal position.	No	RW		‡		

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
61	20971581	UIO probe 2 input contact 1 state	Closed or Open, indicating the current state of this input contact.	No	RO	‡			
62	20971582	UIO probe 2 input contact 2 state	Closed or Open, indicating the current state of this input contact.	No	RO	‡			
63	20971583	UIO probe 2 input contact 1 normal state	Closed or Open, indicating the normal (non-alarm) state of this input contact.	No	RW	‡			
64	20971584	UIO probe 2 input contact 2 normal state	Closed or Open, indicating the normal (non-alarm) state of this input contact.	No	RW	‡			
65	20971585	UIO probe 2 contact 1 severity	Configure the severity of the alarm that the abnormal state of this input contact will generate, either Warning or Critical.	No	RW	‡			
66	20971586	UIO probe 2 contact 2 severity	Configure the severity of the alarm that the abnormal state of this input contact will generate, either Warning or Critical.	No	RW	‡			
67	20971587	UIO probe 2 output relay 1 state	Closed or Open, indicating the current state of this output relay.	No	RO	‡			
68	20971588	UIO probe 2 output relay 1 normal state	Closed or Open, indicating the normal state of this output relay.	No	RW	‡			
69	20971589	LostUPSComm	Lost the local network management interface-to-UPS communication.	Yes	RO	-	-	-	-
70	20971590	Overload	The load exceeds 100% of rated capacity.	Yes	RO	-	-	-	-
71	20971591	SelfTestFailed	Self-Test Failed	Yes	RO	-	-	-	-
72	20971592	LowBattery	The battery power is too low to support the load; if there is a power outage, the UPS will be shut down immediately.	Yes	RO	-	-	-	-
73	20971593	OnBattery	On battery power in response to an input power problem.	Yes	RO	-	-	-	-
74	20971594	LowInputVoltage	Compensating for a low input voltage.	Yes	RO	-	-	-	-
75	20971595	HighInputVoltage	Compensating for a high input voltage.	Yes	RO	-	-	-	-
76	20971596	MainInputBad	Main input bad.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
77	20971597	LowBattery2	The battery power is too low to continue to support the load; the UPS will shut down if input power does not return to normal soon.	Yes	RO	-	-	-	-
78	20971598	OutputOff	The output power is turned off.	Yes	RO	-	-	-	-
79	20971599	ShutdownWaitingForPowerReturn	Turned off for a defined period of time in response to a software command, or off while waiting for input power to return to normal.	Yes	RO	-	-	-	-
80	20971600	BadBattery	At least one battery is inoperable.	Yes	RO	-	-	-	-
81	20971601	InBypassInternalHardwareCondition	In bypass in response to an internal hardware condition.	Yes	RO	-	-	-	-
82	20971602	InBypassFrontPanelSoftware	In bypass in response to the UPS front-panel or a user-initiated software command, typically for maintenance.	Yes	RO	-	-	-	-
83	20971603	InBypassBypassSwitch	In bypass in response to the bypass switch at the UPS, typically for maintenance.	Yes	RO	-	-	-	-
84	20971604	BypassPowerSupplyProblem	A bypass power supply not fully functional.	Yes	RO	-	-	-	-
85	20971605	FanProblem	A base module fan not operating properly.	Yes	RO	-	-	-	-
86	20971606	LostBattComm	Lost communication with the battery packs.	Yes	RO	-	-	-	-
87	20971607	RuntimeCalStarted	Runtime Calibration started.	Yes	RO	-	-	-	-
88	20971608	GracefulShutdownInProgress	Graceful shutdown in progress.	Yes	RO	-	-	-	-
89	20971609	AvrRelayInoperable	An automatic voltage regulator (AVR) relay is inoperable.	Yes	RO	-	-	-	-
90	20971610	AbnormaOutputVoltage	An abnormal output voltage exists.	Yes	RO	-	-	-	-
91	20971611	BatteryChargerInoperable	A battery charger is inoperable.	Yes	RO	-	-	-	-
92	20971612	InternalBattTempHigh	The internal battery temperature exceeds the critical threshold.	Yes	RO	-	-	-	-
93	20971613	BatteryDisconnected	The battery is not installed properly.	Yes	RO	-	-	-	-
94	20971614	OutletGroupOff	The power for the outlet group is now turned off.	Yes	RO	-	-	-	-
95	20971615	DcImbalance	An inverter DC imbalance exists.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
96	20971616	MainRelayInoperable	A main relay is inoperable.	Yes	RO	-	-	-	-
97	20971617	BypassRelayInoperable	A bypass relay is inoperable.	Yes	RO	-	-	-	-
98	20971618	LostUPSCommOnBat	Lost the management interface-to-UPS communication while the UPS was on battery.	Yes	RO	-	-	-	-
99	20971619	PFCInputRelayInoperable	A power factor correction input relay is inoperable.	Yes	RO	-	-	-	-
100	20971620	UPSTempCritical	The internal UPS temperature exceeds the critical threshold.	Yes	RO	-	-	-	-
101	20971621	BattVoltageHigh	The battery voltage exceeds the nominal battery voltage rating.	Yes	RO	-	-	-	-
102	20971622	EepromInoperable	An EEPROM is inoperable.	Yes	RO	-	-	-	-
103	20971623	BattTempSensorIssue	There is an issue with the battery temperature sensor.	Yes	RO	-	-	-	-
104	20971624	BattBusSoftStartInoperable	A battery bus soft start is inoperable.	Yes	RO	-	-	-	-
105	20971625	BattVoltageSenseIssue	There is an issue with the battery voltage sense circuit.	Yes	RO	-	-	-	-
106	20971626	OutputShortCircuit	The output has a short-circuit.	Yes	RO	-	-	-	-
107	20971627	OutputRelayInoperable	An output relay is inoperable.	Yes	RO	-	-	-	-
108	20971628	PfcInoperable	A power factor correction is inoperable.	Yes	RO	-	-	-	-
109	20971629	DcBusOvervoltage	A DC bus overvoltage exists.	Yes	RO	-	-	-	-
110	20971630	InverterInoperable	An inverter is inoperable.	Yes	RO	-	-	-	-
111	20971631	OvercurrentTrip	Overcurrent (Bang bang trip)	Yes	RO	-	-	-	-
112	20971632	BypassPfcRelayInoperable	Bypass PFC relay is inoperable.	Yes	RO	-	-	-	-
113	20971633	DcBusSoftStartInoperable	DC bus soft start is inoperable.	Yes	RO	-	-	-	-
114	20971634	GreenRelayCondition	Green relay condition.	Yes	RO	-	-	-	-
115	20971635	DcOutputCondition	DC output condition.	Yes	RO	-	-	-	-
116	20971636	DcBusCondition	DC bus converter condition.	Yes	RO	-	-	-	-
117	20971637	PowerSystemSensorCondition	Power system sensor condition.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
118	20971638	AdConverterInoperable	An analog-to-digital (A/D) converter is inoperable.	Yes	RO	-	-	-	-
119	20971639	LogicPowerSupplyInoperable	A logic power supply is inoperable.	Yes	RO	-	-	-	-
120	20971640	BackfeedRelayInoperable	A backfeed relay is inoperable.	Yes	RO	-	-	-	-
121	20971641	UpsInternalCommError	An internal UPS communication detected error exists.	Yes	RO	-	-	-	-
122	20971642	FirmwareTransferToUpsDidNotSucceed	Firmware transfer to UPS did not succeed.	Yes	RO	-	-	-	-
123	20971643	UpsInvalidFirmware	UPS has no valid firmware.	Yes	RO	-	-	-	-
124	20971644	WarrantyExpiringSoon	Warranty expiring soon. Contact APC.	Yes	RO	-	-	-	-
125	20971645	TechnicalCheckRecommended	Technical check recommended. Contact APC.	Yes	RO	-	-	-	-
126	20971646	BatteryNearEndOfLife	Battery near end of life. Order replacement battery.	Yes	RO	-	-	-	-
127	20971647	BatteryMeasureLifeNearEnd	Battery measured life near end. Order replacement battery.	Yes	RO	-	-	-	-
128	20971648	BatteryLifeExceeded	Battery life exceeded. Order replacement battery.	Yes	RO	-	-	-	-
129	20971649	BatteryTempWarning	The battery temperature exceeds the warning threshold.	Yes	RO	-	-	-	-
130	20971650	BatteryGeneralCondition	Battery general condition.	Yes	RO	-	-	-	-
131	20971651	BatteryCommLost	Battery communication lost.	Yes	RO	-	-	-	-
132	20971652	BatteryPackDisconnected	Battery pack disconnected.	Yes	RO	-	-	-	-
133	20971653	BatteryFirmwareMismatch	Battery firmware mismatch.	Yes	RO	-	-	-	-
134	20971654	BatteryTempSensorNotOperating	Battery temperature sensor is not operating correctly.	Yes	RO	-	-	-	-
135	20971655	LocalDisplayButtonIssue	A local display button issue exists.	Yes	RO	-	-	-	-
136	20971656	UpsNeedsFactorySetup	UPS needs factory setup.	Yes	RO	-	-	-	-
137	20971657	EpoActive	Emergency Power Off (EPO) active.	Yes	RO	-	-	-	-
138	20971658	FirmwareMismatch	A firmware mismatch exists.	Yes	RO	-	-	-	-
139	20971659	OscillatorInoperable	An oscillator is inoperable.	Yes	RO	-	-	-	-
140	20971660	MeasureMismatch	A measurement mismatch exists.	Yes	RO	-	-	-	-
141	20971661	GeneralSubsystemCondition	A general subsystem condition exists.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
142	20971662	LogicPowerSuppyRelayCondition	A logic power supply relay condition exists.	Yes	RO	-	-	-	-
143	20971663	PowerSystemCondition	Power system condition.	Yes	RO	-	-	-	-
144	20971664	MaintenanceModeForFan	In maintenance mode for fan.	Yes	RO	-	-	-	-
145	20971665	ServiceBypassInBypass	The service bypass has been commanded to bypass.	Yes	RO	-	-	-	-
146	20971666	ServiceBypassDisconnected	The service bypass is disconnected.	Yes	RO	-	-	-	-
147	20971667	ServiceBypassOutputCondition	The service bypass has an output condition.	Yes	RO	-	-	-	-
148	20971668	ServiceBypassInternalCondition	The service bypass has an internal condition.	Yes	RO	-	-	-	-
149	20971669	InTemporaryBypass	In temporary bypass.	Yes	RO	-	-	-	-
150	20971670	PowerModuleInoperable	A power module is inoperable.	Yes	RO	-	-	-	-
151	20971671	BatteryInoperable	A battery is inoperable.	Yes	RO	-	-	-	-
152	20971672	LoadKvaAlarmViolation	A load (kVA) alarm threshold violation exists.	Yes	RO	-	-	-	-
153	20971673	InputVoltageFreqPreventsBypass	An input voltage or frequency problem prevents switching to bypass mode.	Yes	RO	-	-	-	-
154	20971674	BypassDueToInternalHardwareCondition	In bypass in response to an internal hardware condition.	Yes	RO	-	-	-	-
155	20971675	BypassDueToOverload	In bypass in response to an overload.	Yes	RO	-	-	-	-
156	20971676	BypassDueToMaintenance	In bypass for maintenance.	Yes	RO	-	-	-	-
157	20971677	SystemFanInoperable	System level fan is inoperable.	Yes	RO	-	-	-	-
158	20971678	RuntimeAlarmViolation	A runtime alarm threshold violation exists.	Yes	RO	-	-	-	-
159	20971679	ExtendedRunFrameInoperable	An extended run frame is not operating correctly.	Yes	RO	-	-	-	-
160	20971680	OutputVoltageOutsideLimits	The output voltage is outside its defined limits.	Yes	RO	-	-	-	-
161	20971681	PhaseSyncCondition	A phase synchronization condition exists.	Yes	RO	-	-	-	-
162	20971682	BatteryNotInstalledProperly	The battery is not installed properly.	Yes	RO	-	-	-	-
163	20971683	BatteryVoltageExceedsNominal	The battery voltage exceeds the nominal battery voltage rating.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
164	20971684	SiteWiringFault	A site wiring fault exists.	Yes	RO	-	-	-	-
165	20971685	NumBatteriesIncreased	The number of batteries increased.	Yes	RO	-	-	-	-
166	20971686	NumBatteryDecreased	The number of batteries decreased.	Yes	RO	-	-	-	-
167	20971687	ExtendedRunFramesIncreased	The number of extended run frames increased.	Yes	RO	-	-	-	-
168	20971688	ExtendedRunFramesDecreased	The number of extended run frames decreased.	Yes	RO	-	-	-	-
169	20971689	ExternalSwitchQ001Closed	The external Switch Gear Q001 has closed.	Yes	RO	-	-	-	-
170	20971690	ExternalSwitchQ002Closed	The external Switch Gear Q002 has closed.	Yes	RO	-	-	-	-
171	20971691	ExternalSwitchQ003Closed	The external Switch Gear Q003 has closed.	Yes	RO	-	-	-	-
172	20971692	ExternalSwitchQ004Closed	The external Switch Gear Q004 has closed.	Yes	RO	-	-	-	-
173	20971693	ExternalSwitchQ005Closed	The external Switch Gear Q005 has closed.	Yes	RO	-	-	-	-
174	20971694	ExternalSwitchQ006Closed	The external Switch Gear Q006 has closed.	Yes	RO	-	-	-	-
175	20971695	ExternalSwitchQ007Closed	The external Switch Gear Q007 has closed.	Yes	RO	-	-	-	-
176	20971696	ExternalSwitchQ008Closed	The external Switch Gear Q008 has closed.	Yes	RO	-	-	-	-
177	20971697	ExternalSwitchQ009Closed	The external Switch Gear Q009 has closed.	Yes	RO	-	-	-	-
178	20971698	ExternalSwitchQ0010Closed	The external Switch Gear Q010 has closed.	Yes	RO	-	-	-	-
179	20971699	EpoActive2	An emergency power off (EPO) switch is activated.	Yes	RO	-	-	-	-
180	20971700	StaticBypassSwitchInoperable	A static bypass switch module is inoperable.	Yes	RO	-	-	-	-
181	20971701	SystemStartupConfigProblem	There is a problem with the system start up configuration.	Yes	RO	-	-	-	-
182	20971702	PsuInoperable	A power supply unit (PSU) is inoperable.	Yes	RO	-	-	-	-
183	20971703	WeakBattery	A weak battery exists.	Yes	RO	-	-	-	-
184	20971704	HighBatteryTemperature	A high battery temperature exists.	Yes	RO	-	-	-	-
185	20971705	InternalMechanicalBypass	An internal mechanical bypass exists.	Yes	RO	-	-	-	-
186	20971706	LostParallelRedundancy	Lost parallel redundancy.	Yes	RO	-	-	-	-
187	20971707	ParallelCommCondition1	A parallel bus communication condition exists on cable 1.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
188	20971708	ParalletlCommCondition2	A parallel bus communication condition exists on cable 2.	Yes	RO	-	-	-	-
189	20971709	AuxCommCondition	An auxiliary bus communication condition exists.	Yes	RO	-	-	-	-
190	20971710	ParallelTerminationCondition1	A parallel bus termination condition exists on cable 1.	Yes	RO	-	-	-	-
191	20971711	ParallelTerminationCondition2	A parallel bus termination condition exists on cable 2.	Yes	RO	-	-	-	-
192	20971712	AuxTerminationCondition	An auxiliary bus termination condition exists.	Yes	RO	-	-	-	-
193	20971713	NoMasterPresent	A no master present condition exists in the parallel system.	Yes	RO	-	-	-	-
194	20971714	ParallelOverload	An overload condition on a parallel unit.	Yes	RO	-	-	-	-
195	20971715	ParallelConfigCondition	A parallel configuration condition exists.	Yes	RO	-	-	-	-
196	20971716	ChangeDustFilterSoon	The dust filter must be changed soon. Contact APC.	Yes	RO	-	-	-	-
197	20971717	ChangeDustFilterNow	The dust filter must be changed immediately. Contact APC.	Yes	RO	-	-	-	-
198	20971718	UioInputContact1Critical1	A critical level issue exists for Environmental Monitor for probe 1, input contact 1 ({name} at {location}).	Yes	RO	-	-	-	-
199	20971719	UioInputContact1Critical2	A critical level issue exists for Environmental Monitor for probe 2, input contact 1 ({name} at {location}).	Yes	RO	-	-	-	-
200	20971720	UioInputContact2Critical1	A critical level issue exists for Environmental Monitor for probe 1, input contact 2 ({name} at {location}).	Yes	RO	-	-	-	-
201	20971721	UioInputContact2Critical2	A critical level issue exists for Environmental Monitor for probe 2, input contact 2 ({name} at {location}).	Yes	RO	-	-	-	-
202	20971722	UioTempMinThresholdViolation1	A minimum temperature threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
203	20971723	UioTempMinThresholdViolation2	A minimum temperature threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
204	20971724	UioTempLowThresholdViolation1	A low temperature threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
205	20971725	UioTempLowThresholdViolation2	A low temperature threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
206	20971726	UioTempHighThresholdViolation1	A high temperature threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
207	20971727	UioTempHighThresholdViolation2	A high temperature threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
208	20971728	UioTempMaxThresholdViolation1	A maximum temperature threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
209	20971729	UioTempMaxThresholdViolation2	A maximum temperature threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
210	20971730	UioHumidMinThresholdViolation1	A minimum humidity threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
211	20971731	UioHumidMinThresholdViolation2	A minimum humidity threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
212	20971732	UioHumidLowThresholdViolation1	A low humidity threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
213	20971733	UioHumidLowThresholdViolation2	A low humidity threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting under {threshold}.	Yes	RO	-	-	-	-
214	20971734	UioHumidHighThresholdViolation1	A high humidity threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-

Index	BACnet ID	BACnet Name	Description	Alarm	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
215	20971735	UioHumidHighThresholdViolation2	A high humidity threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
216	20971736	UioHumidMaxThresholdViolation1	A maximum humidity threshold violation exists for external Environmental Monitor sensor 1 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
217	20971737	UioHumidMaxThresholdViolation2	A maximum humidity threshold violation exists for external Environmental Monitor sensor 2 ({name} at {location}) reporting over {threshold}.	Yes	RO	-	-	-	-
218	20971738	UioLostComm1	Lost the local network management interface-to-external Environmental Monitoring Card communication on port 1.	Yes	RO	-	-	-	-
219	20971739	UioLostComm2	Lost the local network management interface-to-external Environmental Monitoring Card communication on port 2.	Yes	RO	-	-	-	-
220	20971740	UioCriticalFault	A critical level issue exists for integrated Environmental Monitor input contact ({name} at {location}).	Yes	RO	-	-	-	-
221	20971741	UioOutputRelayAbnormalState1	Transition to abnormal state for Integrated Environmental Monitor Output Relay ({name} at probe 1).	Yes	RO	-	-	-	-
222	20971742	UioOutputRelayAbnormalState2	Transition to abnormal state for Integrated Environmental Monitor Output Relay ({name} at probe 2).	Yes	RO	-	-	-	-
223	20971743	UioInputContact1Warning1	A warning level issue exists for Environmental Monitor probe 1, input contact 1 ({name} at {location}).	Yes	RO	-	-	-	-
224	20971744	UioInputContact1Warning2	A warning level issue exists for Environmental Monitor for probe2, input contact 1 ({name} at {location}).	Yes	RO	-	-	-	-
225	20971745	UioInputContact2Warning1	A warning level issue exists for Environmental Monitor for probe 1, input contact 2 ({name} at {location}).	Yes	RO	-	-	-	-
226	20971746	UioInputContact2Warning2	A warning level issue exists for Environmental Monitor for probe 2, input contact 2 ({name} at {location}).	Yes	RO	-	-	-	-

** This property is available only for UPS devices with an **AP9631** or **AP9635** Network Management Card inserted in the SmartSlot of the UPS (1 Universal Input/Output port available).

‡ This property is available only for UPS devices with an **AP9631** Network Management Card inserted in the SmartSlot of the UPS (2 Universal Input/Output ports available)

Character String Value Objects

Character string value objects provide information on UPS data properties that return character strings via the BACnet protocol:
- The BACnet ID is formed using the BACnet object type number (character string value is 40) and the index number.
- Access values - **RO** is Read Only, **RW** is Read/Write.
- Maximum Characters – the maximum number of characters that can be returned for a UPS property.

Index	BACnet ID	BACnet Name	Description	Access	Maximum Characters	SMT/SMX/SRT	SURT	SURTD	All other UPS models
0	167772160	UPS model	The UPS model name.	RO	24	x	x	x	x
1	167772161	UPS serial number	The UPS serial number.	RO	16	x	x	x	x
2	167772162	UPS manufacture date	The UPS manufacture date.	RO	16	x	x	x	x
3	167772163	User-specified battery replacement date	The battery replacement date set by the user.	RO	16	x	x	x	x
4	167772164	UPS apparent power rating	The rated apparent full power.	RO	16	x	x		
5	167772165	UPS real power rating	The rated real full power.	RO	16	x	x		
6	167772166	UPS external battery SKU	The replacement battery pack SKU for the external battery pack or internal pack if there is no capability to support external batteries.	RO	16	x	x		
7	167772167	UPS SKU	The UPS SKU number.	RO	16	x	x		
8	167772168	UPS Firmware Revision	The revision number of the UPS firmware.	RO	16	x	x	x	x
9	167772169	UPS Internal Battery SKU	The replacement battery pack SKU for the internal battery pack (or the system, if there is only one type).	RO	16	x	x		
10	167772170	Outlet group main name	User-specified outlet group name.	RW	16	x	x	x	x
11	167772171	Outlet group switched 1 name	User-specified outlet group name.	RW	16	x	x	x	x
12	167772172	Outlet group switched 2 name	User-specified outlet group name.	RW	16	x	x	x	x
13	167772173	Outlet group switched 3 name	User-specified outlet group name.	RW	16	x	x	x	x

Index	BACnet ID	BACnet Name	Description	Access	Maximum Characters	SMT/SMX/SRT	SURT	SURTD	All other UPS models
14	167772174	Output frequency setting	The frequency in Hertz (Hz) of the output voltage.	RO	0		x		
15	167772175	UPS name	A user-specified name to identify the UPS.	RW	24	x	x	x	x
16	167772176	Next battery replacement date	Among the installed UPS battery cartridges, this is the earliest recommended date for replacing your batteries.	RO	16	x	x		
17	167772177	Self test result	The result of the most recent UPS self-test (passed, failed, or unavailable) and the date of that test. A self-test cannot be started if a runtime calibration is in progress or the batteries are not sufficiently charged.	RO	100	x	x	x	x
18	167772178	Runtime calibration result	The result of the most recent Runtime Calibration. A runtime calibration recalculates your remaining runtime. The UPS requires the batteries to be fully charged and the UPS to be sufficiently loaded before it will start a runtime calibration.	RO	100	x	x	x	x
19	167772179	UIO probe 1 temperature and humidity name	A name you specify for this sensor, usually describing its purpose. The maximum length is 20 characters.	RW	20		**		
20	167772180	UIO probe 1 temperature and humidity location	This sensor's physical location. The maximum length is 20 characters.	RW	20		**		
21	167772181	UIO probe 1 contact 1 name	A name you specify for this input contact, usually describing its purpose. The maximum length is 20 characters.	RW	20		**		
22	167772182	UIO probe 1 contact 2 name	A name you specify for this input contact, usually describing its purpose. The maximum length is 20 characters.	RW	20		**		
23	167772183	UIO probe 1 contact 1 location	This input contact's physical location. The maximum length is 20 characters.	RW	20		**		
24	167772184	UIO probe 1 contact 2 location	This input contact's physical location. The maximum length is 20 characters.	RW	20		**		
25	167772185	UIO probe 1 output relay 1 name	A name you specify for this output relay, usually describing its purpose. The maximum length is 20 characters.	RW	20		**		
26	167772186	UIO probe 1 output relay 1 location	This physical location of the output relay. The maximum length is 20 characters.	RW	20		**		
27	167772187	UIO probe 2 temperature and humidity name	A name you specify for this sensor, usually describing its purpose. The maximum length is 20 characters.	RW	20		‡		

Index	BACnet ID	BACnet Name	Description	Access	Maximum Characters	SMT/SMX/SRT	SURT	SURTD	All other UPS models
28	167772188	UIO probe 2 temperature and humidity location	This sensor's physical location. The maximum length is 20 characters.	RW	20		‡		
29	167772189	UIO probe 2 contact 1 name	A name you specify for this input contact, usually describing its purpose. The maximum length is 20 characters.	RW	20		‡		
30	167772190	UIO probe 2 contact 2 name	A name you specify for this input contact, usually describing its purpose. The maximum length is 20 characters.	RW	20		‡		
31	167772191	UIO probe 2 contact 1 location	This input contact's physical location. The maximum length is 20 characters.	RW	20		‡		
32	167772192	UIO probe 2 contact 2 location	This input contact's physical location. The maximum length is 20 characters.	RW	20		‡		
33	167772193	UIO probe 2 output relay 1 name	A name you specify for this output relay, usually describing its purpose. The maximum length is 20 characters.	RW	20		‡		
34	167772194	UIO probe 2 output relay 1 location	This physical location of the output relay. The maximum length is 20 characters.	RW	20		‡		

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Multi-State Value Objects

Multi-state value objects provide information on UPS data properties that return a list of options via the BACnet protocol:
- The BACnet ID is formed using the BACnet object type number (multi-state value is 19) and the index number.
- Options – all possible values that can be returned for a UPS multi-value property.
- Access values - **RO** is Read Only, **RW** is Read/Write.

Index	BACnet ID	BACnet Name	Description	Options	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
0	79691776	Last battery transfer	The cause of the last switch to battery operation. Excludes Self-Test.	none, unknown, high input voltage, low input voltage, distorted input, rapid change input voltage, high input frequency, low input frequency, freq and/or phase difference, test, general error, power system error, battery system error, distorted inverter output, epo interface, graceful shutdown	RO	x	x	x	x
1	79691777	Rated Output voltage setting	The Rated Output Voltage is the AC voltage the UPS supplies to the load, while the UPS is on battery.	100, 120, 200, 208, 220, 230, 240, 380, 400, 415, 480, 110, 127, Auto_120, 120/208, 120/240, 100/200, 225, 115	RO	x	x	x	x
2	79691778	Sensitivity	The Sensitivity setting changes the time the UPS takes to react to line noise. Use the Reduced and Low options to allow the UPS to accept a noisy power input for a longer time, before going on battery. Use Low when the input power is known to have a lot of noise on the line, e.g. input power supplied by a generator.	normal, reduced, low	RW	x	x	x	x
3	79691779	Audible Alarm	Allows configuration of when or if the audible alarm will occur when switching to battery power.	at power outage, at low battery, mute, never	RW	x	x	x	x
4	79691780	Self test schedule	Use this option to define when your UPS will initiate a self-test.	never, startup, every 7, every 14, startup and every 7 since test, startup and every 14 since test	RW	x	x	x	x

Index	BACnet ID	BACnet Name	Description	Options	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
5	79691781	UPS state	The mode of operation of the UPS.	unknown, online, online green, on battery, sleep, shutdown, fault, self test, calibration, bypass, low battery	RO	x	x	x	x
6	79691782	UPS Control	Control the UPS state, based on the options available.	do nothing, on immediately, on delayed, off immediately, off delayed, bypass, return from bypass, reboot immediately, reboot delayed, sleep immediately, sleep delayed	RW	x	x	x	x
7	79691783	Main Outlet Group control	Control the state of each outlet group.	do nothing, cancel, on immediately, on delayed, off immediately, off delayed, reboot immediately, reboot delayed, shutdown immediately with ac restart, shutdown delayed with ac restart	RW	x	x		
8	79691784	Switched Outlet group 1 control	Control the state of each outlet group.	do nothing, cancel, on immediately, on delayed, off immediately, off delayed, reboot immediately, reboot delayed, shutdown immediately with ac restart, shutdown delayed with ac restart	RW	x	x		
9	79691785	Switched Outlet group 2 control	Control the state of each outlet group.	do nothing, cancel, on immediately, on delayed, off immediately, off delayed, reboot immediately, reboot delayed, shutdown immediately with ac restart, shutdown delayed with ac restart	RW	x	x		
10	79691786	Switched Outlet group 3 control	Control the state of each outlet group.	do nothing, cancel, on immediately, on delayed, off immediately, off delayed, reboot immediately, reboot delayed, shutdown immediately with ac restart, shutdown delayed with ac restart	RW	x	x		
11	79691787	UIO probe 1 temperature and humidity status	The status of the sensor alarm. OK if this sensor is not reporting an alarm condition. Other options include alarm severity, or presence indicator.	not present, ok, warning, critical	RO			**	

Index	BACnet ID	BACnet Name	Description	Options	Access	SMT/SMX/SRT	SURT	SURTD	All other UPS models
12	79691788	UIO probe 1 contact status	The status of the contact. OK if this contact is not reporting an alarm condition. Other options include alarm severity, or presence indicator.	not present, ok, warning, critical	RO			**	
13	79691789	UIO probe 2 temperature and humidity status	The status of the sensor alarm. OK if this sensor is not reporting an alarm condition. Other options include alarm severity, or presence indicator.	not present, ok, warning, critical	RO			‡	
14	79691790	UIO probe 2 contact status	The status of the contact. OK if this contact is not reporting an alarm condition. Other options include alarm severity, or presence indicator.	not present, ok, warning, critical	RO			‡	

** This property is available only for UPS devices with an **AP9631** or **AP9635** Network Management Card inserted in the SmartSlot of the UPS (1 Universal Input/Output port available).

‡ This property is available only for UPS devices with an **AP9631** Network Management Card inserted in the SmartSlot of the UPS (2 Universal Input/Output ports available).

Notification Class Object

When UPS event alarms specified in the Binary Value Objects table occur, a notification is sent to the recipients in the notification class defined in the Notification Class Object.

- The BACnet ID is formed using the BACnet object type number (notification class is 15) and the index number.

Index	BACnet ID	BACnet Name	Description	Access
0	62914560	DefaultNotifier	Default Notification Class	RW