November 3, 2011

BACnet Protocol Implementation Conformance Statement

Vendor

BeaconMedæs
1800 Overview Dr.
Rock Hill, SC 29730
USA

BACnet Protocol Revision

Rev. 12

Product Details – Medical Air and Vacuum Systems

Product Name	Model Numbers	Firmware Version
Scroll Air Systems	SAS, LAS	4107600010.07 and above
Claw Vacuum Systems	VAM, VAS, VAV, VHM, VHS, VHV	4107600210.08 and above
Lube Vacuum Systems	VLM, VLS, VLT, VLV	4107600210.08 and above

Device Profiles

Profile: BACnet Smart Sensor (B-SS) – All Devices

BIBBs Supported

ReadProperty-B (DS-RP-B)
Dynamic Device Binding-B (DM-DDB-B)
Dynamic Object Binding-B (DM-DOB-B)

Object Type Support

Analog Value, Binary Value, Device, Multi-State Value, Integer Value, Positive Integer Value

Data Link Layer Options

ISO 8802-3 (“Ethernet”) LAN

Character Set Support

ISO 10646 (UTF-8) Encoding

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Object Mapping for TAE Systems

The easiest procedure for mapping a TAE System's objects is to read the list of objects from the device. This is done by sending a read property message to the device with the property type "object-list". This will send back a list of all the objects that are relevant to the system. Alternatively, the objects can be found manually in the charts below. Please note that all the possible objects are listed in the table, and objects that are beyond the scope of a specific system should be ignored. This includes objects related to units that are not installed on a system, and information about sensors not included on all systems (e.g. Dewpoint, CO, Dryers, VSD Speed).

Analog Values:

Object Name	Instance #	Present Value	Units	Event State
"System Pressure" or "System Vacuum"	0	System Pressure or Vacuum	PSI, KPA, BAR, INHG, MMHG	Normal = Value in Sensor Range Fault = Value not in Sensor Range
"System Hours"	1	System Hours	Hours	N/A
"Unit 1 Running Hours"	100	Unit 1 Running Hours		
"Unit 2 Running Hours"	101	Unit 2 Running Hours		
"Unit 3 Running Hours"	102	Unit 3 Running Hours		
"Unit 4 Running Hours"	103	Unit 4 Running Hours		
"Unit 5 Running Hours"	104	Unit 5 Running Hours		
"Unit 6 Running Hours"	105	Unit 6 Running Hours		
"Dryer 1 Hours"	200	Dryer 1 Running Hours		
"Dryer 2 Hours"	201	Dryer 2 Running Hours		

Integer Values:

Object Name	Instance #	Present Value	Units	Event State
"Ambient Temperature"	0	Ambient Temperature	°F, °C	Normal = Value in Sensor Range Fault = Value not in Sensor Range
"Dewpoint"	1	Dewpoint		
"Cabinet Temperature"	2	Cabinet Temperature		

Positive Integer Values:

Object Name	Instance #	Present Value	Units	Event State
"CO Level"	0	CO Level	PPM	Normal = Value in Sensor Range Fault = Value not in Sensor Range
"VSD Speed"	1	VSD Rotation Speed	HZ	
"Dryer 1 Cycles"	100	# of Dryer 1 Cycles	No-units	N/A
"Dryer 2 Cycles"	101	# of Dryer 2 Cycles		

Binary Values:

Object Name	Instance #	Present Value	Binary Description
"System Alarms"	0	Any System Alarms?	1 = Alarms 0 = No Alarms
"System Service"	1	Any System Service Due?	1 = Service Due 0 = No Service Due
"System Shutdowns"	2	Any System Shutdowns?	1 = Shutdowns 0 = No Shutdowns
Name of System Alarm 1	100	System Alarm 1 Status	1 = In Alarm 0 = Not In Alarm
Name of System Alarm 2	101	System Alarm 2 Status	
Name of System Alarm 3	102	System Alarm 3 Status	
Name of System Alarm 4	103	System Alarm 4 Status	
Name of System Alarm 5	104	System Alarm 5 Status	
Name of System Alarm 6	105	System Alarm 6 Status	
Name of System Alarm 7	106	System Alarm 7 Status	
Name of System Alarm 8	107	System Alarm 8 Status	
Name of System Alarm 9	108	System Alarm 9 Status	
Name of System Alarm 10	109	System Alarm 10 Status	
Name of System Shutdown 1	110	System Shutdown 1 Status	1 = In Shutdown 0 = Not In Shutdown
Name of System Shutdown 2	111	System Shutdown 2 Status	
Name of System Shutdown 3	112	System Shutdown 3 Status	
Name of System Shutdown 4	113	System Shutdown 4 Status	
Name of System Shutdown 5	114	System Shutdown 5 Status	
Name of System Shutdown 6	115	System Shutdown 6 Status	
Name of System Shutdown 7	116	System Shutdown 7 Status	
Name of System Shutdown 8	117	System Shutdown 8 Status	
Name of System Shutdown 9	118	System Shutdown 9 Status	
Name of System Shutdown 10	119	System Shutdown 10 Status	
Name of System Shutdown 11	120	System Shutdown 11 Status	
Name of System Shutdown 12	121	System Shutdown 12 Status	
"Unit 1 Alarms"	200	Any Unit 1 Alarms?	1 = Alarms 0 = No Alarms
"Unit 2 Alarms"	201	Any Unit 2 Alarms?	
"Unit 3 Alarms"	202	Any Unit 3 Alarms?	
"Unit 4 Alarms"	203	Any Unit 4 Alarms?	
"Unit 5 Alarms"	204	Any Unit 5 Alarms?	
"Unit 6 Alarms"	205	Any Unit 6 Alarms?	
"Unit 1 Service"	206	Any Unit 1 Service Due?	1 = Service Due, 0 = No Service Due
"Unit 2 Service"	207	Any Unit 2 Service Due?	
"Unit 3 Service"	208	Any Unit 3 Service Due?	
"Unit 4 Service"	209	Any Unit 4 Service Due?	
"Unit 5 Service"	210	Any Unit 5 Service Due?	
"Unit 6 Service"	211	Any Unit 6 Service Due?	
"Unit 1 Shutdowns"	212	Any Unit 1 Shutdowns?	1 = Shutdowns 0 = No Shutdowns
"Unit 2 Shutdowns"	213	Any Unit 2 Shutdowns?	
"Unit 3 Shutdowns"	214	Any Unit 3 Shutdowns?	
"Unit 4 Shutdowns"	215	Any Unit 4 Shutdowns?	
"Unit 5 Shutdowns"	216	Any Unit 5 Shutdowns?	
"Unit 6 Shutdowns"	217	Any Unit 6 Shutdowns?	

Multi-State Values:

Object Name	Instance #	Present Value	Description
"Unit 1 Run Mode"	0	Unit 1 Running Mode	0 = Unit Stopped 1 = Unit Running DOL 2 = Unit Running VSD
"Unit 2 Run Mode"	1	Unit 2 Running Mode	
"Unit 3 Run Mode"	2	Unit 3 Running Mode	
"Unit 4 Run Mode"	3	Unit 4 Running Mode	
"Unit 5 Run Mode"	4	Unit 5 Running Mode	
"Unit 6 Run Mode"	5	Unit 6 Running Mode	
"Unit 1 Sequence"	6	Sequence Location	0 = Lead 1 = Lag 1 2 = Lag 2 3 = Lag 3 4 = Lag 4 5 = Lag 5
"Unit 2 Sequence"	7	Sequence Location	
"Unit 3 Sequence"	8	Sequence Location	
"Unit 4 Sequence"	9	Sequence Location	
"Unit 5 Sequence"	10	Sequence Location	
"Unit 6 Sequence"	11	Sequence Location	
"Unit 1 Operation Mode"	12	Unit 1 Operation Mode	0 = Off 1 = Manual 2 = Automatic 3 = Override Off 4 = Override On 5 = Emergency Manual
"Unit 2 Operation Mode"	13	Unit 2 Operation Mode	
"Unit 3 Operation Mode"	14	Unit 3 Operation Mode	
"Unit 4 Operation Mode"	15	Unit 4 Operation Mode	
"Unit 5 Operation Mode"	16	Unit 5 Operation Mode	
"Unit 6 Operation Mode"	17	Unit 6 Operation Mode	
"Unit 1" *Name of Alarm*	18	Unit 1 Alarm 1 Status	0 = Not In Alarm 1 = In Alarm 2 = Unknown (Lost Ethernet)
"Unit 1" *Name of Alarm*	19	Unit 1 Alarm 2 Status	
"Unit 1" *Name of Alarm*	20	Unit 1 Alarm 3 Status	
"Unit 1" *Name of Alarm*	21	Unit 1 Alarm 4 Status	
"Unit 1" *Name of Alarm*	22	Unit 1 Alarm 5 Status	
"Unit 2" *Name of Alarm*	24	Unit 2 Alarm 1 Status	0 = Not In Alarm 1 = In Alarm 2 = Unknown (Lost Ethernet)
"Unit 2" *Name of Alarm*	25	Unit 2 Alarm 2 Status	
"Unit 2" *Name of Alarm*	26	Unit 2 Alarm 3 Status	
"Unit 2" *Name of Alarm*	27	Unit 2 Alarm 4 Status	
"Unit 2" *Name of Alarm*	28	Unit 2 Alarm 5 Status	
"Unit 3" *Name of Alarm*	30	Unit 3 Alarm 1 Status	0 = Not In Alarm 1 = In Alarm 2 = Unknown (Lost Ethernet)
"Unit 3" *Name of Alarm*	31	Unit 3 Alarm 2 Status	
"Unit 3" *Name of Alarm*	32	Unit 3 Alarm 3 Status	
"Unit 3" *Name of Alarm*	33	Unit 3 Alarm 4 Status	
"Unit 3" *Name of Alarm*	34	Unit 3 Alarm 5 Status	
"Unit 4" *Name of Alarm*	36	Unit 4 Alarm 1 Status	0 = Not In Alarm 1 = In Alarm 2 = Unknown (Lost Ethernet)
"Unit 4" *Name of Alarm*	37	Unit 4 Alarm 2 Status	
"Unit 4" *Name of Alarm*	38	Unit 4 Alarm 3 Status	
"Unit 4" *Name of Alarm*	39	Unit 4 Alarm 4 Status	
"Unit 4" *Name of Alarm*	40	Unit 4 Alarm 5 Status	
"Unit 5" Name of Alarm	42	Unit 5 Alarm 1 Status	0 = Not In Alarm 1 = In Alarm 2 = Unknown (Lost Ethernet)
"Unit 5" Name of Alarm	43	Unit 5 Alarm 2 Status	
"Unit 5" Name of Alarm	44	Unit 5 Alarm 3 Status	
"Unit 5" Name of Alarm	45	Unit 5 Alarm 4 Status	
"Unit 5" Name of Alarm	46	Unit 5 Alarm 5 Status	

Multi-State Values (Continued):

Object Name	Instance #	Present Value	Description
"Unit 6" *Name of Alarm*	48	Unit 6 Alarm 1 Status	0 = Not In Alarm 1 = In Alarm 2 = Unknown (Lost Ethernet)
"Unit 6" *Name of Alarm*	49	Unit 6 Alarm 2 Status	
"Unit 6" *Name of Alarm*	50	Unit 6 Alarm 3 Status	
"Unit 6" *Name of Alarm*	51	Unit 6 Alarm 4 Status	
"Unit 6" *Name of Alarm*	52	Unit 6 Alarm 5 Status	
"Unit 1" *Name of Shutdown*	54	Unit 1 Shutdown 1 Status	0 = Not In Shutdown 1 = In Shutdown 2 = Unknown (Lost Ethernet)
"Unit 1" *Name of Shutdown*	55	Unit 1 Shutdown 2 Status	
"Unit 1" *Name of Shutdown*	56	Unit 1 Shutdown 3 Status	
"Unit 1" *Name of Shutdown*	57	Unit 1 Shutdown 4 Status	
"Unit 1" *Name of Shutdown*	58	Unit 1 Shutdown 5 Status	
"Unit 2" *Name of Shutdown*	60	Unit 2 Shutdown 1 Status	0 = Not In Shutdown 1 = In Shutdown 2 = Unknown (Lost Ethernet)
"Unit 2" *Name of Shutdown*	61	Unit 2 Shutdown 2 Status	
"Unit 2" *Name of Shutdown*	62	Unit 2 Shutdown 3 Status	
"Unit 2" *Name of Shutdown*	63	Unit 2 Shutdown 4 Status	
"Unit 2" *Name of Shutdown*	64	Unit 2 Shutdown 5 Status	
"Unit 3" *Name of Shutdown*	66	Unit 3 Shutdown 1 Status	0 = Not In Shutdown 1 = In Shutdown 2 = Unknown (Lost Ethernet)
"Unit 3" *Name of Shutdown*	67	Unit 3 Shutdown 2 Status	
"Unit 3" *Name of Shutdown*	68	Unit 3 Shutdown 3 Status	
"Unit 3" *Name of Shutdown*	69	Unit 3 Shutdown 4 Status	
"Unit 3" *Name of Shutdown*	70	Unit 3 Shutdown 5 Status	
"Unit 4" *Name of Shutdown*	72	Unit 4 Shutdown 1 Status	0 = Not In Shutdown 1 = In Shutdown 2 = Unknown (Lost Ethernet)
"Unit 4" *Name of Shutdown*	73	Unit 4 Shutdown 2 Status	
"Unit 4" *Name of Shutdown*	74	Unit 4 Shutdown 3 Status	
"Unit 4" *Name of Shutdown*	75	Unit 4 Shutdown 4 Status	
"Unit 4" *Name of Shutdown*	76	Unit 4 Shutdown 5 Status	
"Unit 5" *Name of Shutdown*	78	Unit 5 Shutdown 1 Status	0 = Not In Shutdown 1 = In Shutdown 2 = Unknown (Lost Ethernet)
"Unit 5" *Name of Shutdown*	79	Unit 5 Shutdown 2 Status	
"Unit 5" *Name of Shutdown*	80	Unit 5 Shutdown 3 Status	
"Unit 5" *Name of Shutdown*	81	Unit 5 Shutdown 4 Status	
"Unit 5" *Name of Shutdown*	82	Unit 5 Shutdown 5 Status	
"Unit 6" Name of Shutdown	84	Unit 6 Shutdown 1 Status	0 = Not In Shutdown 1 = In Shutdown 2 = Unknown (Lost Ethernet)
"Unit 6" Name of Shutdown	85	Unit 6 Shutdown 2 Status	
"Unit 6" Name of Shutdown	86	Unit 6 Shutdown 3 Status	
"Unit 6" Name of Shutdown	87	Unit 6 Shutdown 4 Status	
"Unit 6" Name of Shutdown	88	Unit 6 Shutdown 5 Status	
"Dryer 1 Operation Mode"	300	Operation Mode	0 = Off 1 = Manual 2 = Automatic 3 = Override Off 4 = Override On 5 = Emergency Manual
"Dryer 2 Operation Mode"	301	Operation Mode	
"Dryer 1 Tower A Mode"	302	Dryer Tower Mode	0 = Off 1 = Drying 2 = Regenerating 3 = Drying
"Dryer 2 Tower A Mode"	303	Dryer Tower Mode	
"Dryer 1 Tower B Mode"	304	Dryer Tower Mode	
"Dryer 2 Tower B Mode"	305	Dryer Tower Mode	