July 16th, 2025

BACnet Protocol Implementation Conformance Statement

Vendor

BeaconMedæs
1059 Paragon Way
Rock Hill, SC 29730
USA

BACnet Protocol Revision

Rev. 19

Product Details – TA360 Medical Air and Vacuum Systems

All TA360 Source Equipment with the following Controller Model Number:

Product Name	Model Numbers	Firmware Version
TA360 Source Controller	TA360-S	4107600055 Rev07 and above

The TA360 Controller controls the following TA360 Source Equipment:

Product Name	Model Numbers
Scroll Air Systems	SAS, LAS
Claw Vacuum Systems	VAM, VAS, VAV, VHM, VHS, VHV, LVH, LVA
Lube Vacuum Systems	VLM, VLS, VLT, VLV, LVL

Device Profiles

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

BIBBs Supported

ReadProperty-B	(DS-RP-B)
ReadPropertyMultiple-B	(DS-RPM-B)
Change of Value-B	(DS-COV-B)
WriteProperty-B	(DS-WP-B)
ReinitializeDevice-B	(DM-RD-B)
Dynamic Device Binding-B	(DM-DDB-B)
Dynamic Object Binding-B	(DM-DOB-B)

Object Type Support

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

Data Link Layer Options

ISO 8802-3 (“BACnet/IP”) LAN

Character Set Support

ISO 10646 (UTF-8) Encoding

Special Functionality

Maximum APDU size in octets: 1456

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Object Mapping for TA360 Systems

The easiest procedure for mapping a TA360 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).

Scroll Air Systems

Analog Values:

Object Name	Instance #	Present Value	Units	Event State
"System Pressure"	0	System Pressure	PSI, KPA, BAR, INHG, MMHG	Normal = Value in Sensor Range Fault = Value not in Sensor Range
"Ambient Temperature"	3	Ambient Temperature	degF	
"Dew Point"	4	Dew Point	degC	
"CO Level"	6	CO Reading	PPM	
"Unit 1 Running Hours"	100	Unit 1 Running Hours	Hours	N/A
"Unit 2 Running Hours"	101	Unit 2 Running Hours	Hours	
"Unit 3 Running Hours"	102	Unit 3 Running Hours	Hours	
"Unit 4 Running Hours"	103	Unit 4 Running Hours	Hours	
"Unit 5 Running Hours"	104	Unit 5 Running Hours	Hours	
"Unit 6 Running Hours"	105	Unit 6 Running Hours	Hours	
"Dryer 1 Hours"	200	Dryer 1 Running Hours	Hours	
"Dryer 2 Hours"	201	Dryer 2 Running Hours	Hours	

Integer Values:

Object Name	Instance #	Present Value	Units	Event State
"Dryer 1 Cycles"	1	Dryer 1 Cycles	Qty	N/A
"Dryer 2 Cycles"	2	Dryer 2 Cycles	Qty	

Binary Values:

Object Name	Instance #	Present Value	Binary Description
"Any System Alarms"	0	Any System Alarms?	1 = Alarms 0 = No Alarms
"Any System Service"	1	Any System Service Due?	1 = Service Due 0 = No Service Due
"Any System Shutdowns"	2	Any System Shutdowns?	1 = Shutdowns 0 = No Shutdowns
“High Dew Point Alarm”	100	Status of Dew Point Alarm	1 = In Alarm 0 = Not In Alarm
“High CO Level Alarm”	101	Status of CO Level Alarm	
“Lag Alarm”	102	Status of Lag Alarm	
“High Ambient Temperature Alarm”	103	Status of Ambient Temperature Alarm	
“Control Circuit Alarm”	105	Status of Control Circuit Alarm	
“Dryer 1 Switch Failure Alarm”	107	Status of Dryer 1 Switch Failure Alarm	
“Dryer 2 Switch Failure Alarm”	108	Status of Dryer 2 Switch Failure Alarm	
“Low Outlet Pressure Alarm”	109	Status of Low Outlet Pressure Alarm	
“Tank Water Level Alarm”	110	Status of Tank Water Level Alarm	
“Dryer 1 Outlet Alarm”	111	Status of Dryer 1 Outlet Alarm	
“Dryer 2 Outlet Alarm”	112	Status of Dryer 2 Outlet Alarm	
“Line Filter DeltaP Dryer 1 Alarm”	113	Status of Line Filter DeltaP Dryer 1 Alarm	
“Line Filter DeltaP Dryer 2 Alarm”	114	Status of Line Filter DeltaP Dryer 2 Alarm	
“High Outlet Pressure”	117	High Outlet Pressure Alarm	
"Unit 1 Alarms"	200	Any Unit 1 Alarms?	
"Unit 2 Alarms"	201	Any Unit 2 Alarms?	1 = Alarms 0 = No 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?	
"Unit 2 Service"	207	Any Unit 2 Service Due?	1 = Service Due, 0 = No 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?	
"Unit 2 Shutdowns"	213	Any Unit 2 Shutdowns?	1 = Shutdowns 0 = No 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?	
“Unit 1 Motor Overload Alarm”	218	Status of Alarm	

“Unit 1 Discharge Temp Alarm”	219	Status of Alarm	1 = In Alarm 0 = Not In Alarm
“Unit 1 Inlet Vacuum Alarm”	220	Status of Alarm	
“Unit 1 Aftercooler Temp Alarm”	221	Status of Alarm	
“Unit 1 Fail to Load Alarm”	222	Status of Alarm	
“Unit 2 Motor Overload Alarm”	225	Status of Alarm	
“Unit 2 Discharge Temp Alarm”	226	Status of Alarm	
“Unit 2 Inlet Vacuum Alarm”	227	Status of Alarm	
“Unit 2 Aftercooler Temp Alarm”	228	Status of Alarm	
“Unit 2 Fail to Load Alarm”	229	Status of Alarm	
“Unit 3 Motor Overload Alarm”	232	Status of Alarm	
“Unit 3 Discharge Temp Alarm”	233	Status of Alarm	
“Unit 3 Inlet Vacuum Alarm”	234	Status of Alarm	
“Unit 3 Aftercooler Temp Alarm”	235	Status of Alarm	
“Unit 3 Fail to Load Alarm”	236	Status of Alarm	
“Unit 4 Motor Overload Alarm”	239	Status of Alarm	
“Unit 4 Discharge Temp Alarm”	240	Status of Alarm	
“Unit 4 Inlet Vacuum Alarm”	241	Status of Alarm	
“Unit 4 Aftercooler Temp Alarm”	242	Status of Alarm	
“Unit 4 Fail to Load Alarm”	243	Status of Alarm	
“Unit 5 Motor Overload Alarm”	246	Status of Alarm	
“Unit 5 Discharge Temp Alarm”	247	Status of Alarm	
“Unit 5 Inlet Vacuum Alarm”	248	Status of Alarm	
“Unit 5 Aftercooler Temp Alarm”	249	Status of Alarm	
“Unit 5 Fail to Load Alarm”	250	Status of Alarm	
“Unit 6 Motor Overload Alarm”	253	Status of Alarm	
“Unit 6 Discharge Temp Alarm”	254	Status of Alarm	
“Unit 6 Inlet Vacuum Alarm”	255	Status of Alarm	
“Unit 6 Aftercooler Temp Alarm”	256	Status of Alarm	
“Unit 6 Fail to Load Alarm”	257	Status of Alarm	

Multi-State Values:

Object Name	Instance #	Present Value	Description
"Unit 1 Running Mode"	0	Unit 1 Running Mode	1 = Unit Stopped 2 = Unit Running DOL 3 = Unit Running VSD 4 = Emergency Comms 5 = Emergency Transducer 6 = Purge DOL 7 = Purge VSD 8 = Bump DOL
"Unit 2 Running Mode"	1	Unit 2 Running Mode	
"Unit 3 Running Mode"	2	Unit 3 Running Mode	
"Unit 4 Running Mode"	3	Unit 4 Running Mode	
"Unit 5 Running Mode"	4	Unit 5 Running Mode	
"Unit 6 Running Mode"	5	Unit 6 Running Mode	
"Unit 1 Sequence"	6	Sequence Location	1 = Lead 2 = Lag 1 3 = Lag 2 4 = Lag 3 5 = Lag 4 6 = 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	1 = Off 2 = Manual 3 = Automatic 4 = Override Off 5 = Override On 6 = Emergency Comms 7 = Emergency Transducer 8 = Purge Off
"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	
“Dryer 1 Operation Mode”	300	Dryer 1 Operation Mode	1 = Off 2 = Manual 3 = Automatic 4 = Override Off 5 = Override On
“Dryer 2 Operation Mode”	301	Dryer 2 Operation Mode	
“Dryer 1 Tower A Mode”	302	Dryer 1 Tower A Mode	1 = None 2 = Drying 3 = Purging 4 = Ready
“Dryer 2 Tower A Mode”	303	Dryer 2 Tower A Mode	
“Dryer 1 Tower B Mode”	304	Dryer 1 Tower B Mode	
“Dryer 2 Tower B Mode”	305	Dryer 2 Tower B Mode	

Claw and Lube Vacuum Systems

Analog Values:

Object Name	Instance #	Present Value	Units	Event State
"System Vacuum"	2	System Vacuum	PSI, KPA, BAR, INHG, MMHG	Normal = Value in Sensor Range Fault = Value not in Sensor Range
“Ambient Temperature”	3	Ambient Temperature	degF	
“Cabinet Temperature”	5	Cabinet Temperature	degF	
"Unit 1 Running Hours"	100	Unit 1 Running Hours	Hours	N/A
"Unit 2 Running Hours"	101	Unit 2 Running Hours	Hours	
"Unit 3 Running Hours"	102	Unit 3 Running Hours	Hours	
"Unit 4 Running Hours"	103	Unit 4 Running Hours	Hours	
"Unit 5 Running Hours"	104	Unit 5 Running Hours	Hours	
"Unit 6 Running Hours"	105	Unit 6 Running Hours	Hours	

Integer Values:

Object Name	Instance #	Present Value	Units	Event State
"VSD Speed"	0	VSD Speed	Hz	Normal = Value in Sensor Range Fault = Value not in Sensor Range

Binary Values:

Object Name	Instance #	Present Value	Binary Description
"Any System Alarms"	0	Any System Alarms?	1 = Alarms 0 = No Alarms
"Any System Service"	1	Any System Service Due?	1 = Service Due 0 = No Service Due
"Any System Shutdowns"	2	Any System Shutdowns?	1 = Shutdowns 0 = No Shutdowns
“Lag Alarm”	102	Status of Lag Alarm	1 = In Alarm 0 = Not In Alarm
“High Ambient Temperature Alarm”	103	Status of Ambient Temperature Alarm	
“High Cabinet Temperature Alarm”	104	Status of Cabinet Temperature Alarm	
“Control Circuit Alarm”	105	Status of Control Circuit Alarm	
“Low Outlet Pressure Alarm”	109	Status of Low Outlet Pressure Alarm	
“Tank Water Level Alarm”	110	Status of Tank Water Level Alarm	
“VSD Fault Alarm"	115	Status of VSD Fault Alarm	
“VSD Off Alarm”	116	Status of VSD Off Alarm	
“High Outlet Pressure”	117	High Outlet Pressure Alarm	
"Unit 1 Alarms"	200	Any Unit 1 Alarms?	
"Unit 2 Alarms"	201	Any Unit 2 Alarms?	1 = Alarms 0 = No 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?	
"Unit 2 Service"	207	Any Unit 2 Service Due?	1 = Service Due, 0 = No 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?	
"Unit 2 Shutdowns"	213	Any Unit 2 Shutdowns?	1 = Shutdowns 0 = No 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?	
“Unit 1 Motor Overload Alarm”	218	Status of Alarm	
“Unit 1 Discharge Temp Alarm”	219	Status of Alarm	1 = In Alarm 0 = Not In Alarm
“Unit 1 Fail to Load Alarm”	222	Status of Alarm	
“Unit 1 VSD Starter Alarm”	223	Status of Alarm	
“Unit 2 Motor Overload Alarm”	225	Status of Alarm	
“Unit 2 Discharge Temp Alarm”	226	Status of Alarm	
“Unit 2 Fail to Load Alarm”	229	Status of Alarm	
“Unit 2 VSD Starter Alarm”	230	Status of Alarm	
“Unit 3 Motor Overload Alarm”	232	Status of Alarm	
“Unit 3 Discharge Temp Alarm”	233	Status of Alarm	

“Unit 3 Fail to Load Alarm”	236	Status of Alarm	
“Unit 3 VSD Starter Alarm”	237	Status of Alarm	
“Unit 4 Motor Overload Alarm”	239	Status of Alarm	
“Unit 4 Discharge Temp Alarm”	240	Status of Alarm	
“Unit 4 Fail to Load Alarm”	243	Status of Alarm	
“Unit 4 VSD Starter Alarm”	244	Status of Alarm	
“Unit 5 Motor Overload Alarm”	246	Status of Alarm	
“Unit 5 Discharge Temp Alarm”	247	Status of Alarm	
“Unit 5 Fail to Load Alarm”	250	Status of Alarm	
“Unit 5 VSD Starter Alarm”	251	Status of Alarm	
“Unit 6 Motor Overload Alarm”	253	Status of Alarm	
“Unit 6 Discharge Temp Alarm”	254	Status of Alarm	
“Unit 6 Fail to Load Alarm”	257	Status of Alarm	
“Unit 6 VSD Starter Alarm”	258	Status of Alarm	

Multi-State Values:

Object Name	Instance #	Present Value	Description
"Unit 1 Running Mode"	0	Unit 1 Running Mode	1 = Unit Stopped 2 = Unit Running DOL 3 = Unit Running VSD 4 = Emergency Comms 5 = Emergency Transducer 6 = Purge DOL 7 = Purge VSD 8 = Bump DOL
"Unit 2 Running Mode"	1	Unit 2 Running Mode	
"Unit 3 Running Mode"	2	Unit 3 Running Mode	
"Unit 4 Running Mode"	3	Unit 4 Running Mode	
"Unit 5 Running Mode"	4	Unit 5 Running Mode	
"Unit 6 Running Mode"	5	Unit 6 Running Mode	
"Unit 1 Sequence"	6	Sequence Location	1 = Lead 2 = Lag 1 3 = Lag 2 4 = Lag 3 5 = Lag 4 6 = 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	1 = Off 2 = Manual 3 = Automatic 4 = Override Off 5 = Override On 6 = Emergency Comms 7 = Emergency Transducer 8 = Purge Off
"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	

Revision History

Rev	Date	Revised By	Description
0	05/16/2025	PM	Initial Release
1	06/13/2025	PM	Updates to reflect the results of BACnet certificationc Separated Object Mapping into Air and Vacuum sections
2	07/16/2025	PM	Corrected Multi-State value descriptions to correctly reflect that the reported value starts with 1, not 0. Removed Dryer Modes from the Vacuum Multi-State objects. Updated with TA360 Source Controller Model Number infomration.