ENGINEERING SUBMITTAL DATA

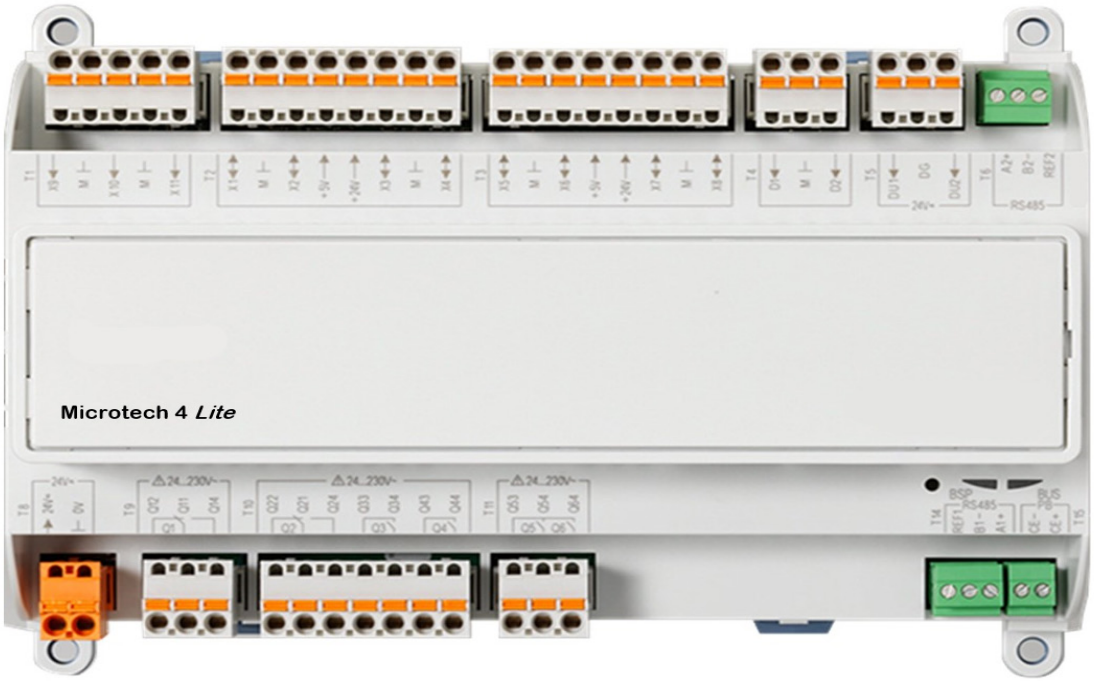
ED 19126-1

OCTOBER 2023

MICROTECH® PRECISELINE®

NETWORK INTEGRATION GUIDE

BACnet® MS/TP Network Protocol Information
PreciseLine Light Air Handler
Unit Sizes 006-100



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Introduction

This manual describes how to integrate the MicroTech® unit controller to a BAS (building automation system) for network communication.

Product Description

The MicroTech 4 Lite (MicroTech) is the dedicated unit controller for Daikin Applied PreciseLine® Light Air Handlers. The MicroTech controller supports building automation system (BAS) network communication with native BACnet® MS/TP capability.

BACnet objects are accessible to the network after the unit has been set up for MS/TP communications via the portable interface keypad display. BACnet parameters include setpoints, system status, monitoring, and alarm objects.

This document is intended for system integrators and engineers familiar with the BACnet protocol. Contact the Daikin Applied Controls Customer Support group at 866-462-7829 or email DaikinControls@daikinapplied.com for additional assistance.

Software Version

This document supports the latest version of the MicroTech controller application and all subsequent versions. However, if the MicroTech controller software is a later version, some of the information in this document may not completely describe the application.

The revision of the application software can be determined from the MicroTech portable interface keypad display under the 'About This AHU' menu. The software version can also be read from the Application_Software_Version property of the BACnet Device Object.

Hazard Identification

⚠ DANGER

Danger indicates a hazardous situation, which will result in death or serious injury if not avoided.

⚠ WARNING

Warning indicates a potentially hazardous situations, which can result in property damage, personal injury, or death if not avoided.

⚠ CAUTION

Caution indicates a potentially hazardous situations, which can result in minor injury or equipment damage if not avoided.

NOTICE

Notice indicates practices not related to physical injury.

NOTE: Indicates important details or clarifying statements for information presented.

Reference Documents

Title	Number	Company	Source
MicroTech PreciseLine Light Air Handler Controller	OM 1357	Daikin Applied	www.DaikinApplied.com
BACnet A Data Communication Protocol for Building Automation and Control Networks	ANSI/ ASHRAE 135-2014	American Society of Heating, Refrigeration, and Air-Conditioning Engineers	www.ashrae.org

BACnet Agency Conformance

The MicroTech unit controller supports the American National Standards Institute and American Society of Heating, Refrigeration and Air-Conditioning Engineers (ANSI/ASHRAE) standard 135-2014.

The MicroTech unit controller is tested according to the BACnet Testing Laboratory (BTL) Test Plan. It is designed to meet the requirements of the BACnet Standard as stated in the Protocol Implementation and Conformance Statement (PICS). However, it is not BTL listed. The PICS is located in "BACnet PICS MicroTech PreciseLine Air Handler Unit Controller".

BACnet Device Object

BACnet Objects

The MicroTech unit controller incorporates standard BACnet object types (i.e., object types defined in the BACnet Standard) that conform to the BACnet Standard. Each object has properties that define unit variables or data points. Some object types occur more than once in the MicroTech unit controller; each occurrence or instance has different properties and controls different unit variables or data points. Each instance is designated with a unique object identifier. Some properties can be adjusted from the network and others can only be interrogated (read-only properties).

The MicroTech unit controller follows the standard BACnet convention for prioritizing data points using the Present_Value property (current value) of each object and is automatically set to the highest priority level. The Present_Value is writeable if it is commandable or if Out_Of_Service is set to TRUE as determined by each object type (AI, AV, MSV, BI, Device). Refer to the table notes included in "BACnet PICS MicroTech PreciseLine Air Handler Unit Controller".

All BACnet objects available to the network are found in the "BACnet Data Points" section.

Device Object Properties

Each BACnet compatible device can only have a single BACnet Device Object.

⚠ CAUTION

If another device in the network already has this object identifier, you must change the instance number of one device object so that all devices in the network have a unique object identifier.

The Device Object contains other informative properties as shown in Table 1.

Table 1: Device Object Properties

Property	Identifier	Default Value	Data Type
Object Identifier	75	Device	BACnetObjectIdentifier
Object Name	77	PL AHU_##### (Variable)	Character String
Object Type	79	8	BACnetObjectType
System Status	112	0	BACnetDeviceStatus
Vendor Name	121	Daikin	Character String
Vendor Identifier	120	3	Unsigned 16
Model Name	70	Climatix POL546	Character String
Firmware Revision	44	Variable	Character String
Application Software Version	12	Variable	Character String
Location	58	Unsupported Property	Character String
Description	28	Blank[2]	Character String
Protocol Version	98	1	Unsigned
Protocol Revision	139	15	Unsigned
Protocol Services Supported	97	-	Unsigned
Protocol Object Types Supported1	96	AI, AV, BI, Device, MSV	BACnetObjectTypes Supported
Object List	76	-	Sequence of BACnet ObjectIdentifer
Max APDU Length Accepted	62	480	Unsigned 16
Segmentation Supported	107	None	BACnetSegmentation
Max Segments Accepted	167	4	Unsigned
Local Time	57	Variable	Time
Local Date	56	Variable	Date
UTC Offset	119	-360 (Range: -780...780)	Integer
Daylight Savings Status	24	Variable	Boolean
APDU Segment Timeout	10	5000	Unsigned
APDU Timeout	11	6000	Unsigned
Number of APDU Retries	73	3	Unsigned
Device Address Binding	30	-	Sequence of BACnet AddressBinding
Database Revision	115	Variable	Unsigned
Active COV Subscriptions	152	-	List of BACnetCOV Subscriptions

[1]While the MicroTech controller supports the entire set of object types, not all object types are used.
[2]Changeable via the remote user interface.

Device Object Identifier

The Device Object_Identifier uniquely specifies the unit within the network. The initial device object instance number is calculated based on the Device Instance from the unit controller application. This number must be unique on the entire BACnet network. The device instance number can be changed via the keypad display. Set Apply Changes from No to Yes under the BACnet MSTP Set Up Menu for the change to take effect.

Device Object_Name

Each device has a unique Object_Name by default. The Object Name is PL AHU_#####. The ##### represents the Device Instance. If the Device Instance changes, and the “PL_AHU_” portion of the Object_Name is retained, the Device Name is updated as well.

Network Addressing and Configuration

The MicroTech unit controller uses standard BACnet addressing parameters for network communication.

Other than Unit Support, addressing values can only be set or changed from the portable interface display. Follow these steps to set up and configure BACnet:

1. Connect the BACnet network to the T14 BACnet MS/TP port on the unit controller.
2. Connect the portable interface to the T_H port on the unit controller.
3. Login as a Manager level user (Table 2).

   NOTE: T13 is the room sensor

Table 2: Remote User Interface Password Levels

Access Level	Password Level	Access Type	Password
User	NA	User Read Only	NA
User (Lowest)	6	User Read/Write	5321
Manager	4	Setup Read/Write	2526
Technician (Highest)	2	Service Read/Write	6363

4. From the portable interface keypad/display main menu, scroll down and select the Unit Maintenance\BACnet MSTP Set-Up menu.
5. Configure the desired parameters as described in Table 3.
6. Set Apply Changes from No to Yes so that the unit controller recognizes the changes. This causes the unit controller to reset and the updates to take effect.

Table 3: BACnet MS/TP Network Addressing Parameters

Description	Parameter Name	Default Value	Range
Device Name	MSTPDevName	PL AHU_23	-
Device Instance	MSTPDevInst	23	0-4194302
MAC Address	MSTPMACAddr	18	0-127
Baud Rate	MSTPBaudRate	38400	9600 19200 38400 76800
Max Master	MSTPMaxMasters	127	1-127
Max Info Frames	MSTPMaxInfoFr	10	1-32
Unit Support	MSTPUnitSupport	English	English/ SI
Max APDU Length	-	480	-

BACnet Data Points

Table 4 - Table 7 describe the BACnet points available to the network from the MicroTech unit controller. The tables support standard object types and alarm objects as described in the "BACnet PICS MicroTech PreciseLine Air Handler Unit Controller".

All BACnet points available to the BAS remain at the last valid value upon loss of communication. If the network input value is invalid, the unit controller reverts to a default value. In the case of network sensor inputs, it reverts to the corresponding local sensor input when installed.

Use the remote user interface to set BACnet addressing parameters for network communication. Refer to the MicroTech PreciseLine Unit Controller, OM 1357 for all keypad/display menu options available (www.DaikinApplied.com).

Table 4: Analog Inputs

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default[3]	Description[2,3]
Discharge Air Temperature	AI:1	aiDAT	R	-40-212°F -40-100°C	-	The current temperature reading from the required discharge air temperature (DAT) sensor input. Standard on all units.
Return Air Temperature	AI:2	aiRAT	R	-40-212°F -40-100°C	-	The current temperature reading from the required return air temperature (RAT) sensor input. Standard on all units.
Outdoor Air Temperature	AI:3	aiOAT	R	-40-212°F -40-100°C	-	The current temperature reading from the required outdoor air temperature (OAT) sensor input. Standard on all units.
Entering Water/Leaving Coil Temperature	AI:5	aiEwtLct	R	-40-212°F -40-100°C	-	The current temperature reading from the required entering water (EWT) or leaving coil temperature (LCT) sensor input. Applies when a sensor is installed and the unit is configured for one of the sensor inputs.
Space Relative Humidity	AI:6	aiSpaceHum	R	0-100%	-	The current reading from the optional space relative humidity sensor input. Applies when a sensor is installed and the unit is configured for this input.[1]
Return Air Relative Humidity	AI:7	aiRetHum	R	0-100%	-	The current reading from the required return air humidity sensor input.[1] Standard on all units.
Outdoor Air Relative Humidity	AI:8	aiOutHum	R	0-100%	-	The current reading from the optional outdoor air humidity sensor input. Applies when a sensor is installed and the unit is configured for this input.[1]
Space CO_2	AI:9	aiSpaceCO2	R	0-3000 ppm	-	The current reading from the optional space CO_2 sensor. Applies when a sensor is installed and the unit is configured for this input.[1] The sensor is required for demand controlled ventilation.
Duct Static Pressure	AI:10	aiDSP	R	0-5 in.w.c 0-12.7 cm	-	The current reading from the duct static pressure sensor input. Applies when unit is configured for DSP control.
Space Temperature	AI:11	RSSpaceTemp	R	-40-212°F -40-100°C	-	The current reading from the required room sensor space temperature input.

[1]There are three available inputs for humidity sensors. The unit controller comes with a factory-installed return humidity sensor. It also supports up to two additional factory or field-installed humidity and/or outdoor air humidity sensors.
[2]See "Alarms" section for alarm object details.
[3]If the sensor is not installed, configured, or communicating properly with the controller, BACnet displays the invalid value of 32767.0.

Table 5: Binary Inputs

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Freeze Stat	BI:1	biFreezeStatus	R	0= FREEZE 1= NORMAL	0=FREEZE	The freezestat input status. When a unit detects a freeze condition, the contact opens and an alarm is generated.[1]
Dirty Filter	BI:2	biChgFilter	R	0=NORM_OPEN 1=NORM_CLOSED	0=NORM_ OPEN	The filter switch input status. When the filter is dirty, the switch closes and generates an alarm indicating a filter change is required.[1]
Emergency Stop	BI:3	biEmergencyStop	R	0=STOP 1=RUN	0=STOP	The emergency stop input status. When conditions trigger the emergency switch-open (Stop), the unit de-energizes, shuts down and an alarm is generated.[1]
Outdoor Air Damper End Switch	BI:4	biOadEndSwitch	R	0=OPEN 1=CLOSED	0=OPEN	The outdoor air damper end switch input status.
Blocked Condensate	BI:5	biBlockedCond	R	0=WET 1=DRY	0=WET	The condensate blocked input status.
Air Flow Status	BI:6	biAirFlowStatus	R	0=NO_FLOW 1=FLOW	0= NO_FLOW	The air flow input status.

[1]See "Alarms" section for a description of binary inputs (not listed here) that support BACnet alarm objects.

Table 6: MultiState Values

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
BACnet Units of Measurement	MSV:1	MSTPUnitSupport	W	1=SI 2=English	1=English	Sets the type of units (English or Metric) passed from the unit controller to the BACnet network.
Clear Alarms	MSV:3	ClearAlms	W	1=No 2=ClrFlts 3=ClrPrblms 4=ClrWrngs 5=ClrAllAlms	1=No	Clears all active alarms or all active alarms by alarm class (problems, warnings, or faults).
Unit State	MSV:4	UnitState	R	1=OFF 2=HEAT 3=COOL 4=ECONO 5=ECONO_COOL 6=DEHUMID 7=FANONLY 8=OVERRIDE	1=OFF	The current operating mode of the unit.
Application Mode	MSV:5	AppModeSel	W	1=AUTO 2=HEAT 3=COOL 4=FANONLY 5=OFF	5=OFF	Network or remote user interface input for unit application mode. While it does not “force” the unit into any state, it does disable certain unit operations. For example, an Application Mode of “Cool” disables heating, “Heat” disables cooling, and “Fan Only” disables heating and cooling. The unit controller uses the last valid input it receives, regardless of the source.
Effective Occupancy	MSV:6	EffOcc	R	1=OCCUPIED 2=UNOCCUPIED 3=BYPASS 4=STANDBY	1=OCCU-PIED	Network or remote user interface input for unit occupancy mode. The effective occupancy is determined based on inputs from occupancy bypass override, occupancy scheduler, an internal schedule, and/or an occupancy sensor.
Network Occupancy Command	MSV:7	NetOccOrSel	W	1=OCCUPIED 2=UNOCCUPIED 3=BYPASS 4=STANDBY 5=NULL	1=OCCU-PIED	Network input command for unit occupancy mode. The network occupancy command overrides the local keypad/display. Reverts to its default value upon unit controller reset.
Occupancy Command	MSV:8	KeyOccOrSel	W	1=OCCUPIED 2=UNOCCUPIED 3=BYPASS 4=STANDBY 5=AUTO	5=AUTO	Input command for unit occupancy mode, provided from either the network or remote user interface.
Network Occupancy Schedule	MSV:9	NetOccSchedStat	W	1=OCCUPIED 2=UNOCCUPIED 3=STANDBY 4=NULL	1=OCCU-PIED	Network occupancy schedule input that commands the unit to the desired occupancy mode. MSV:9 is recommended for use with standard occupancy control. Applies when Occ Mode is set to Auto from the user interface. Reverts to its default value upon unit controller reset.
Occupancy Schedule Status	MSV:10	IntSchedStat	R	1=NULL 2=UNOCCUPIED 3=OCCUPIED	1=NULL	Status of the internal occupancy schedule. Applies to single event, holiday, and daily occupancy schedules.
Exhaust Fan Enable	MSV:11	ExhFnEnSel	W	1=DISABLED 2=ENABLED	2=ENABLED	Disables exhaust fan operation.
Dehumidification Type	MSV:12	DhumMethodSel	W	1=REL_HUM 2=DEWPT	1=REL_HUM	Selects the control setpoint for dehumidification. 1=REL_HUM: Relative humidity 2=DEWPT: Dewpoint Note that dehumidification is not available when the unit is in heating or cooling mode.
Economizer OAD End Switch Calibration Enable	MSV:13	EconEndSwCalibCmd	W	1=NO 2=YES	1=NO	Allows the unit controller to perform economizer outdoor air damper end switch calibration. Available only when the Econo FDD parameter for unit configuration is Enabled from the controller keypad/display.[1]

Table 6: MultiState Values, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Economizer Control Strategy Select	MSV:14	EconStrategySel	W	1=NONE 2=OAT 3=ENTHALPY_OUT 4=TEMP_ DIFF 5=ENTHALPY_DIFF	1=NONE	Selects the economizer control strategy. 1=NONE: The economizer is not configured. 2=OAT: The economizer controls to the outdoor air temperature sensor setpoint. 3=ENTHALPY_OUT: The economizer controls to the calculated outdoor air enthalpy setpoint. 4=TEMP_ DIFF: The economizer is enabled when the difference between the outdoor air temperature is below the indoor air temperature by more than the temperature differential set by the remote user interface. 5=ENTHALPY_DIFF: The economizer is enabled when the calculated outdoor air enthalpy is below the calculated indoor air enthalpy by more than the differential configuration parameter set from the remote user interface.
Return Air Damper Scaling	MSV:15	RADmprSclgSel	W	1=LINEAR 2=SQUARED	1=LINEAR	Determines the relationship between the return air damper voltage output and return air damper % capacity.
Outdoor Air Damper Scaling	MSV:16	OADScalingSel	W	1=LINEAR 2=SQUARED	1=LINEAR	Determines the relationship between the outdoor air damper voltage output and economizer % capacity.
OA Outdoor Air Lockout Enable	MSV:17	OATLckoutSel	W	1=DISABLED 2=ENABLED	1=DISABLED	Enables the outdoor air lockout function. When enabled, the unit forces the outdoor air damper closed when the outdoor air temperature is too cold and drops below the outdoor air lockout setpoint.
Filter Change Select	MSV:18	FilterChgSel	W	1=NONE 2=RUNTIME 3=BINARY_INPUT 4=BOTH	1=NONE	Configures the controller to send a dirty filter notification using one of these options: 1=NONE: No notification will be sent from the controller. 2=RUNTIME: Notification is sent based on the total amount of time that the fan has been running since the last change filter notice. 3=BINARY_INPUT: Notification is sent based on the unit controller digital input. 4=BOTH: Notification is sent based on either the fan run time or a digital input.
Heating Stage 1	MSV:19	boHtgStg1	R	1=OFF 2=ON	1=OFF	The heating stage 1 binary output status.
Heating Stage 2	MSV:20	boHtgStg2	R	1=OFF 2=ON	1=OFF	The heating stage 2 binary output status.
Heating Stage 3	MSV:21	boHtgStg3	R	1=OFF 2=ON	1=OFF	The heating stage 3 binary output status.
Heating Stage 4	MSV:22	boHtgStg4	R	1=OFF 2=ON	1=OFF	The heating stage 4 binary output status.
Cooling State 1	MSV:23	boClgStg1	R	1=OFF 2=ON	1=OFF	The cooling stage 1 binary output status.
Cooling State 2	MSV:24	boClgStg2	R	1=OFF 2=ON	1=OFF	The cooling stage 2 binary output status.
Cooling State 3	MSV:25	boClgStg3	R	1=OFF 2=ON	1=OFF	The cooling stage 3 binary output status.
Cooling State 4	MSV:26	boClgStg4	R	1=OFF 2=ON	1=OFF	The cooling stage 4 binary output status.
Supply Fan Enable	MSV:27	boSupFanEn	R	1=DISABLED 2=ENABLED	1=DISABLED	The supply fan binary output status.
Exhaust Fan Enable	MSV:28	boExhFanEn	R	1=DISABLED 2=ENABLED	1=DISABLED	The exhaust fan binary output status.
VAV Box Enable	MSV:29	boVAVBoxEn	R	1=DISABLED 2=ENABLED	1=DISABLED	The variable air volume (VAV) box binary output status.

Table 6: MultiState Values, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Economizer Enable	MSV:36	NetEconEn	W	1=DISABLED 2=ENABLED 3=NULL	3= NULL	Allows the network to enable or disable economizer operation. The network overrides the local keypad/display setting. When set to Enabled, the unit automatically enters economizing. Reverts back to default (Null) value upon unit controller reset.
Cool Enable	MSV:37	NetClgEn	W	1=DISABLED 2=ENABLED 3=NULL	3= NULL	Allows network to enable or disable cooling operation. The network overrides the local keypad/display setting. When set to Enabled, the unit automatically enters cooling. Reverts back to default (Null) value upon unit controller reset.
Heat Enable	MSV:38	NetHtgEn	W	1=DISABLED 2=ENABLED 3=NULL	3= NULL	Allows network to enable or disable heating operation. When set to Enabled, the unit automatically enters heating. Reverts back to default (Null) value upon unit controller reset.
Dehumidification Enable	MSV:39	NetDehumEn	W	1=DISABLED 2=ENABLED 3=NULL	3= NULL	Allows network to enable or disable dehumidification operation. When set to Enabled, the unit automatically enters dehumidification. Reverts back to default (Null) value upon unit controller reset.
Fan Cycling Select	MSV:40	FnCyclingSel	W	1=ON 2=CYCLE	1=ON	Sets the fan cycling strategy. 1=ON: Configures the supply fan to always be on when the unit is in an occupied state. 2=CYCLE: Configures the supply fan to cycle on and off with demand when the unit is in an occupied state.
Lead Compressor Select Method	MSV:41	LeadCmpSel	W	1=RUN_HOURS 2=COMP1	1=RUN_ HOURS	Selects the compressor staging method used to satisfy the cooling demand. 1=RUN_HOURS: The compressor with the lowest total runtime is energized first. 2=COMP1: The compressors are energized in numerical order (Cool to 1, Cool to 2...)

[1]Designed to meet Title 24 economizer standard standards for FDD (fault detection and diagnostics.)

Table 7: Analog Values for Temperature and System Setpoints

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Effective Space Humidity	AV:1	EffSpaceHum	R	0-100%	32767 (Null)[1]	The space humidity value provided by the network input, NetSpaceHum (AV:24). Otherwise, it reflects the local space humidity sensor input (including any calibration offsets) if installed. The analog input displays 32767 (invalid) if the sensor is not connected, configured, or is out of range. The network parameter takes priority over the sensor input.
Effective Space CO_2	AV:2	EffSpaceCO2	R	0-3000 ppm	32767 (Null)[1]	The space CO_2 value provided by the network input, NetSpaceCO2 (AV:22). Otherwise, it reflects the optional space CO_2 sensor input (including any calibration offsets) if installed. The analog input displays 32767 (invalid) if the sensor is not connected, configured, or is out of range. The network parameter takes priority over the sensor input.
Effective Space Temperature	AV:3	EffSpaceTemp	R	-40-212°F -40-100°C	32767 (Null)[1]	The space temperature value provided by the network input, NetSpaceTemp (AV:8). Otherwise, it reflects the analog input or space temperature sensor input (including any calibration offsets) if installed. The analog input displays 32767 (invalid) if the sensor is not configured or is out of range. The network parameter takes priority over the sensor input.

Table 7: Analog Values for Temperature and System Setpoints, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Effective Leaving Coil Temperature	AV:5	EffLCT	R	-40-212°F -40-100°C	32767 (Null)[1]	Reflects the current leaving coil temperature value provided by the network input. Otherwise, it reflects the LCT sensor input (including any calibration offsets) if installed. The analog input displays 32767 (invalid) if the sensor is not connected, configured, or is out of range. The network parameter takes priority over the sensor input.
Effective Entering Water Temperature	AV:6	EffEWT	R	-40-212°F -40-100°C	32767 (Null)[1]	Reflects the entering water temperature value provided by the network input, NetEWT (AV:9). Otherwise, it reflects the entering water temperature sensor input (including any calibration offsets) if installed. The analog input displays 32767 (invalid) if the sensor is not connected, configured, or is out of range. The network parameter takes priority over the sensor input.
Effective Outdoor Air Temperature	AV:7	EffOAT	R	-40-212°F -40-100°C	32767 (Null)[1]	Reflects the outdoor air temperature value provided by the network input, NetOAT (AV:10). Otherwise, it reflects the OAT sensor input (including any calibration offsets) if installed. The analog input displays 32767 (invalid) if the sensor is not connected, configured, or is out of range. The network parameter takes priority over the sensor input.
Network Space Temperature	AV:8	NetSpaceTemp	W	-40-212°F -40-100°C	32767 (Null)[1]	The network space temperature input value. If an input is not provided from the network, the temperature reverts to the local sensor value.
Network Entering Water Temperature	AV:9	NetEWT	W	-40-212°F -40-100°C	32767 (Null)[1]	The network entering water temperature input value. If an input is not provided from the network, the temperature reverts to the local sensor value.
Network Outdoor Air Temperature	AV:10	NetOAT	W	-40-212°F -40-100°C	32767 (Null)[1]	The network outdoor air temperature input value. If an input is not provided from the network, the temperature reverts to the local sensor value.
Occupied Cooling Setpoint	AV:11	OccClgSp	W	50-95°F 10-35°C	75°F 23.9°C	Space temperature setpoint that determines when the unit enters cooling mode. Applies when the effective occupancy is occupied.[4]
Occupied Heating Setpoint	AV:12	OccHtgSp	W	50-95°F 10-35°C	70°F 21.1°C	Space temperature setpoint that determines when the unit enters heating mode. Applies when the effective occupancy is occupied.[4]
Occupied Off Differential Setpoint	AV:13	OccOffDifSp	W	1-5°F 0.56-2.78°C	1°F 0.56°C	The temperature differential that determines when cooling or heating is no longer needed. Applies when the unit is in either occupied or standby mode.
Standby Cooling Setpoint	AV:14	StandbyClgSp	W	50-95°F 10-35°C	77°F 25°C	Space temperature setpoint that determines when the unit enters standby mode. Applies when the effective occupancy is in standby.
Standby Heating Setpoint	AV:15	StandbyHtgSp	W	50-95°F 10-35°C	66°F 18.9°C	Temperature heating setpoint when the unit is in standby mode.
Unoccupied Cooling Setpoint	AV:16	UnoccClgSp	W	50-95°F 10-35°C	85°F 29.4°C	Space temperature setpoint that determines when the unit starts up and provides cooling (night setup) during unoccupied periods.[4]
Unoccupied Heating Setpoint	AV:17	UnoccHtgSp	W	50-95°F 10-35°C	60°F 15.6°C	Space temperature setpoint that determines when the unit starts up and provides heating (night setup) during unoccupied periods.[4]
Unoccupied Off Differential Setpoint	AV:18	UnoccOffDifSp	W	1-5°F 0.56-2.78°C	1°F 0.56°C	Temperature setpoint differential that determines when cooling or heating is no longer needed when the unit is in unoccupied mode.
Discharge Air Temperature Heating Setpoint	AV:19	HtgDATSp	W	75-120°F 23.9-48.9°C	80°F 26.7°C	Temperature setpoint that modulates heating capacity when the unit is controlling the discharge air temperature. When the supply fan control strategy (cpSupFanCtrlSel) is set to either DSP or SZ_VAV and variable heating is available, the unit controls DAT. The unit does not control DAT when supply fan control is constant speed (CONST_SPEED).

Table 7: Analog Values for Temperature and System Setpoints, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Discharge Air Temperature Cooling Setpoint	AV:20	ClgDATSp	W	45-75°F 7.2-23.9°C	55°F 12.8°C	Temperature setpoint that modulates cooling capacity when the unit is controlling the discharge air temperature. When the supply fan control strategy (cpSupFanCtrlSel) is set to either DSP or SZ_VAV and variable cooling is available, the unit controls DAT. The unit does not control DAT when supply fan control is constant speed (CONST_SPEED).
Network Space CO2	AV:22	NetSpaceCO2	W	0-3000 ppm	32767 (Null)[1]	The space CO_2 input provided by the network. This value takes priority over a field wired CO_2 sensor. It is used for minimum OA economizer damper demand control ventilation.
Effective Outdoor Humidity	AV:23	EffOutHum	R	0-100%	32767 (Null)[1,5]	Reflects the effective outdoor air relative humidity input value provided by the outdoor air humidity sensor.
Network Space Humidity	AV:24	NetSpaceHum	W	0-100%	32767 (Null)[1]	The space relative humidity input provided by the network. This value takes priority over a field wired sensor. If the network value becomes unreliable, the space humidity defaults to the local sensor input.
Network Outdoor Humidity	AV:25	NetOutHum	W	0-100%	32767 (Null)[1]	The outdoor relative humidity input provided by the network. This value takes priority over a field wired sensor. If the network value becomes unreliable, it reflects the outdoor air sensor input.
Duct Static Pressure Setpoint	AV:26	DSPSp	W	0-5 in.w.c 0-12.7 cm	1.0 in.w.c 2.54 cm	The DSP setpoint for supply fan control.
Duct Static Pressure Deadband	AV:27	DspDB	W	0-5 in.w.c 0-12.7 cm	0.1 in.w.c 0.635 cm	Configures the supply fan duct static pressure deadband. The deadband is the fixed range limit on each side of the control setpoint value. Applies to units when supply fan is configured for either duct static pressure or single zone VAV. The unit controller relies on the PI loop to modulate discharge air temperature in order to maintain the DSP setpoint.
Duct Static Pressure Gain	AV:28	DspGain	W	0-255	0.1	Adjusts the "gain" value of the PI loop control function used to control the duct static pressure value. Applies when the unit is configured for DSP supply fan control.
Duct Static Pressure Project Ahead Time	AV:29	DspPAT	W	0-600 sec	60 sec	Sets the amount of time it takes for the supply air fan duct static pressure to reach a steady state. The "project ahead time" is used for supply air fan PI loop calibration.
Duct Static Pressure Sampling Period	AV:30	DspPeriod	W	1-600 sec	5 sec	Adjusts the period of time for which the supply air fan DSP is sampled between speed changes. The sample time must be long enough to allow the static pressure to get very close to steady state before another calculation is made.
Duct Static Pressure Max Change	AV:31	DspMaxChg	W	0-100%	5%	Sets the maximum increase or decrease (either positive or negative value) that is added to the current supply fan speed. Used when the duct pressure control setpoint is outside of the deadband and the minimum DspPeriod time has passed since the last speed change.
Single Zone VAV Deadband	AV:32	SzVavDB	W	0-5°F 0-2.78°C	1°F 0.56°C	Sets the supply fan deadband value. The deadband is the fixed range limit on each side of the control setpoint value. Applies when unit is configured for 1ZnVAV (single zone VAV) supply fan control.
Single Zone VAV Gain	AV:33	SzVavGain	W	0-255	2	Adjusts the “gain” value that the PI loop function uses to control supply fan speed. Applies when unit is configured for 1ZnVAV (single zone VAV) supply fan control.
Single Zone VAV Project Ahead Time	AV:34	SzVavPAT	W	0-600 sec	400 sec	Sets the amount of time it takes for the supply fan to reach a steady state. The PI loop function uses the “project ahead time” to control the supply fan speed. Applies when unit is configured for 1ZnVAV (single zone VAV) supply fan control.

Table 7: Analog Values for Temperature and System Setpoints, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Single Zone VAV Sampling Period	AV:35	SzVavPeriod	W	1-600 sec	60 sec	Sets the amount of sampling time the PI loop function uses to control supply fan speed. Applies when unit is configured for 1ZnVAV (single zone VAV) supply fan control.
Single Zone VAV Max Change	AV:36	SzVavMaxChg	W	0-100%	10%	Sets the maximum increase or decrease (either positive or negative value) used by the PI loop function to control supply fan speed. Applies when unit is configured for 1ZnVAV (single zone VAV) supply fan control.
Duct Static Pressure High Alarm	AV:37	DSPHighAlarmSetpt	W	2-5 in.w.c 5.1-12.7 cm	4.5 in.w.c 11.4 cm	Setpoint at which the unit controller provides a high duct static pressure alarm to the network.
Supply Fan Constant Speed	AV:39	SupFnCnstSpdSp	W	20-100%	75%	Sets the operating speed for the supply fan in constant speed control.
Supply Fan Minimum Speed	AV:40	SupFnMinSpdSp	W	20-100%	20%	Sets the minimum supply fan speed control signal regardless of operating mode.
Supply Fan Maximum Speed	AV:41	SupFnMxSpdSp	W	20-100%	100%	Sets the maximum supply fan speed control signal regardless of operating mode.
Supply Fan Dehumidification Speed	AV:42	SupFnDhumSpfSp	W	20-100%	50%	Sets the operating speed for the constant supply fan when the unit is in dehumidification mode.
Heating Valve Deadband	AV:44	HtgVlvDBSp	W	1-10°F 0.56-5.56°C	1°F 0.56°C	Sets the discharge air temperature deadband setpoint used for heating valve modulation. The deadband is the fixed range limit on each side of the control setpoint.
Heating Valve Sampling Period	AV:45	HtgVlvPeriodSp	W	1-600 sec	60 sec	Sets the sampling time used in the PI loop control function that modulates the heating valve setpoint value.
Heating Valve Gain	AV:46	HtgVlvGnSp	W	0-255	1.5	Adjusts the "gain" portion of the PI loop control function used to control the heating valve setpoint value.
Heating Valve Project Ahead Time	AV:47	HtgVlvPATSp	W	0-600 sec	90 sec	Sets the amount of time it takes for heating valve to reach a steady state. The “project ahead time” is used in the heating PI control function.
Heating Valve Max Change	AV:48	HtgVlvMxChgSp	W	0-100%	10%	Sets the maximum increase or decrease (either positive or negative value) of compressor heating used in the PI loop control function.
Cooling Valve Deadband	AV:49	ClgVlvDBSp	W	1-10°F 0.56-5.56°C	1°F 0.56°C	Sets the deadband value for cooling configurations. The deadband is the fixed range limit on each side of the cooling value control setpoint.
Cooling Valve Sampling Period	AV:50	ClgVlvPeriodSp	W	1-600 sec	20 sec	Sets the sampling time used in the PI loop control function that modulates the cooling valve setpoint value.
Cooling Valve Gain	AV:51	ClgVlvGnSp	W	0-255	1	Adjusts the "gain" portion of the PI loop control function used to control the cooling valve setpoint value.
Cooling Valve Project Ahead Time	AV:52	ClgVlvPATSp	W	0-600 sec	40 sec	Sets the amount of time it takes for the cooling valve to reach a steady state. The “project ahead time” is used in the cooling valve PI loop control function.
Cooling Valve Max Change	AV:53	ClgVlvMxChgSp	W	0-100%	15%	Sets the maximum increase or decrease (either positive or negative value) of the cooling valve used in the PI loop control function.
Compressor Minimum On Time	AV:54	CmpMnOnTmSp	W	60-600 sec	180 sec	The minimum amount of time the compressor must be energized before it can be de-energized.
Compressor Minimum Off Time	AV:55	CmpMnOffTmSp	W	300-600 sec	360 sec	The minimum amount of time the compressor must remain de-energized before it can be energized.
Compressor Cooling Timer	AV:56	ClgIStgTmrSp	W	0-600 sec	0 sec	Sets the amount of time between compressor cooling stages.
Electric Heat Interstage Timer	AV:58	HtgIStgTmrSp	W	0-600 sec	0 sec	Sets the amount of time between compressor heating stages.
Outdoor Air Damper Closed Position	AV:61	DmprClsdEndSwSp	W	0-100%	0%	Sets the outdoor air damper end switch closed position.[6]
Outdoor Air Damper Open Position	AV:62	DmprOpnEndSwSp	W	0-100%	100%	Sets the outdoor air damper end switch open position.[6]

Table 7: Analog Values for Temperature and System Setpoints, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Minimum Outdoor Air Damper Differential	AV:63	MnDmprSwDiffSp	W	0-50%	1%	Sets the differential above which the damper end switch indicates the damper is fully closed. This differential is calculated during OAD calibration.[3] Available only when the unit configuration parameter, Econo FDD5, is set to Enabled from the controller keypad/display.[6] Contact Daikin Applied Technical Support at 866-462-7829. Also refer to MicroTech PreciseLine OM 1357 for more information.
Maximum Outdoor Air Damper Differential	AV:64	MxDmprSwDiffSp	W	0-50%	1%	Sets the differential below which the damper end switch indicates the damper is fully open. This differential is calculated during OAD calibration.[3] Available only when the unit configuration parameter, Econo FDD5, is set to Enabled from the controller keypad/display.[6] Contact Daikin Applied Technical Support at 866-462-7829. Also refer to MicroTech PreciseLine OM 1357 for more information.
Economizer High Limit	AV:65	EconHighLimitSp	W	50-100°F 10-37.8°C	75°F 23.9°C	Temperature setpoint that determines when the economizer is providing too much outdoor air (when it is attempting to maintain a minimum outdoor air setpoint) and is therefore over-economizing.
Economizer Low Limit	AV:66	EconLowLimitSp	W	50-100°F 10-37.8°C	70°F 21.1°C	Temperature setpoint that determines when the economizer is not providing enough outdoor air (when it is attempting to bring in the maximum amount of outdoor air) and is therefore under-economizing.
Outdoor Air Damper Minimum Position	AV:67	OADMinSp	W	0-100%	20%	Minimum outdoor air damper position allowed when an outdoor air damper is configured and the fan is running.[6]
Outdoor Air Damper Maximum Position	AV:68	OADMaxSp	W	0-100%	100%	Maximum outdoor air damper position allowed when an outdoor air damper is configured and the fan is running.[6]
Economizer Outdoor Air Temperature	AV:69	EconOutTmpSp	W	0-100°F -17.78-37.8°C	70°C 21.1°C	Disables the economizer when the outdoor air temperature is above this setpoint.
Economizer Outdoor Air Enthalpy	AV:70	OutAirEnthSp	W	5-50 BTU 1.5-15 Wh	28 BTU 8.2 Wh	Enables the economizer when the calculated outdoor air enthalpy is at or below this setpoint. Applies to units configured for outdoor enthalpy economizer control.
Economizer Temperature Differential	AV:71	EconTmpDiffSp	W	1-10°F -17.2 - -12.2°C	2°F -16.7°C	Enables the economizer for cooling when the OAT is at or below the control temperature minus the outdoor/indoor temperature differential setpoint. Also disables the economizer when the OAT is at or above the control temperature. Apples to dry bulb economizers that use a temperature differential strategy.
Economizer Enthalpy Differential	AV:72	EconEnthDiffSp	W	1-10 BTU 0.29-2.9 Wh	2 BTU 0.59 Wh	Enables the economizer for cooling when the outdoor air enthalpy is at or below the indoor air enthalpy minus the indoor/outdoor air enthalpy differential setpoint. Also disables the economizer when the outdoor air enthalpy is at or above the indoor air enthalpy. Apples to economizers that use an enthalpy differential strategy.
Outdoor Air Temperature Lockout	AV:73	OATLckoutTmpSp	W	25-60°F -3.9-15.6°C	36°F 2.2°C	Disables the unit when the outdoor air temperature drops below this setpoint and when the lockout functionality is enabled.
Outdoor Air Damper CO_2 Minimum Position	AV:74	MnCO2Sp	W	0-3000 ppm	500 ppm	Sets the minimum outdoor air damper position when the CO_2 ppm is at or below this setpoint.
Outdoor Air Damper CO_2 Maximum Position	AV:75	MxCO2Sp	W	0-3000 ppm	2000 ppm	Sets the maximum outdoor air damper position when the CO_2 ppm is at or above this setpoint.
Indoor Relative Humidity Setpoint	AV:76	InHumSp	W	20-100%	60%	The indoor relative humidity setpoint used to determine when dehumidification is required
Indoor Relative Humidity Differential	AV:77	InHumDiffSp	W	1-10%	5%	Indoor relative humidity differential used to determine when the unit should exit the dehumidification mode.

Table 7: Analog Values for Temperature and System Setpoints, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Indoor Dewpoint Setpoint	AV:78	DewptSp	W	45-70° 7.2-21.1°C	55°F 12.8°C	The indoor dewpoint temperature setpoint used to determine when dehumidification is required.
Indoor Dewpoint Differential	AV:79	DewptDiffSp	W	0-10°F 0.56-5.56°C	2°F 1.11°C	Indoor dewpoint differential used to determine when the unit should exit the dehumidification mode.
Leaving Coil Temperature Setpoint	AV:80	LCTSp	W	45-75° 7.2-21.1°C	55°F 12.8°C	The current effective leaving coil setpoint when dehumidification is active. This setpoint applies only if the unit is equipped with modulating cooling (such as chilled water or variable speed compressor) and the reheat type is not None.
Discharge Air Temperature Dehumidification Setpoint	AV:81	DhumDATSp	W	55-80° 12.8-26.7°C	70°F 21.1°C	Sets the discharge air temperature reheat setpoint when the unit is in dehumidification mode.
Minimum Exhaust Fan Speed	AV:82	ExhFnSupFnMnSp	W	5-100%	5%	Minimum exhaust fan speed when supply fan is at minimum speed.
Maximum Exhaust Fan Speed	AV:83	ExhFnSupFnMxSp	W	20-100%	100%	Maximum exhaust fan speed when supply fan is at maximum speed.
Exhaust Fan Constant Speed	AV:84	ExhFnCnstSpdSp	W	0-100%	75%	Exhaust fan constant speed when supply fan is configured for constant speed.
Fiter Run Time	AV:85	FilterRuntime	W	0-300000 Hours	0 Hours	Total amount of time that the fan has been running since the last dirty filter reset occurred. Can be reset once filter is changed.
Supply Fan Run Time	AV:86	SupFanRuntime	W	0-300000 Hours	0 Hours	Total amount of time that the supply fan has been running. Can be reset after a new fan has been installed or replaced.
Exhaust Fan Run Time	AV:87	ExhFanRuntime	W	0-300000 Hours	0 Hours	Total amount of time that the exhaust fan has been running. Can be reset after a new fan has been installed or replaced.
Compressor 1 Runtime	AV:88	Cmp1Runtime	W	0-300000 Hours	0 Hours	Total amount of time that compressor 1 has been running. Can be reset in the event that the compressor is replaced.
Compressor 2 Runtime	AV:89	Cmp2Runtime	W	0-300000 Hours	0 Hours	Total amount of time that compressor 2 has been running. Can be reset in the event that the compressor is replaced.
Compressor 3 Run Time	AV:90	Cmp3Runtime	W	0-300000 Hours	0 Hours	Total amount of time that compressor 3 has been running. Can be reset in the event that the compressor is replaced.
Compressor 4 Runtime	AV:91	Cmp4Runtime	W	0-300000 Hours	0 Hours	Total amount of time that compressor 4 has been running. Can be reset in the event that the compressor is replaced.
Compressor 1 Starts	AV:92	Cmp1Starts	W	0-300000	0	Total number of times that compressor 1 has been started. Can be reset in the event that the compressor is replaced.
Compressor 2 Starts	AV:93	Cmp2Starts	W	0-300000	0	Total number of times that compressor 2 has been started. Can be reset in the event that the compressor is replaced.
Compressor 3 Starts	AV:94	Cmp3Starts	W	0-300000	0	Total number of times that compressor 3 has been started. Can be reset in the event that the compressor is replaced.
Compressor 4 Starts	AV:95	Cmp4Starts	W	0-300000	0	Total number of times that compressor 4 has been started. Can be reset in the event that the compressor is replaced.
Filter Change Hours	AV:96	ChgFilterTmSp	W	360-4320 Hours	1440 Hours	The number of hours the fan can run before a filter change is needed. A warning alarm is generated when the run time has exceeded this setpoint.
Outside Air Damper	AV:98	aoOADamper	R	0-10 VDC (0-100%)	-	The analog output signal used for outdoor air damper control. Indicates OAD is open at 10 VDC (100%).[2]
Return Air Damper	AV:99	aoReturnAirDamper	R	0-10 VDC (0-100%)	-	Reflects the analog output signal used for return air damper control. Indicates return air damper is closed at 10 VDC (100%).
Supply Fan Speed	AV:100	aoSupFanSpd	R	0-10 VDC (0-100%)	-	Reflects the analog output signal used for supply fan speed control.[2]
Exhaust Fan Speed	AV:101	aoExhFanSpd	R	0-10 VDC (0-100%)	-	Reflects the analog output signal used for exhaust fan speed control.[2]

Table 7: Analog Values for Temperature and System Setpoints, Continued

Point Name	Object Type/ Instance	BACnet Object Name	Read/ Write	Range (In Units)	Default	Description
Heating Valve and Electric Heat	AV:102	aoHtgVlvSCR	R	0-10 VDC (0-100%)	-	Reflects the hot water valve analog output for heating capacity. When needed, the unit switches to supplemental electric heat. Applies when the unit is configured for modulating electric heat (SCR).[2]
Cooling and Changeover Valve	AV:103	aoClgVlv	R	0-10 VDC (0-100%)	-	Reflects the voltage output that drives the chilled water valve to meet desired cooling capacity.[2]
Room Sensor Occupied Heating Setpoint	AV:104	RSOccHtgSp	R	50-95°F 10-35°C	32767 (Null)[1]	Reflects the room sensor heating temperature setpoint. Applies when space is occupied and control temperature source is set to space.
Room Sensor Occupied Cooling Setpoint	AV:105	RSOccClgSp	R	50-95°F 10-35°C	32767 (Null)[1]	Reflects the room sensor heating temperature setpoint. Applies when space is unoccupied and control temperature source is set to space.
Active Heating Setpoint	AV:106	HtgSp	R	50-95°F 10-35°C	32767 (Null)[1]	Reflects the active heating temperature setpoint.
Active Cooling Setpoint	AV:107	ClgSp	R	50-95°F 10-35°C	32767 (Null)[1]	Reflects the active cooling temperature setpoint.
Cooling Deadband	AV:113	CmpDBSp	W	1-10°F -17.2 - -12.2°C	1°F -17.2°C	Sets the discharge air temperature deadband value for compressor modulation, which is used during calibration. The deadband is the fixed range limit on each side of the DAT control setpoint.
Cooling Sampling Period	AV:114	CmpPeriodSp	W	1-600 Sec	10 Sec	Sets the amount of sampling time used with the compressor PI control function.
Cooling Gain	AV:115	CmpGnSp	W	0-255 in 0-647.7 cm	1 in 2.54 cm	Adjusts the "gain" value of the compressor PI loop control function.
Cooling Project Ahead Time	AV:116	CmpPATSp	W	0-600 Sec	100 Sec	Sets the amount of time it takes for compressor cooling to reach a steady state. The “project ahead time” is used in the cooling PI control function.
Cooling Max Change Setpoint	AV:117	CmpMxChgSp	W	0-10°F	1°F	Sets the maximum increase or decrease (either positive or negative value) of compressor cooling used in the PI control function.
Network Supply Fan Speed	AV:118	NetSupFanSpd	W	0-100%	32767 (Null)[1]	Supply fan speed input provided by the network.
Electric Heat Deadband	AV:119	ElHtgDBSp	W	1-10°F -17.2 - -12.2°C	1°F -17.2°C	Sets the deadband value for 2-4 stage electric heat configurations. The deadband is the fixed range limit on each side of the electric heat control setpoint value.
Electric Heat Sampling Period	AV:120	ElHtgPeriodSp	W	1-600 Sec	10 Sec	Sets the amount of sampling time used with the electric heating PI control function.
Electric Heat Gain	AV:121	ElHtgGnSp	W	0-255 in 0-647.7 cm	1 in 2.54 cm	Adjusts the "gain" value of the electric heating PI loop control function.
Electric Heat Project Ahead Time	AV:122	ElHtgPATSp	W	0-600 Sec	100 Sec	Sets the amount of time it takes for electric heat to reach a steady state. The “project ahead time” is used in the electric heating PI control function.
Electric Heat Max Change Setpoint	AV:123	ElHtgMxChgSp	W	0-10	1	Sets the maximum increase or decrease (either positive or negative value) of electric heat used in the PI control function.
Fault Alarm	AV:124	ActiveFault	R	0-299	0	Highest priority active fault alarm.
Problem Alarm	AV:125	ActiveProb	R	0-199	0	Highest priority active problem alarm.
Warning Alarm	AV:126	ActiveWarn	R	0-99	0	Highest priority active warning alarm.
Current Alarm	AV:127	ActiveAlarm	R	0-299	0	Highest priority active alarm. Alarm object = 0 if no alarms are active.

[1]The network value indicates 32767 (null or invalid) upon power-up or when network value is not in use.

[2] 0 VDC = 100% closed, 10 VDC = 100% open

[3] The outdoor air damper end switch input supports Title 24 economizer standard standards for FDD (fault detection and diagnostics.) Requires calibration by a qualified technician. The calibration sequence starts with a command position, at which the switches open and close at the closed and open ends of the damper modulation range. This function is a manually initiated sequence that strikes the dampers fully open, then fully closed, and detects the changes of state of the switch input and records the points where changes occur. Applies when the Unit State is Off and starting with the end switch input in the closed position and when the Calibrate OAD parameter is set from No to Yes from the remote user interface.

[4] The effective occupied/unoccupied setpoint values can be set from a network parameter, an analog input, or from an optional remote room sensor. When power is applied to the controller, the network value defaults to an invalid value of 32767 if not configured or receiving a command. A room sensor must be installed or the network value is invalid. The network value takes priority over the analog input, which takes priority over the room sensor.

[5] Effective values are provided by the BACnet network, analog input, or room sensor. The effective value set by the network takes priority. On power-up, the network value defaults to 32767 (Invalid). Also note that if an optional sensor is not installed, the effective value is invalid, even when a network value is provided.

[6] Supports Title 24 economizer standards for FDD (fault detection and diagnostics.)

Alarms

Alarms provide the user with information about abnormal conditions that affect unit operation. The cause of the alarm should be investigated and eliminated before the unit or any disabled equipment in it is placed back into service.

The MicroTech unit controller has various ways of managing alarms from the BACnet network. Alarms can be monitored and cleared using more than one method as described here.

Alarm Classes

Alarms in the unit controller are divided into three classes: Faults, Problems, and Warnings. Fault alarms have the highest priority. Problem alarms have the next priority. Warning alarms have the lowest priority.

Fault Alarms

Faults are conditions that are serious enough to completely shut down the unit. The alarm condition must be corrected and the alarm cleared before unit operation can resume. Fault alarms have the highest priority.

Problem Alarms

Problem alarms do not cause unit shutdown but do limit operation of the unit in some way. Some of these alarms must be cleared manually, others clear automatically when conditions return-normal. Problem alarms have the next highest priority.

Warning Alarms

Warnings are conditions that should be addressed, but do not limit operation in any way. Some of these alarms must be cleared manually, others will clear automatically when conditions return to normal. Warning alarms have the lowest priority.

Viewing Alarms

Each alarm is assigned a priority number from 1-299. Faults (200-299) have a higher priority than Problems (100-199) which have a higher priority than Warnings (1-99). Three separate values indicate the highest active alarm numbers by Fault, Problem and Warnings. BACnet alarm objects are set to zero if no alarms are active. Alarm objects are read-only.

Alarm notification is supported through ActiveAlarm (AV:127) The highest priority active alarm can be read directly from the ActiveAlarm object's Present_Value property. Only one highest priority alarm is displayed at a time. Refer to Table 8 and the following alarm tables for more information.

NOTE: A 30-alarm history is available from the remote user interface. It includes when each alarm has occurred and when it was cleared.

Clearing Alarms

Unit alarm reset and clearing has three main categories.

Manual

Once the alarm has occurred, the controller remains in the alarm state until the alarm has been cleared from BAS, unit controller keypad, the integrated thermostat sensor (if installed), or by cycling power to the controller.

Alarms can be cleared from the BAS using the BACnet ClearAlms (MSV:3) multistate variable object (Table 8). All active alarms are cleared automatically when power is cycled to the unit controller. If conditions that triggered the alarm are still present after a power cycle, the active alarm is re-initiated with a new date/time stamp.

NOTE: When the BAS indicates an alarm, it is best to investigate what has triggered the alarm and determine root cause. The purpose of writing to MSV:3 is to intentionally clear an active alarm. For best performance, do not continuously write to this point.

Automatic

The alarm clears once the alarm conditions have been resolved with no action necessary.

Intelligent Reset

The alarm clears automatically up to two times in a 7-day period once the alarm conditions have been resolved. The alarm must then be manually cleared if it occurs a third time within seven days. The alarms that support this feature display "Intel" in the Clear/Reset column of the alarm tables.

Table 8: BACnet Alarm Objects

Point Name	BACnet Object Name	Object Type/ Instance	Range	Description
Active Alarm	ActiveAlarm	AV:127	0-299	Highest priority active alarm along with a time stamp indicating when it occurred or None if there is no active alarm.
Warning Alarm	ActiveWarn	AV:126	1-99	Highest priority active warning alarm. When one or more faults are detected, they are sorted according to priority.
Problem Alarm	ActiveProb	AV:125	100-199	Highest priority active problem alarm. When one or more faults are detected, they are sorted according to priority.
Fault Alarm	ActiveFault	AV:124	200-299	Highest priority active fault alarm. When one or more faults are detected, they are sorted according to priority.
Clear Alarms	ClearAlms	MSV:3	1=No 2=ClrFlts 3=ClrPrblms 4=ClrWrngs 5=ClrAllAlms	Clears all active alarms or all active alarms in a particular alarm class. Default = 1 (None)

Alarm Tables

The following section describes alarms available to the network. Table 9 displays all alarms by priority, highest to lowest. Table 9 - Table 12 contain descriptions for fault, problem and warning alarms. When one or more alarms are detected in each class, they are sorted according to priority. Alarms are read-only.

The unit controller supports Intelligent alarm reset by clearing re-settable fault alarms (indicated as “Intel”) the first two times they occur within a 7-day period. It then triggers a lock-out on third fault alarm that must be cleared manually. A higher alarm number indicates a higher priority alarm.

Alarms can be monitored and cleared as described in the previous section. Available alarms depend on unit configuration.

Refer to the MicroTech PreciseLine unit controller OM 1357 (www.DaikinApplied.com) for full alarm descriptions.

Table 9: Alarms by Alarm Number

Alarm Number	Priority	Name	Description	Type	Clear
230	1	ControlModelFltAlm	Control Mode Fail	Fault	Automatic
225	2	FreezeFltAlm	Freeze Alarm	Fault	Manual
220	3	EmergStopFltAlm	Emergency Stop	Fault	Automatic
215	4	CtrlTempFltAlm	Control Temp Failure	Fault	Manual
210	5	AirFlwStatFltAlm	Airflow Alert	Fault	Intel[1]
205	6	DATSensFltAlm	Discharge Air Temp Sensor Fail	Fault	Automatic
188	7	BlockdCndPrbAlm	Blocked Condensate	Problem	Automatic
175	8	SpcSensPrbAlm	Space Temperature Sensor Fail	Problem	Automatic
165	9	DSPSensPrbAlm	Duct Static Pressure Sensor Fail	Problem	Automatic
160	10	EWTPrbAlm	Entering Water Temperature Sensor Fail	Problem	Automatic
155	11	EWTInadqtPrbAlm	Entering Water Temperature Inadequate	Problem	Automatic
150	12	OATSensPrbAlm	Outdoor Air Temperature Sensor Fail	Problem	Automatic
145	13	CO2SensPrbAlm	CO2 Sensor Fail	Problem	Automatic
140	14	OutHumSensPrbAlm	Outdoor Air Humidity Sensor Fail	Problem	Automatic
135	15	DhumDATLoPrbAlm	Dehumidification DAT Low	Problem	Intel[1]
130	16	SpcHumSensPrbAlm	Space Humidity Sensor Fail	Problem	Automatic
125	17	RATSensPrbAlm	Return Air Temp Sensor Fail	Problem	Automatic
120	18	LCTSensPrbAlm	Leaving Coil Temp Sensor Fail	Problem	Automatic
45	19	OADStuckWrnAlm	Outdoor Air Damper Stuck	Warning	Automatic
40	20	ExcessOutAirWrnAlm	Excess Outdoor Air	Warning	Automatic
35	21	UnderEconWrnAlm	Under Economizing	Warning	Automatic
30	22	OverEconWrnAlm	Over Economizing	Warning	Automatic
25	23	DSPAlertWrnAlm	Duct Static Pressure Alert	Warning	Automatic
20	24	ChgFilterWrnAlm	Change Filter	Warning	Automatic

[1] Intel = Intelligent Reset. The alarm clears automatically up to two times during a seven-day period. If the alarm occurs a third time during the seven day period, it requires a manual clear through the unit remote user interface, room sensor, or the network.

Table 10: Fault Alarms

Alarm (AV:124)	Object Type/ Instance	BACnet Object Name	Clear	Event_Enable (Default)			Description[3]
				To-OffNormal	To-Fault	To-Normal	
Emergency Stop 220	BI:7	EmergStopFltAlm	Automatic	X		X	Alarm is activated when the EmergencyStop input is STOP.[1]
Freeze Alarm 225	BI:8	FreezeFltAlm	Manual	X		X	The freeze alarm input has detected a freeze condition.[1]
Control Temp Failure 215	BI:9	CtrlTempFltAlm	Manual	X		X	Both the return air temperature and the space temperature senor inputs are either invalid/out of range value and are therefore unreliable.
Airflow Alert 210	BI:10	AirFlwStatFltAlm	Intel[2]	X		X	The airflow switch alert indicates insufficient supply air flow available for proper unit operation. Applies when the unit is configured for air flow sensing, the air flow status input indicates "No Flow," and the supply fan timer delay setpoint has been exceeded.
Discharge Air Temp Sensor Fail 205	BI:11	DATSensFltAlm	Automatic	X		X	The discharge air temperature sensor input is invalid or out of range. Alarm applies when the unit is configured for duct static pressure or VAV control.[4]
Control Mode Fail 230	BI:30	ControlModelFltAlm	Automatic	X		X	There application software is not compatible with the unit controller hardware. Contact the Daikin Applied Controls Customer Support group at 866-462-7829 or email DaikinControls@daikinapplied.com to acquire the correct software.

[1] An active alarm causes all valves and dampers to close as well as disables compressors, fans, electric heat (if applicable) and any VAVs.
[2] Intel = Intelligent Reset. The alarm clears automatically up to two times during a seven-day period. If the alarm occurs a third time during the seven day period, it requires a manual clear through the unit keypad, room sensor, or the network.
[3] Normal = 0, In Alarm = 1
[4] Open or short-circuited = 0, Closed = 1

Table 11: Problem Alarms

Alarm (AV:125)	Object Type/ Instance	BACnet Object Name	Clear	Event_Enable (Default)			Description[2]
				To-OffNormal	To-Fault	To-Normal	
Blocked Condensate 188	BI:12	BlockdCndPrbAlm	Automatic	X		X	The condensate overflow blocked input indicates a wet condition for more than 60 seconds. Applies when unit is in cooling or dehumidification.
Space Temperature Sensor Fail 175	BI:13	SpcSensPrbAlm	Automatic	X		X	The space sensor input is not providing a valid value or has become unreliable. Alarm clears automatically when the sensor becomes reliable.
Duct Static Pressure Sensor Fail 165	BI:14	DSPSensPrbAlm	Automatic	X		X	The duct static pressure sensor input is not within the allowable range for longer than the alarm delay default of 60 seconds. Alarm clears automatically when the sensor becomes reliable.
Entering Water Temperature Sensor Fail 160	BI:15	EWTPrbAlm	Automatic	X		X	The entering water temperature/leaving coil temperature sensor input is either out of range or is invalid. Applies to 2-pipe units configured with a heating/cooling valve. Alarm clears automatically when sensor input is reliable.
Entering Water Temperature Sensor Inadequate 155	BI:16	EWTInadqtPrbAlm	Automatic	X		X	The entering water temperature timer has expired and the input provided is outside of either the heating or cooling control temperature range. Alarm clears automatically when the temperature input returns to an adequate condition.
Outdoor Air Temperature Sensor Fail 150	BI:17	OATSensPrbAlm	Automatic	X		X	The OAT sensor is present and either shorted or opened for longer than the alarm delay default of 30 seconds. Alarm clears automatically when the sensor becomes reliable.

Table 11: Problem Alarms, Continued

Alarm (AV:125)	Object Type/ Instance	BACnet Object Name	Clear	Event_Enable (Default)			Description[2]
				To-OffNormal	To-Fault	To-Normal	
CO2 Sensor Fail 145	BI:18	CO2SensPrbAlm	Automatic	X		X	The CO_2 sensor is present and either shorted or opened for longer than the alarm delay default of 30 seconds. Alarm clears automatically when the sensor becomes reliable.
Outdoor Air Humidity Sensor Fail 140	BI:19	OutHumSensPrbAlm	Automatic	X		X	The OA humidity sensor is present and either shorted or opened for longer than the alarm delay default of 30 seconds. Alarm clears automatically when the sensor becomes reliable.
Dehumidification DAT Low 135	BI:20	DhumDATLoPrbAlm	Intel[1]	X		X	The discharge air temperature input is below the dehumidification discharge air temperature setpoint for more than five minutes. Applies when unit is in dehumidification and heating is at 100%.
Space Humidity Sensor Fail 130	BI:21	SpcHumSensPrbAlm	Automatic	X		X	The space humidity sensor is present and either shorted or opened for longer than the temperature alarm delay default of 30 seconds. Alarm clears automatically when the sensor becomes reliable.
Return Air Temp Sensor Fail 125	BI:22	RATSensPrbAlm	Automatic	X		X	The return air temperature sensor is present and either shorted or opened for longer than the temperature alarm delay default of 30 seconds. Alarm clears automatically when the sensor becomes reliable.
Leaving Coil Temp Sensor Fail 120	BI:23	LCTSensPrbAlm	Automatic	X		X	The entering water temperature/leaving coil temperature sensor input is either out of range or is invalid. This disables dehumidification. Alarm automatically clears when sensor indicates conditions have returned to normal.

[1] Intel indicates that the alarm supports intelligent reset. The alarm clears automatically up to two times during a seven-day period. If the alarm occurs a third time during the seven day period, it requires a manual clear through the unit keypad, room sensor, or the network.
[2] Normal = 0, In Alarm = 1

Table 12: Warning Alarms

Alarm (AV:126)	Object Type/ Instance	BACnet Object Name	Clear	Event_Enable (Default)			Description[1]
				To-OffNormal	To-Fault	To-Normal	
Duct Static Pressure Alert 25	BI:24	DSPAlertWrnAlm	Automatic	X		X	The duct static pressure is outside the setpoint range.
Over Economizing 30	BI:25	OverEconWrnAlm	Automatic	X		X	The unit is economizing when it should not be economizing.[2]
Change Filter 20	BI:26	ChgFilterWrnAlm	Automatic	X		X	The filter is dirty, and a filter change is required.[2]
Under Economizing 35	BI:27	UnderEconWrnAlm	Automatic	X		X	The unit is not economizing when it should be economizing.[2]
Excess Outdoor Air 40	BI:28	ExcessOutAirWrnAlm	Automatic	X		X	The unit is delivering excess outdoor air.[2]
Outdoor Air Damper Stuck 45	BI:29	OADStuckWrnAlm	Automatic	X		X	The outdoor air dampers may be stuck.[2]

[1] Normal = 0, In Alarm = 1
[2] Open or short-circuited = 0, Closed = 1

BACnet PICS

MicroTech PreciseLine Air Handler Unit Controller

This section contains the Protocol Implementation Conformance Statement (PICS) for the MicroTech Unit Controller by Daikin Applied as required by ANSI/ASHRAE Standard 135-2014, BACnet: A Data Communication Protocol for Building Automation and Control Networks.

Date	March 2023
Vendor Name	Daikin Applied
Product Name	MT4 PreciseLine
Product Model Number	MT4 Lite AHU
Application Software Version	2506036113
Firmware Revision	11.55
BACnet Protocol Version	1
BACnet Protocol Revision	15

Product Description

The MicroTech Unit Controller with native BACnet MS/TP is designed to operate the PreciseLine Air Handler and integrate it into a BACnet building automation system.

The unit controller provides normal temperature, static pressure and ventilation control and alarm monitoring with alarm-specific component shutdown in critical system conditions. Access to temperatures, pressures, operating states, alarm messages, control parameters and schedules is available through the portable interface keypad display and the BACnet control network.

BACnet Standardized Device Profile

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	BACnet Operator Display	(B-OD)
☐	BACnet Building Controller	(B-BC)
☒	BACnet Advanced Application Controller	(B-AAC)
☐	BACnet Application Specific Controller	(B-ASC)
☐	BACnet Smart Sensor	(B-SS)
☐	BACnet Smart Actuator	(B-SA)

BACnet Interoperability Building Blocks Supported

Data Sharing

Data Sharing – Read Property-A	DS-RP-A
Data Sharing – Read Property-B	DS-RP-B
Data Sharing – Read Property Multiple-A	DS-RPM-A
Data Sharing – Read Property Multiple-B	DS-RPM-B
Data Sharing – Write Property-A	DS-WP-A
Data Sharing – Write Property-B	DS-WP-B
Data Sharing – Write Property Multiple-B	DS-WPM-B
Data Sharing – Change of Value -A	DS-COV-A
Data Sharing – Change of Value -B	DS-COV-B

Alarm and Event Management

Alarm and Event – Notification Internal-B	AE-N-I-B
Alarm and Event – ACK-B	AE-ACK-B
Alarm and Event – Alarm Summary-B	AE-ASUM-B
Alarm and Event – Enrollment Summary-B	AE-ESUM-B
Alarm and Event – Information-B	AE-INFO-B

Device Management

Device Management – Dynamic Device Binding-A	DM-DDB-A
Device Management – Dynamic Device Binding-B	DM-DDB-B
Device Management – Dynamic Object Binding-B	DM-DOB-B
Device Management – Device Communication Control-B	DM-DCC-B
Device Management – Time Synchronization-B	DM-TS-B
Device Management – UTC Time Synchronization-B	DM-UTC-B
Device Management – Reinitialize Device-B	DM-RD-B
Device Management – Backup and Restore-B	DM-BR-B
Device Management – Object Creation and Deletion-B	DM-OCD-B

Scheduling

Scheduling – Internal-B	SCHED-I-B
Scheduling – External-B	SCHED-E-B

Trending

Trending – Viewing and Modifying Internal-B	T-VMT-I-B
Trending – Automated Trend Retrieval-B	T-ATR-B

Segmentation Capability

☒	Able-transmit segmented messages	Window size	1 for MS/TP
☒	Able-receive segmented messages	Window size	1 for MS/TP

Data Link Layer Options

☐	BACnet IP, (Annex J)	-
☐	BACnet IP, (Annex J), Foreign Device	-
☐	ISO 8802-3, Ethernet (Clause 7)	-
☐	ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)	-
☐	ANSI/ATA 878.1, RS-485 ARCNET (Clause 8)	-
☒	MS/TP master (Clause 9), baud rate(s)	9600 19200 38400 57600 76800 115200
☐	MS/TP slave (Clause 9), baud rate(s)	9600 19200 38400 57600 76800 115200
☐	Point-To-Point, EIA 232 (Clause 10), baud rate(s)	38400
☐	Point-To-Point, modem, (Clause 10), baud rate(s)	38400
☐	LonTalk, (Clause 11), medium	TP/FT-10
☐	Other	-

Device Address Binding

Is static device binding supported?	☐ Yes	☒ No

Character Sets Supported

NOTE: Support for multiple character sets does not imply they can be supported simultaneously.

☒ UTF-8	☐ IBM / Microsoft DBCS	☒ ISO 8859-1
☒ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS C 6226

Networking Options

☐	Router, Clause 6 (remote management functionality/BACnet PTP)		
☐	Annex H, BACnet Tunneling Router over IP		
☐	BACnet/IP Broadcast Management Device (BBMD) Number of BDT entries: 10 Number of FDT entries: 10		
-	Does the BBMD support registrations by foreign devices?	☒ Yes	☐ No

Standard Object Types Supported

Analog Inputs

Properties	Readable / Writable	Range restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
Present_Value	R[1]	-
Description	R	-
Status_Flags	R	-
Event_State	R	-
Reliability	R	-
Out_Of_Service	R	-
Units	R	-
Min_Pres_Value	R	-
Max_Pres_Value	R	-
COV_Increment	W[2]	-
Time_Delay	R	-
Notification_Class	R	-
High_Limit	R	-
Low_Limit	R	-
Deadband	R	-
Limit_Enable	W[3]	-
Event_Enable	W	-
Acked_Transitions	R	-
Notify_Type	R	-
Event_Time_Stamps	R	-
Property_List	R	-
Event_Detection_Enable	R	-

[1] Present_Value is not commandable or writeable.
[2] Changes to this property do not take effect until the power is cycled on the unit controller.
[3] This property is writeable via BACnet. However, it reverts to the unit controller value if the object is setup for Intrinsic Reporting. This is a safety feature so the network cannot disable alarms from occurring.

Analog Outputs

Properties	Readable / Writable	Range Restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
Present_Value	W	-
Description	R	-
Status_Flags	R	-
Event_State	R	-
Reliability	R	-
Out_Of_Service	R	-
Units	R	-
Min_Pres_Value	R	-
Max_Pres_Value	R	-
Priority_Array	R	-
Relinquish_Default	W	-
COV_Increment	W[1]	-
Time_Delay	R	-
Notification_Class	R	-
High_Limit	R	-
Low_Limit	R	-
Deadband	R	-
Limit_Enable	W	-
Event_Enable	W	-
Acked_Transitions	R	-
Notify_Type	R	-
Event_Time_Stamps	R	-
Property_List	R	-
Event_Detection_Enable	R	-

[1] Changes to this property do not take effect until the power is cycled on the unit controller.

Analog Values

Properties	Readable / Writable	Range Restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
Present_Value	W[1,3]	-
Status_Flags	R	-
Event_State	R	-
Reliability	R	-
Out_Of_Service	R	-
Units	R	-
Priority_Array	R	-
Relinquish_Default	W	-
COV_Increment	W[2]	-
Time_Delay	R	-
Notification_Class	R	-
High_Limit	R	-
Low_Limit	R	-
Deadband	R	-
Limit_Enable	W	-
Event_Enable	W	-
Acked_Transitions	R	-
Notify_Type	R	-
Event_Time_Stamps	R	-
Property_List	R	-
Event_Detection_Enable	R	-

[1] Present_Value is not commandable or writeable.
[2] Changes to this property do not take effect until the power is cycled on the unit controller.
[3] Priority 1 is reserved for the commandable objects application. BACnet writes at priority 1 will fail.

Binary Inputs

Properties	Readable / Writable	Range Restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
Present_Value	R[1]	-
Description	R	-
Status_Flags	R	-
Event_State	R	-
Reliability	R	-
Out_Of_Service	R	-
Polarity	R	-
Inactive_Text	R	-
Active_Text	R	-
Elapsed_Active_Time	W	Only 0
Time_Of_Active_Time_Reset	R	-
Time_Delay	R	-
Notification_Class	R	-
Alarm_Value	R	-
Event_Enable	W	-
Acked_Transitions	R	-
Notify_Type	R	-
Event_Time_Stamps	R	-
Property_List	R	-
Event_Detection_Enable	R	-

Binary Outputs

Properties	Readable / Writable	Range Restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
Present_Value	W	-
Description	R	-
Status_Flags	R	-
Event_State	R	-
Reliability	R[1]	-
Out_Of_Service	W	-
Polarity	W	-
Inactive_Text	R	-
Active_Text	R	-
Elapsed_Active_Time	W	Only 0
Time_Of_Active_Time_Reset	R	-
Priority_Array	R	-
Relinquish_Default	W	-
Time_Delay	R	-
Notification_Class	R	-
Feedback_Value	R	-
Event_Enable	W	-
Acked_Transitions	R	-
Notify_Type	R	-
Event_Time_Stamps	R	-
Property_List	R	-
Event_Detection_Enable	R	-

Multistate Values

Properties	Readable / Writable	Range Restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
Present_Value	W[1]	-
Description	R	-
Status_Flags	R	-
Event_State	R	-
Reliability	R	-
Out_Of_Service	R	-
Number_Of_States	R	-
State_Text	R	-
Priority_Array	R	-
Relinquish_Default	W	-
Time_Delay	R	-
Notification_Class	R	-
Alarm_Values	R	-
Fault_Values	R	-
Event_Enable	W	-
Acked_Transitions	R	-
Notify_Type	R	-
Event_Time_Stamps	R	-
Property_List	R	-
Event_Detection_Enable	R	-

[1] Present_Value is not commandable or writeable.

Device

Properties	Readable / Writable	Range Restrictions
Object_Identifier	R	-
Object_Name	R	-
Object_Type	R	-
System_Status	R	-
Vendor_Name	R	-
Vendor_Identifier	R	-
Model_Name	R	-
Firmware_Revision	R	-
Application_Software_Version	R	-
Description	W[1]	-
Location	Unsupported Property	-
Protocol_Version	R	1
Protocol_Revision	R	15
Protocol_Services_Supported	R	-
Protocol_Object_Types_Supported	R	-
Object_List	R	-
Max_APDU_Length_Accepted	W	50..1476, 50..480
Segmentation_Supported	W	-
Max_Segments_Accepted	W	2..16
Local_Time	R	-
Local_Date	R	-
UTC_Offset	W	-
Daylight_Savings_Status	R	-
APDU_Segment_Timeout	W	500..65535
APDU_Timeout	W	1000..65535
Number_Of_APDU_Retries	W	-
Max_Master (MS/TP only)	W	1-127
Max_Info_Frames (MS/TP only)	W	1-32
Device_Address_Binding	R	-
Database_Revision	R	-
Active_COV_Subscriptions	R	-

[1] Changeable via the remote user interface.

Revision History

Revision	Date	Changes
ED 19126	June 2023	Initial release
ED 19126-1	October 2023	Corrected a number of BACnet data point table default values and R/W access. Added ControlModelFltAlm. Fixed AV range values. Formatting updates to table headings. Table 7 Corrections include: Added AV:75 MxCO2Ap, AV:47 HtgVlvPATSp, AV:48 HtgVlvMxChgSp, AV:49 ClgVlvDBSp; corrected ranges for AV:44, AV:79, AV:65, AV:66 AV:69, AV:71, AV:113, AV:119 and changed default to 15% for AV:53. Corrected the Location object property to Unsupported and Description object property to writeable via the remote user interface (Table 1 and PICs, Device Properties.)

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