

Group: Controls

Part Number: ED 15113

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MicroTech[®] III

Applied Air Handling Unit Controller

Protocol Implementation Conformance Statement (PICS)

ANSI/ASHRAE 135-2004, BACnet[®]

RoofPak[™] Applied Rooftop Models: RPE, RDE, RPS, RDT, RFS, RCS, RDS and RAH

Self-Contained Models: SWP and SWT

Maverick[™] II Commercial Rooftop Model: MPS

Rebel[™] Model: DPS



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Introduction

This document contains the Protocol Implementation Conformance Statement (PICS) for the MicroTech III Unit Controller as required by ANSI/ASHRAE (American National Standards Institute/American Society of Heating, Refrigeration, and Air Conditioning Engineers) Standard 135-2008, BACnet; A Data Communication Protocol for Building Automation and Control Networks.

Notice

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Limited Warranty

Consult your local Daikin Representative for warranty details. Refer to Form 933- 430285Y.
To find your local Daikin Representative, go to www.DaikinApplied.com.

BACnet Protocol Implementation Conformance Statement

Date:	December 2011
Vendor Name:	Daikin Unit
Product Name:	Controller AHU
Product Model Number:	
Application Software Version - Rooftop and Self-Contained Models RDE, RPS, RDT, RFS, RDS, RAH, SWT, SWP and Maverick II, Model MPS	2506017400
Application Software Version - Rebel Packaged Rooftop, Model DPS	2506018100
Firmware Revision:	9.26
BACnet Protocol Revision:	Version 1 Revision 6

Product Description

The MicroTech III Unit Controller with optional BACnet Communication Module is a microprocessor-based controller designed to operate Air Handling Units (Applied Rooftop, Self-Contained, Maverick II Commercial Rooftop, and Rebel Packaged Rooftop) and integrate them into BACnet building automation systems.

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 an equipment-mounted keypad/display and the BACnet control network.

BACnet Standardized Device Profile

Based on BIBBs supported, the MicroTech III Unit Controller with optional BACnet Communications Module is a BACnet Building Controller (B-BC). Refer to the section below entitled BACnet Interoperability Building Blocks (BIBBs) Supported for a complete listing of BIBBs.

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

BACnet Interoperability Building Blocks (BIBBs) Supported

BIBB Name	Designation
Data Sharing – ReadProperty – B	DS-RP-B
Data Sharing – ReadPropertyMultiple – B	DS-RPM-B
Data Sharing – WriteProperty – B	DS-WP-B
Data Sharing – WritePropertyMultiple – B	DS-WPM-B
Data Sharing – COV – B	DS-COV-B
Data Sharing – ReadProperty – A	DS-RP-A
Data Sharing – ReadPropertyMultiple – A	DS-RPM-A
Data Sharing – WriteProperty – A	DS-WP-A
Data Sharing – COV – A	DS-COV-A
Alarm & Event – Notification Internal - B	AE-N-I-B
Alarm & Event – AcknowledgeAlarm - B	AE-ACK-B
Alarm & Event – ACK –B	AE-ACK-B
Alarm & Event – Information - B	AE-INFO-B
Alarm & Event – Alarm Summary - B	AE-ASUM-B
Alarm & Event – Event-Enrollment Summary - B	AE-ESUM-B
Scheduling – Internal - B	SCHED-I-B
Scheduling – External - B	SCHED-E-B
Trending – Viewing and Modifying Trends Internal – B	T-VMT-I-B
Trending – Automated Trend Retrieval – B	T-ATR-B
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 – TimeSynchronization – B	DM-TS-B
Device Management – UTCTimeSynchronization – B	DM-UTS-B
Device Management – Reinitialize Device – B	DM-RD-B
Device Management – List Manipulation – B	DM-LM-B
Device Management – Object Creation and Deletion – B	DM-OCD-B
Device Management – Backup and Restore – B	DM-BR-B
Network Management – Connection Establishment – A	NM-CE-A

Standard Object Types Supported

Object-Type	Creatable	Deleteable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
Analog Input	<input type="checkbox"/>	<input type="checkbox"/>	Description High_Limit Low_Limit COV_Increment Notification_Class Reliability Max_Pres_Value Min_Pres_Value Deadband Acked_Transitions Event_Enable Notify_Type Limit_Enable Time_Delay Event_Time_Stamps	Present_Value ¹ COV_Increment ² Event_Enable Limit_Enable ³
Analog Output	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Min_Pres_Value Max_Pres_Value COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Out_Of_Service Relinquish_Default High_Limit Low_Limit Deadband Limit_Enable COV_Increment ² Event_Enable
Analog Value	<input type="checkbox"/>	<input type="checkbox"/>	Description High_Limit Low_Limit COV_Increment Priority_Array Relinquish_Default Notification_Class Reliability Deadband Acked_Transitions Event_Enable Notify_Type Limit_Enable Time_Delay Event_Time_Stamps	Present_Value ^{1,6} COV_Increment ² Event_Enable

Object-Type	Creatable	Deleteable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
Binary Input	<input type="checkbox"/>	<input type="checkbox"/>	Description Inactive_Text Active_Text Notification_Class Reliability Acked_Transitions Event_Enable Alarm_Value Notify_Type Time_Delay Event_Time_Stamps Elapsed_Active_Time Time_Of_Active_Time_Reset	Present_Value Event_Enable Elapsed_Active_Time (only 0)
Binary Output	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Inactive_Text Active_Text Notification_Class Feedback_Value Acked_Transitions Event_Enable Notify_Type Time_Delay Event_Time_Stamps Elapsed_Active_Time Time_Of_Active_Time_Reset	Event_Enable Polarity Feedback_Value Relinquish_Default Elapsed_Active_Time (only 0)
Binary Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Inactive_Text Active_Text Priority_Array Relinquish_Default Notification_Class Reliability Acked_Transitions Event_Enable Alarm_Value Notify_Type Time_Delay Event_Time_Stamps Elapsed_Active_Time Time_Of_Active_Time_Reset	Acked_Transitions Event_Enable Present_Value ^{1,5} Elapsed_Active_Time (only 0)
Calendar	<input type="checkbox"/>	<input type="checkbox"/>	Description	Date_List (Max 10)

Object-Type	Creatable	Deleteable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
Device	<input type="checkbox"/>	<input type="checkbox"/>	Location Description Active_Cov_Subscription (<=50) ADPU_Segment_Timeout Local_Time Local_Date UTC_Offset Daylight_Savings_Status Max_Master (MS/TP only) Max_Info_Frames (MS/TP only) Max_Segments_Accepted Configuration_Files Last_Restore_Time Backup_Failure_Timeout	Description Location Max_ADPU_Length_Accepted(1476>= x >=50) UTC_Offset Max_Segments_Accepted ADPU_Segment_Timeout (>100) APDU_Timeout (>100) Number_Of_APDU_Retries Segmentation_Supported Max_Master (MS/TP only) Max_Info_Frames (MS/TP only)
Event_Enrollment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Object_Name Event_Type Notify_Type Event_Parameters Object_Property_Reference Event_Enable Notification_Class
File	<input type="checkbox"/>	<input type="checkbox"/>	Description	
Multi-State Input	<input type="checkbox"/>	<input type="checkbox"/>	Description State_Text Notification_Class Acked_Transitions Event_Enable Notify_Type Time_Delay Alarm_Values Fault_Values Reliability Event_Time_Stamps	Present_Value(if Out Of Service=True) Out_Of_Service Event_Enable Alarm_Values (max 16) Fault_Values (max 16)
Multi-State Output	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability State_Text Notification_Class Acked_Transitions Event_Enable Notify_Type Time_Delay Event_Time_Stamps Feedback_Value	Event_Enable Relinquish_Default (1...Number_Of_States)
Notification Class	<input type="checkbox"/>	<input type="checkbox"/>	Description	Recipient_List (Max 20) Priority Ack_Required

Object-Type	Creatable	Deleteable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	Description Weekly_Schedule Exception_Schedule	Present_Value ⁴ Schedule_Default Effective_Period Weekly_Schedule (Max 6 per day) Priority_For_Writing (1..16) Exception_Schedule List_Of_Object_Property_Refs
Multi-State Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Priority_Array Relinquish_Default Notification_Class Reliability Acked_Transitions Event_Enable Alarm_Values Fault_Values Notify_Type Time_Delay Event_Time_Stamps State_Text	Present_Value ¹ Event_Enable
Trend_Log	<input type="checkbox"/>	<input type="checkbox"/>	Description Start_Time Stop_Time Log_Device_Object_Property Log_Interval Client_COV_Increment Notification_Threshold Records_Since_Notification Last_Notify_record Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Start_Time Stop_Time Log_Device_Object_Property Log_Interval Client_COV_Increment Stop_When_Full Notification_Threshold Event_Enable

¹ Some objects of this type are read only. For those objects, the Present_Value is not commandable or writable.

² Changes to this property do not take effect until the power is cycled on the unit controller. After changing COV_Increment, you must wait at least one minute before cycling power. Otherwise, this change will not be saved.

³ Thought this property is writable via BACnet, if the object is setup for Intrinsic Reporting, this value will revert to the controller value. This is a safety feature so the network cannot disable alarms from occurring.

⁴ Writeable only if Out of Service is true. Also limited to multistate or analog.

⁵ Priority 5 is reserved for the application for commandable objects. BACnet writes at priority 5 will fail.

⁶ Priority 1 is reserved for the application for commandable objects. BACnet writes at priority 1 will fail.

Data Link Layer Options

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800
- MS/TP slave (Clause 9), baud rate(s):

Segmentation Capability

- Segmented requests supported Window Size: 4 for IP and 1 for MS/TP
- Segmented responses supported Window Size: 4 for IP and 1 for MS/TP

Device Address Binding

- Static Device Binding Yes
- No

Networking Options

- Router, Clause 6 – List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
 Number of BDT entries:
 Does the BBMD Support registration by Foreign Devices? Yes No

Character Sets Supported

- ANSI X3.4 IBM™/Microsoft™ DBCS ISO 8859-1
- ISO 10646 (UCS-2) ISO 10646 (UCS-4) JIS C 6226

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

This document contains the most current product information as of this printing. For the most current product information, please go to **www.DaikinApplied.com**.

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