

Group: **Controls**

Part Number: ED 15122

Date: April 2010

Supersedes: ED 15122

**MicroTech<sup>®</sup> III**  
**Pathfinder<sup>™</sup> Air Cooled Chiller Unit Controller**  
**Protocol Implementation Conformance Statement (PICS)**  
**ANSI/ASHRAE 135-2004, BACnet<sup>®</sup>**

- **Model AWS (with or without VFD)**



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## Revision History

ED 15122	November 2009	Preliminary release.
ED15122-1	April 2010	Updated software application version section to support AWS with VFDs.

## Reference Documents

Company	Number	Title	Source
McQuay International	ED 15120	MicroTech® III Chiller Unit Controller Protocol Document	www.mcquay.com
McQuay International	IM 966	MicroTech III Chiller Unit Controller BACnet® IP Communication Module Installation Manual	www.mcquay.com
McQuay International	IM 967	MicroTech III Chiller Unit Controller BACnet Communication Module (MS/TP) Installation Manual	www.mcquay.com
McQuay International	IM 1002 (50Hz ) IM 997 (60Hz)	Pathfinder™ Air Cooled Chiller Installation Manual	www.mcquay.com
McQuay International	OM 1051	Pathfinder Air Cooled Chiller Operation Manual	www.mcquay.com

## Notice

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## Limited Warranty

Consult your local McQuay Representative for warranty details. Refer to Form 933-430285Y. To find your local McQuay Representative, go to [www.mcquay.com](http://www.mcquay.com).

# Protocol Implementation Conformance Statement (PICS)

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This section contains the Protocol Implementation Conformance Statement (PICS) for the MicroTech III Chiller Unit Controller from McQuay International as required by ANSI/ASHRAE (American National Standards Institute/American Society of Heating, Refrigeration, and Air Conditioning Engineers) Standard 135-2004, BACnet; A Data Communication Protocol for Building Automation and Control Networks.

## BACnet Protocol Implementation Conformance Statement

Date:	April 2010
Vendor Name:	McQuay International
Product Name:	MicroTech III Chiller Unit Controller
Product Model Number:	AWS
Applications Software Versions:	2507500101 2507500201
Firmware Revision:	1.1.30s
BACnet Protocol Revision:	Version 1 Revision 4

## Product Description

The MicroTech III Chiller Unit Controller with optional BACnet Communication Module is a microprocessor-based controller designed to operate McQuay International Chiller Units and be integrated 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 Chiller Unit Controller with optional BACnet Communications Module is a BACnet Advanced Application Controller (B-AAC). Refer to the section below entitled BACnet Interoperability Building Blocks (BIBBs) Supported for a complete listing of BIBBS.

## 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 – WriteProperty – A	DS-WP-A
Data Sharing – COV – A	DS-COV-A
Alarm & Event – Notification Internal - B	AE-N-I-B
Alarm & Event – ACK –B	AE-ACK-B
Alarm & Event – Information - B	AE-INFO-B
Alarm & Event – Alarm Summary - B	AE-ASUM-B
Scheduling – Internal - B	SCHE-I-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

## Standard Object Types Supported

Object-Type	Creatable	Deletable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
Analog Input	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability COV_Increment High_Limit Low_Limit Notification_Class Min_Pres_Value Max_Pres_Value Deadband Acked_Transitions Event_Enable Notify_Type Limit_Enable Time_Delay Event_Time_Stamps	Present_Value <sup>1</sup> COV_Increment <sup>2</sup> Event_Enable
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	Present_Value COV_Increment <sup>2</sup> Event_Enable
Analog Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Priority_Array Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value <sup>1</sup> COV_Increment <sup>2</sup> Event_Enable

Object-Type	Creatable	Deletable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
Binary Input	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Inactive_Text Active_Text Notification_Class Acked_Transitions Event_Enable Alarm_Value Notify_Type Time_Delay Event_Time_Stamps	Present_Value Event_Enable
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	Present_Value Event_Enable
Binary Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Inactive_Text Active_Text Priority_Array Relinquish_Default Notification_Class Acked_Transitions Event_Enable Alarm_Value Notify_Type Time_Delay Event_Time_Stamps	Acked_Transitions Event_Enable Present_Value <sup>1</sup>
Device	<input type="checkbox"/>	<input type="checkbox"/>	Description Location Active_Cov_Subscription (<=50) Local_Time Local_Date UTC_Offset ADPU_Segment_Timeout Daylight_Savings_Status Max_Segments_Accepted Max_Master (MS/TP only) Max_Info_Frames (MS/TP only)	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)

Object-Type	Creatable	Deleteable	Optional Properties Supported	Writeable Properties Not Required To Be Writeable
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	
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
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 <sup>1</sup> Event_Enable
Notification Class	<input type="checkbox"/>	<input type="checkbox"/>	Description	Object_Name Description Recipient_List (Max 20) Priority Ack_Required
Calendar	<input type="checkbox"/>	<input type="checkbox"/>	Description	Date_List (Max 10)
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	Weekly_Schedule Exception_Schedule	Object_Name Effective_Period Weekly_Schedule Exception_Schedule List_Of_Object_Property_Refs

<sup>1</sup> Some objects of this type are read only. For those objects, the Present\_Value is not commandable or writable.

<sup>2</sup> 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.



This document contains the most current product information as of this printing. For the most current product information, please go to [www.mcquay.com](http://www.mcquay.com).

