Protocol Implementation Conformance Statement (Normative)

BACnet Protocol Implementation Conformance Statement

**For the BAC-12xxxx/13xxxx/14xxxx Series
FlexStat™ BACnet Programmable Thermostats (B-AAC)**

BACnet Protocol Implementation Conformance Statement
(BACnet Testing Laboratories Version)

Date: 13 August 2012
Vendor Name: KMC Controls
Product Name: FlexStat BACnet Programmable Thermostats
Product Model Number: BAC-12xxxx/13xxxx/14xxxx Series
Applications Software Version: N/A   **Firmware Revision:** R2.1.0.0
BACnet Protocol Revision: 4

Product Description:
The KMC FlexStat series of flexible, intelligent temperature/humidity/CO_2/occupancy-sensing, wall-mounted, thermostat/controllers are native BACnet Advanced Application Controllers (B-AAC) for connection with a BACnet system. The set-and-forget FlexStat simplifies networked zone control for common packaged HVAC equipment, such as single- and multi-stage packaged, unitary, and split systems (including high SEER/EER variable speed packaged equipment), as well as factory-packaged and field-applied economizers, water-source and air-to-air heat pumps, fan coil units, central station air handling units, and other similar applications.

In addition, an on-board library of programs permits a single model to be rapidly configured for a wide range of HVAC control applications. The FlexStat series also provides the capability to customize the standard library of sequences using KMC's TotalControl or BACstage programming tool. This enables a local authorized KMC installing contractor to adapt the standard library to the unique site needs and application specific requirements of a particular project.

Standard hardware options include a mix of output configurations (relays and analog outputs), optional on-board humidity/motion/CO_2 sensing, and inputs for additional remote external sensors such as outside air temperature and fan status sensors. An optional RJ-45 jack in addition to the screw terminals allows network communication to be selectable between BACnet IP, Ethernet, or MS/TP protocols.

The BAC-13xxxx series models have the T6613 CO_2 sensor with ABC (Automatic Background Calibration Logic) sensor calibration. The BAC-14xxxx series models have the T6615 CO_2 dual-beam self-calibrating sensor. These models are designed for use in demand control ventilation applications. BAC-12xxxx models do not have a CO_2 sensor but can use an external KMC SAE-11xx CO_2 sensor for DCV.

List all BACnet Interoperability Building Blocks supported (see Annex K in BACnet 2001):
AE-ACK-B, AE-ASUM-B, AE-ESUM-B, AE-INFO-B, AE-N-I-B, DM-LM-B, DM-BR-B, DM-DCC-B, DM-DDB-A, DM-DDB-B, DM-DOB-A, DM-DOB-B, DM-RD-B, DM-TS-B, DM-UTC-B, DS-COV-B, DS-RP-A, DS-RP-B, DS-RPM-A, DS-RPM-B, DS-WP-A, DS-WP-B, DS-WPM-A, DS-WPM-B, SCHED-I-B, T-ATR-B, T-VMT-I-B

Which of the following device binding methods does the product support? (check one or more)

☑ Send Who-Is, receive I-Am (BIBB DM-DDB-A)
☑ Receive Who-Is, send I-Am (BIBB DM-DDB-B)
☑ Send Who-Has, receive I-Have (BIBB DM-DOB-A)
☑ Receive Who-Has, send I-Have (BIBB DM-DOB-B)
☑ Manual configuration of recipient device's network number and MAC address
☐ None of the above

Standard Object Types Supported:

OBJECT	CREATABLE	DELETABLE	OPTIONAL PROPERTIES
Analog Input	No	No	COV_Increment, Description, and Device_Type
Analog Output	No	No	COV_Increment, Description, and Device_Type
Analog Value	No	No	COV_Increment, Description, Priority_Array, and Relinquish_Default
Binary Input	No	No	Active_Text, Description, Device_Type, and Inactive_Text
Binary Output	No	No	Active_Text, Description, Device_Type, Inactive_Text, Minimum_Off_Time, and Minimum_On_Time
Binary Value	No	No	Active_Text, Description, Inactive_Text, Priority_Array, Relinquish Default, Minimum_Off_Time, and Minimum_On_Time
Calendar	No	No	Description
Device	No	No	Active_COV_Subscriptions, APDU_Segment_Timeout, Backup_Failure_Timeout, Configuration_Files, Daylight_Savings_Status, Description, Last_Restore_Time, Local_Date, Local_Time, Location, Max_Master, Max_Info_Frames, Max_Segments_Accepted, and UTC_Offset
File	No	No	Description
Loop	No	No	Bias, COV_Increment, Derivative_Constant, Derivative_Constant_Units, Description, Integral_Constant, Integral_Constant_Units, Maximum_Output, Minimum_Output, Proportional_Constant, Proportional_Constant_Units, and Update_Interval
Notification	No	No	Description
Program	No	No	Description, Description_Of_Halt, Instance_Of, Program_Location, and Reason_For_Halt
Schedule	No	No	Description, Exception_Schedule, and Weekly_Schedule
Trend	No	No	Client_COV_Increment, COV_Resubscription_Interval, Description, Log_DeviceObjectProperty, Log_Interval, Start_Time, and Stop_Time
Event Enrollment	No	No	Description
Multi-state Value	No	No	Description, Priority_Array, Relinquish_Default, and State_Text

Data Link Layer Options (check all that are supported):

☑ BACnet IP, (Annex J)
    ☑ Able to register as a 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), baud rate(s) _____
☑ MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800
☐ MS/TP slave (Clause 9), baud rate(s): 9600, 19200, 38400, 76800
☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s): 9600, 19200, 38400
☐ Point-To-Point, modem, (Clause 10), baud rate(s): 9600, 19200, 38400
☐ LonTalk, (Clause 11), medium: _____
☐ Other: _____

Networking Options (check all that are supported):

☐ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.:
    BACnet IP, Ethernet 8802.3, MS/TP, PTP_____
☐ Annex H.3, BACnet Tunneling Router over UDP/IP
☐ BACnet/IP Broadcast Management Device (BBMD)
    Does the BBMD support registrations by Foreign Devices?   ☐ Yes   ☐ No

Segmentation Capability (check all that apply):

    ☑ Able to transmit segmented messages   Window Size 10
    ☑ Able to receive segmented messages   Window Size 10

Character Sets Supported (check all that apply):

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

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

If this product is a communication gateway, describe the non-BACnet equipment/network(s) that the gateway supports:
_____
_____
_____

Include any addition information about the product's BACnet capabilities relevant to interoperability:
_____
_____
_____