369464 Rev. A 1 07.13.11

BACnet® Protocol Implementation Conformance Statement (PICS)

Date: July 13, 2011
Vendor Name: Lutron Electronics Co., Inc.
Product Name: Quantum® BACnet® Integration
Applications Software Version: 2.0
Firmware Revision: 2.0
BACnet® Protocol Revision: 4
Vendor ID: 176

Product Description

BACnet® IP is embedded in the Quantum® processor. There are two types of BACnet® devices available in Quantum®: subsystem devices and area devices. The subsystem devices are main BACnet® devices; typically, one main device per floor of the building. The area devices are virtual BACnet® devices of the subsystem device. It is possible to have multiple subsystem devices in a project.

BACnet® Interoperability Building Blocks Supported (Annex K):

K.1.2 BIBB	Data Sharing	ReadProperty-B (DS-RP-B)
K.1.4 BIBB	Data Sharing	ReadPropertyMultiple-B (DS-RPM-B)
K.1.8 BIBB	Data Sharing	WriteProperty-B (DS-WP-B)
K.1.10 BIBB	Data Sharing	WritePropertyMultiple-B (DS-WPM-B)
K.1.12 BIBB	Data Sharing	COV-B (DS-COV-B)
K.5.2 BIBB	Device Management	DynamicDeviceBinding-B (DM-DDB-B)
K.5.4 BIBB	Device Management	DynamicObjectBinding-B (DM-DOB-B)

BACnet® Standardized Device Profile (Annex L):

BACnet® Application Specific Controller (B-SA)

Segmentation Capability:

Segmented requests supported? **No.** Window Size: **n/a**
Segmented responses supported? **No.** Window Size: **n/a**

Non-Standard Application Services:

Non-standard application services are not supported.

Standard Object Types Supported:

Device

1. Dynamically creatable using BACnet®'s CreateObject service? **No.**
2. Dynamically deletable using BACnet®'s DeleteObject service? **No.**
3. List of optional properties supported: **Active_COV_Subscriptions.**
4. List of all properties that are writable where not otherwise required by this standard: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Job Name:	**Model Numbers:**
Job Number:	

Analog Value

1. Dynamically creatable using the BACnet® CreateObject service? No.
2. Dynamically deletable using BACnet®'s DeleteObject service? No.
3. List of optional properties supported: Reliability, COV_Increment (See Table for objects that support this property).
4. List of all properties that are writable where not otherwise required by this standard: None.
5. List of proprietary properties: None.
6. List of any property value range restrictions: See Table.

Binary Value

1. Dynamically creatable using BACnet®'s CreateObject service? No.
2. Dynamically deletable using BACnet®'s DeleteObject service? No.
3. List of optional properties supported: Reliability, Active_Text, Inactive_Text.
4. List of all properties that are writable where not otherwise required by this standard: None.
5. List of proprietary properties: None.
6. List of any property value range restrictions: See Table.

Multi-State Value

1. Dynamically creatable using BACnet®'s CreateObject service? No.
2. Dynamically deletable using BACnet®'s DeleteObject service? No.
3. List of optional properties supported: Reliability, State_Text.
4. List of all properties that are writable where not otherwise required by this standard: None.
5. List of proprietary properties: None.
6. List of any property value range restrictions: See Table.

Data Link Layer Options:

Other: These devices are virtual devices and are represented by a six octet address equal to the 48-bit device instance of the virtual device.

Device Address Binding:

Is static device binding supported? No.

Networking Options:

BACnet®/IP Broadcast Management Device (BBMD)

Character Sets Supported:

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

ANSI X3.4

Object Name	Type	Instance	Read	Write	COV	Units	Min PV	Max PV	Inactive Text (0)	Active Text (1)	State Text (Multi-State)	Notes
{Area Name} {Instance}	DEVICE	{BASE}+{1000 to 9999}	X									Virtual device name is the area name, a space, and the instance number.
Lighting Level	AV	2	X	X		%	0	100				The present value read is the maximum level for all the zones in area. This value will be 100 percent if any zone is in daylighting state.
Lighting State	BV	3	X	X	X		0	1	Off	On		
Lighting Scene	MSV	4	X	X			1	{SCENES}+1			{SceneName}	Number of scenes and scene names are defined in Quantum database.
Daylighting Enabled	BV	5	X	X			0	1	Disabled	Enabled		
Daylighting Level	AV	6	X	X		%	0	100				
Permanently Disable Occupancy	BV	7	X	X			0	1	False	True		
Occupancy State	MSV	8	X		X		1	4				States 1 through 4 1: Unoccupied 2: Occupied 3: Afterhours 4: Unknown.
Unoccupied Level	AV	9	X	X		%	0	216				0 through 100; 0 = Off 101=Unaffected, 102=Daylighting, 200=Off Scene, 201-216=Scene Number (Scene 1 through Scene 16)
Occupied Level	AV	10	X	X		%	0	216				0 through 100; 0 = Off 101=Unaffected, 102=Daylighting, 200=Off Scene, 201-216=Scene Number (Scene 1 through Scene 16)

(continued on next page)

AV=Analog-Value, BV=Binary-Value, MSV=Multi-State-Value, PV=Present-Value

{BASE} is a 22-bit value set in the Lutron system configuration software (default 1760000).
{SYSTEM} is an 8-bit value set in the Lutron system configuration software (0 to 127).
{Instance} is a number defined in the Lutron system configuration software that is equal to the {BASE} number + {{SYSTEM} number +1
{Area Name} is a text string defined in the Lutron system configuration software
{SCENES} is the number of scenes defined for each area in the Lutron system configuration software
{SceneName} is a text string of the name of each scene that is defined in the Lutron system configuration software

Job Name:	Model Numbers:
Job Number:	

369464 Rev. A 4 07.13.11

Object Name	Type	Instance	Read	Write	COV	Units	Min PV	Max PV	Inactive Text (0)	Active Text (1)	State Text (Multi-State)	Notes
Additional Occupied Timeout	AV	11	X	X		min	0	42				
Loadshed Allowed	BV	12	X	X			0	1	No	Yes		
Loadshed Goal	AV	13	X	X			0	90				
Occupancy Mode	MSV	14	X	X			1	4				States 1 through 4 1: Inactive 2: Occupancy & Vacancy 3: Vacancy 4: NotApplicable
Number of Lamp Failures	AV	15	X		X		0	none				
Number of Devices Not Responding	AV	16	X		X		0	none				
Hyperion Enabled	BV	17	X	X			0	1	Disabled	Enabled		
Total Power	AV	18	X		X	watts	0	none				
Maximum Power	AV	19	X			watts	0	none				
Zone Level	AV	1000 to 1999	X	X		%	0	100				
{ShadeGroupName} Level	AV	2000 to 2999	X	X		%	0	100				{ShadeGroupName} is prefixed with Shade Group if name does not contain Shade Group.
{ShadeGroupName} Preset	MSV	3000 to 3999	X	X			1	34			{PresetName}	Names and text are defined in Quantum database. "Open" (state 1) and "Close" (state 31) are predefined. "n/a" means an undefined state.
Hyperion mode Sunny or Dark	BV	20	X	X			0	1	Dark	Sunny	Dark, Sunny	Used to override the Hyperion solar adaptive shade control system.

AV=Analog-Value, BV=Binary-Value, MSV=Multi-State-Value, PV=Present-Value

{BASE} is a 22-bit value set in the Lutron system configuration software (default 1760000).
{SYSTEM} is an 8-bit value set in the Lutron configuration software (0 to 127).
{ShadeGroupName} is a text string defined in the Lutron system configuration software
{PresetName} is a text string defined in the Lutron system configuration software

Job Name:	Model Numbers:
Job Number:	