Date: March 17, 2010
Vendor Name: Lithonia Lighting
Product Name: Synergy
Product Model Number: SYSC MLX
Applications Software Version: 
Firmware Revision: 2.67
BACnet Protocol Revision: 1.0

Product Description:
Synergy is a unique event driven lighting control system that integrates all aspects of lighting control into a single system platform. Synergy combines architectural dimming, low voltage switching, lighting automation and lighting energy management functions into a single scalable package capable of meeting the requirements of virtually any lighting control application.

BACnet Standardized Device Profile (Annex L):
- BACnet Operator Workstation (B-OWS)
- 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)


Segmentation Capability:
- Segmented requests supported
- Segmented responses supported
### Standard Object Types Supported:

#### Analog Input Object Type

1. Dynamically creatable using BACnet's CreateObject service?  No  
2. Dynamically deletable using BACnet's DeleteObject service?  No  
3. List of optional properties supported:  
   - Description, and Reliability.  
4. List of all properties that are writable where not otherwise required by this standard:  
   - Present_Value  
5. List of proprietary properties:  

<table>
<thead>
<tr>
<th>Property Identifier</th>
<th>Property Data Type</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strike_Count (512)</td>
<td>REAL</td>
<td>Number of OFF to ON transitions</td>
</tr>
<tr>
<td>Runtime Hours (513)</td>
<td>REAL</td>
<td>Number of hours present value is ON</td>
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6. List of any property value range restrictions:  

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</tr>
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<tbody>
<tr>
<td>Present_Value</td>
<td>0.0 – 100.0, resolution of 1.0.</td>
</tr>
</tbody>
</table>

#### Analog Output Object Type

1. Dynamically creatable using BACnet's CreateObject service?  No  
2. Dynamically deletable using BACnet's DeleteObject service?  No  
3. List of optional properties supported:  
   - Description, Reliability, Max_Pres_Value, and Min_Pres_Value.  
4. List of all properties that are writable where not otherwise required by this standard:  
   - Max_Pres_Value, Min_Pres_Value,  
   - Object_Identifier – Only of instances of SIMPLY5 dimmers; Will renumber (reposition) the SIMPLY5 dimmer on its loop.  
   - Strike_Count (512) – Resets the strike count and runtime hours to 0 regardless of value.  
   - Runtime Hours (513) - Resets the strike count and runtime hours to 0 regardless of value.  
5. List of proprietary properties:  

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</table>
| Present_Value      | 0.0 to 100.0, 1.0 resolution,  
|                    | 128.0 = STOP,  
|                    | 129.0 = LOWER,  
|                    | 130.0 = RAISE,  
|                    | 131.0 = BLINK,  
|                    | 132.0=FLASH (SIMPLY5 dimmers only),  
|                    | 255.0 = NULL, and  
|                    | 1000.0 * fade time (1/10 seconds) + level = FADE |
Analog Value Object Type

1. Dynamically creatable using BACnet's CreateObject service? No
2. Dynamically deletable using BACnet's DeleteObject service? No
3. List of optional properties supported:
   - Description, Reliability, Priority_Array, and Relinquish_Default.
4. List of all properties that are writable where not otherwise required by this standard
   - Member_List (42002) – Update an existing group member, delete an existing group member, append a new group member, delete all group members, and replace all group members.
5. List of proprietary properties:

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| Member_List (42002) | BACnetARRAY[n] of Unsigned | Each member consists of five unsigned values:  
   1. device_id – range 0-419403, with zero representing a local device. All other value being remote devices.  
   2. object_type – legal values are:  
      - 1=AO – SIMPLY5, SIMPLY5_GROUP, NODE_DIMMER, NODE_MAXSTAR, or NODE_RELAY  
      - 2=AV – NODE_GROUP  
      - 4=BO – SIMPLY5, SIMPLY5_GROUP, NODE_DIMMER, NODE_MAXSTAR, or NODE_RELAY  
      - 5=BV – NODE_PARTITION  
   3. instance_number – range depends on object type:  
      - When object_type is 1 (AO) or 4 (BO):  
        - 0-9999 for NODE_DIMMER or NODE_RELAY  
        - 10000-19999 for NODE_MAXSTAR  
        - 20000-29999 for SIMPLY5  
        - 30000-39999 for SIMPLY5_GROUP  
   4. level – range is 0-100 percent  
   5. fade_time – range is 0-6039 (00:00-99:99)  

   Taken together, these five values represent all the properties of one member (as specified by Array-Index) of the group specified by the AV objects instance number.

   For example, if property 42002 of instance 2101 of an AV object contains these values:
   `{0,2,2117,74,0,0,2,2118,43,0,0,2,2119,20,0}`
   then group 2101 has three members: groups 2117-2119. All the members are local, and all the members have a fade_time of zero. Each member has a unique level.

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| Present_Value       | 0.0 to 100.0, 1.0 resolution,  
                      | 128.0 = STOP,  
                      | 129.0 = LOWER,  
                      | 130.0 = RAISE,  
                      | 131.0 = BLINK,  
                      | 255.0 = NULL, and  
                      | 1000.0 * fade time (1/10 seconds) + level = FADE |
**Binary Input Object Type**

1. Dynamically creatable using BACnet's CreateObject service? No
2. Dynamically deletable using BACnet's DeleteObject service? No
3. List of optional properties supported:
   Description, Device_Type, and Reliability.
4. List of all properties that are writable where not otherwise required by this standard
   Device_Type, Group_Object_ID (42001), and Present_Value.
5. List of proprietary properties:

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<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group_Object_ID (42001)</td>
<td>BACnetObjectType</td>
<td>This object identifier represents the Synergy Group number this switch or button controls. The only supported object type is AV.</td>
</tr>
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**Binary Output Object Type**

1. Dynamically creatable using BACnet's CreateObject service? No
2. Dynamically deletable using BACnet's DeleteObject service? No
3. List of optional properties supported:
   Description, and Reliability.
4. List of all properties that are writable where not otherwise required by this standard
   Object_Identifier – Only of instances of SIMPLY5 dimmers; Will renumber (reposition) the SIMPLY5 dimmer on its loop.
   Strike_Count (512) – Resets the strike count and runtime hours to 0 regardless of value.
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5. List of proprietary properties:

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**Binary Value Object Type**

1. Dynamically creatable using BACnet's CreateObject service? No
2. Dynamically deletable using BACnet's DeleteObject service? No
3. List of optional properties supported:
   Description, Reliability, Priority_Array, and Relinquish_Default.
4. List of all properties that are writable where not otherwise required by this standard
   Present_Value.
5. List of proprietary properties:

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6. List of any property value range restrictions:
### File Object Type

1. Dynamically creatable using BACnet’s CreateObject service? No
2. Dynamically deletable using BACnet's DeleteObject service? No
3. List of optional properties supported:
   - Description.
4. List of all properties that are writable where not otherwise required by this standard
   - File_Size, and Script_Update (42003)
5. List of proprietary properties:
   - **Script_Update (42003)**
     - Property Data Type: UNSIGNED
     - Meaning: Writing 1 to instance 1 forces an immediate update of SINGLE.TXT.

### Device Object Type

1. Dynamically creatable using BACnet's CreateObject service? No
2. Dynamically deletable using BACnet's DeleteObject service? No
3. List of optional properties supported:
   - Description, Local_Time, Local_Date, UTC_Offset, Daylight_Savings_Status, APDU_Segment_Timeout, Max_Master, and Max_Info_Frames.
4. List of all properties that are writable where not otherwise required by this standard
   - Max_Master and Max_Info_Frames.
5. List of proprietary properties:
   - **514** Time Dawn
   - **515** Time Dusk
6. List of any property value range restrictions:
   - **Max_Info_Frames**: 1-255
   - **Max_Master**: 0-127
**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), baud rate(s): 156Kbps
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400
- MS/TP slave (Clause 9), baud rate(s): ________
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): ________
- Point-To-Point, modem, (Clause 10), baud rate(s): ________
- Lon Talk, (Clause 11), medium: __________
- Other: __________

**Device Address Binding:**

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.) ☐ 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)
  - Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No

**Character Sets Supported:**

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 (UCS-4)
- JIS C 6226

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

N/A