



IntesisBox® BACnet Server

Digitally Addressable Lighting Interface (DALI)

User Manual

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Gateway for the integration of DALI devices into BACnet MSTP or BACnet IP enabled monitoring and control systems.

Order codes:

IBBACDAL0640000, 64 DALI ballasts (1 DALI channel)

IBBACDAL1280000, 128 DALI ballasts (2 DALI channels)

INDEX

1	Description	7
1.1	Introduction	7
1.2	Functionality	8
1.3	Gateway's capacity	8
2	Protocol Implementation Conformance Statement	10
2.1	BACnet Standardized Device Profile (Annex L):	10
2.2	Segmentation Capability:	10
2.3	Data Link Layer Options:	10
2.4	Device Address Binding:	11
2.5	Networking Options:	11
2.6	Character Sets Supported	11
2.7	Gateway	11
3	BACnet Interoperability Building Blocks Supported (BIBBs)	12
3.1	Data Sharing BIBBs	12
3.2	Alarm and Event Management BIBBs	12
3.3	Scheduling BIBBs	13
3.4	Trending BIBBs	13
3.5	Network Management BIBBs	13
3.6	Device Management BIBBs	14
4	Service Types	15
5	Objects	16
5.1	Supported Object Types	16
5.2	Member objects	19
5.2.1	Gateway objects	19
5.2.2	ECG objects – all ballasts	19
5.2.3	ECG objects – Emergency ballasts (type = 1)	19
5.2.4	ECG objects – LED ballasts (type = 6)	20
5.2.5	Group objects	21
5.2.6	Broadcast objects	21
5.3	Objects and properties	21
5.3.1	IBOX-BAC-DALI (Device Object Type)	21
5.3.2	Uyxx_Ballast / Lamp Failure	24
5.3.3	Uyxx_Update All ECG Status	25
5.3.4	Uyxx_Ballast Status	26
5.3.5	Uyxx_Actual Level	28
5.3.6	Uyxx_Device Type	29
5.3.7	Uyxx_Physical Minimum Level	31
5.3.8	Uyxx_Min Level	33
5.3.9	Uyxx_Max Level	34
5.3.10	Uyxx_Power On Level	35
5.3.11	Uyxx_System Failure Level	36
5.3.12	Uyxx_Fade Time	37
5.3.13	Uyxx_Fade Rate	39
5.3.14	Uyxx_Arc Power Level	41
5.3.15	Uyxx_Arc Power Off / On	42
5.3.16	Uyxx_Step Down / Up	43
5.3.17	Uyxx_Recall Min Level	44
5.3.18	Uyxx_Recall Max Level	45
5.3.19	Uyxx_Go to Scene	46
5.3.20	Uyxx_Store Current Lvl as Scene	47
5.3.21	Uyxx_Clear/Remove Scene	48
5.3.22	Uyxx_Add to DALI Group	49
5.3.23	Uyxx_Remove to DALI Group	50
5.3.24	Uyxx_Set Fade Time	51
5.3.25	Uyxx_Set Fade Rate	53
5.3.26	Uyxx_Min Level	55
5.3.27	Uyxx_Max Level	56

5.3.28	Uyxx_Set Power-on Level	57
5.3.29	Uyxx_Set System-failure Level.....	58
5.3.30	Uyxx_Failure Status.....	59
5.3.31	Uyxx_Emergency Mode.....	61
5.3.32	Uyxx_Emergency Status	63
5.3.33	Uyxx_Emergency battery charge	65
5.3.34	Uyxx_Next Function Test.....	66
5.3.35	Uyxx_Next Duration Test.....	67
5.3.36	Uyxx_Function Test Interval	68
5.3.37	Uyxx_Duration Test Interval	69
5.3.38	Uyxx_Test Execution Timeout.....	70
5.3.39	Uyxx_Prolong Time	71
5.3.40	Uyxx_Duration Test Result	72
5.3.41	Uyxx_Lamp Total Operation Time	73
5.3.42	Uyxx_Emergency Level.....	74
5.3.43	Uyxx_Emergency Min Level	75
5.3.44	Uyxx_Emergency Max Level	76
5.3.45	Uyxx_Rated Duration.....	77
5.3.46	Uyxx_Features.....	78
5.3.47	Uyxx_Lamp Emergency Time	80
5.3.48	Uyxx_Rest	81
5.3.49	Uyxx_Inhibit	82
5.3.50	Uyxx_Re-Light/Reset Inhibit	83
5.3.51	Uyxx_Start Function Test	84
5.3.52	Uyxx_Start Duration Test.....	85
5.3.53	Uyxx_Stop Test	86
5.3.54	Uyxx_Reset Function T. Done Fl.....	87
5.3.55	Uyxx_Reset Duration T. Done Fl.....	88
5.3.56	Uyxx_Reset Lamp Time	89
5.3.57	Uyxx_Store T. Execution Timeout	90
5.3.58	Uyxx_Store Prolong Time.....	91
5.3.59	Uyxx_Store Function T. Interval	92
5.3.60	Uyxx_Store Duration T. Interval	93
5.3.61	Uyxx_Store Emergency Level	94
5.3.62	Uyxx_Failure Status.....	95
5.3.63	Uyxx_Gear Type.....	97
5.3.64	Uyxx_Dimming Curve	98
5.3.65	Uyxx_Possible Operating Modes	99
5.3.66	Uyxx_Features.....	100
5.3.67	Uyxx_Reference Running.....	102
5.3.68	Uyxx_Current Protector	103
5.3.69	Uyxx_Operating Mode.....	104
5.3.70	Uyxx_Fast Fade Time.....	105
5.3.71	Uyxx_Min Fast Fade Time.....	107
5.3.72	Uyxx_Reference System Power.....	109
5.3.73	Uyxx_Enable/Disable Curr. Prot.	110
5.3.74	Uyxx_Select Dimming Curve	111
5.3.75	Uyxx_Store Fast Fade Time	112
5.3.76	Gyxx_Arc Power Level	114
5.3.77	Gyxx_Arc Power Off / On	115
5.3.78	Gyxx_Step Down / Up	116
5.3.79	Gyxx_Recall Min Level	117
5.3.80	Gyxx_Recall Max Level	118
5.3.81	Gyxx_Go to Scene.....	119
5.3.82	Gyxx_Store Current Lvl as Scene	120
5.3.83	Gyxx_Clear/Remove Scene	121
5.3.84	Gyxx_Set Fade Time	122
5.3.85	Gyxx_Set Fade Rate	124
5.3.86	Gyxx_Set Min Level.....	126
5.3.87	Gyxx_Set Max Level.....	127
5.3.88	Gyxx_Set Power-on Level	128

5.3.89	Gyxx_Set System-failure Level	129
5.3.90	By_Arc Power Level	130
5.3.91	By_Arc Power Off / On	131
5.3.92	By_Step Up / Down	132
5.3.93	By_Recall Min Level	133
5.3.94	By_Recall Max Level	134
5.3.95	By_Go to Scene.....	135
5.3.96	By_Store Current Lvl as Scene	136
5.3.97	By_Clear/Remove Scene	137
5.3.98	By_Set Fade Time	138
5.3.99	By_Set Fade Rate	140
5.3.100	By_Set Min Level.....	142
5.3.101	By_Set Max Level.....	143
5.3.102	By_Set Power-on Level	144
5.3.103	By_Set System-failure Level	145
6	Connections	146
6.1	Powering the device	148
6.2	Connection to BACnet.....	148
6.2.1	BACnet IP	148
6.2.2	BACnet MSTP	148
6.3	Connection to DALI channel.....	148
6.4	Connection to the configuration tool.....	149
7	Set-up process and troubleshooting	150
7.1	Pre-requisites	150
7.2	IntesisBox MAPS. Configuration & monitoring tool for IntesisBox BACnet series	150
7.2.1	Introduction	150
7.2.2	Connection.....	150
7.2.3	Configuration tab	151
7.2.4	Signals	151
7.2.5	Sending the configuration to IntesisBox	152
7.2.6	Diagnostic	152
7.3	Set-up procedure.....	154
8	Electrical & Mechanical Features.....	155
9	Dimensions	156

1 Description

1.1 Introduction

This document describes the integration of DALI lighting ballasts with BACnet/IP or BACnet/MSTP protocol compatible devices or systems using the gateway IntesisBox BACnet Server - DALI.

The aim of this integration is to monitor and control DALI lighting ballasts, remotely, for your Control Center using any BACnet based control system or device, as if it was a part of the own BACnet system and vice-versa.

The gateway acts as a BACnet/IP Server or BACnet MSTP device in its BACnet interface, allowing other BACnet devices to perform subscription (COV) requests and reads/writes to its internal points. In current version of the device, following DALI device types are supported:

- DALI Fluorescent lights (DALI type 0)
- Emergency lights (DALI type 1)
- LED modules (DALI type 6)

All of them, regardless of its type, will be referred as 'ballasts', 'DALI devices' and 'ECGs' (Electronic Control Gears) indistinctively throughout the document.

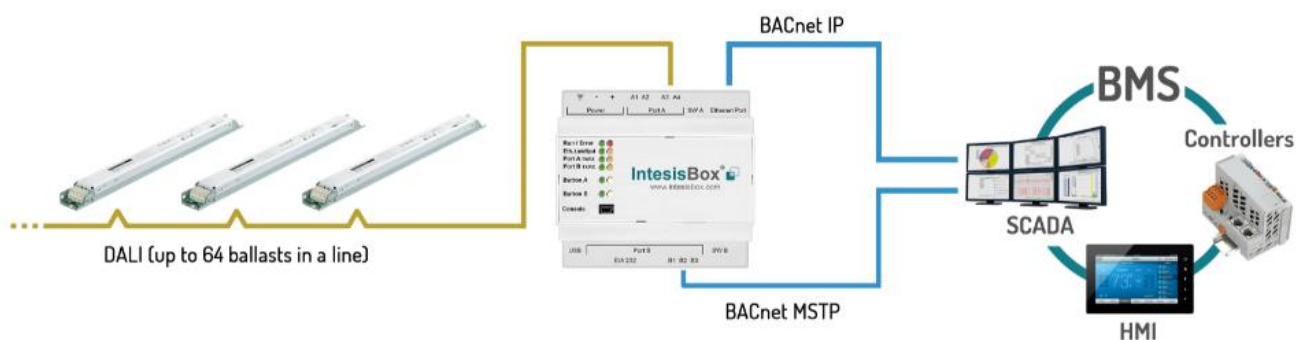
Up to 64 DALI lighting devices can be fitted in a single DALI channel, and therefore controlled and monitored from IntesisBox. Depending on the version of the gateway, 1 line (64 lighting devices) or 2 lines (128 lighting devices) are supported.

Version supporting 2 DALI channels does not have support for BACnet/MSTP – it's a BACnet/IP-only device.

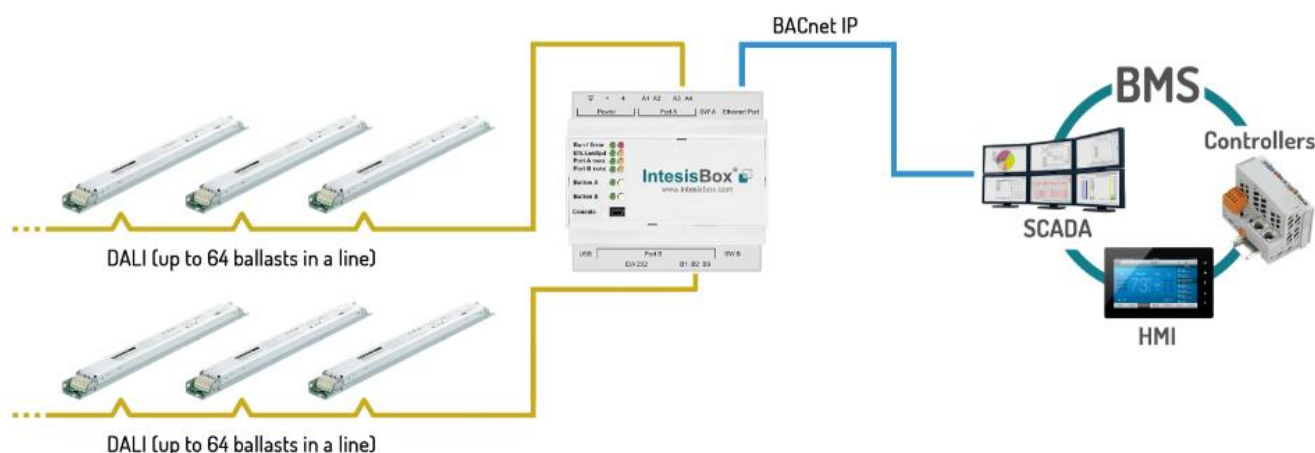
IntesisBox needs to be configured using IntesisBox MAPS software configuration tool. In the software, BACnet and DALI lighting ballast parameters must be configured and downloaded to the IntesisBox.



NOTE: There may be differences in the implementation of DALI among different ballasts and manufacturers. IntesisBox is compatible with Ballasts implementing the DALI standard and certified under the DiiA guidelines for testing and certification. Use only DALI devices having the DALI logo with IntesisBox.



Integration of DALI into BACnet IP / BACnet MSTP control systems (product version supporting 1 DALI channel)



Integration of DALI into BACnet IP / BACnet MSTP control systems (product version supporting 2 DALI channels)

This document assumes the user is familiar with BACnet and DALI technologies and technical terms.

1.2 Functionality

IntesisBox polls continuously the DALI lighting ballasts to obtain updated readings for the points configured in it (the corresponding points list is explained later in this document). With every read, the new values received are updated in the Intesisbox's memory and become available in the BACnet side. When a change in any point configured as output in IntesisBox is detected (this is, written from the BACnet side), the corresponding action in the DALI lighting ballasts will be performed.

In the continuous polling process of the DALI channel, if there is no answer, it is indicated with a virtual signal of communication error for this ballast in its line.

1.3 Gateway's capacity

IntesisBox capacity is listed below:

Element	Max.	Notes
Number of DALI channels	2	Number of independent DALI channels
Number DALI lighting devices per line	64	64 DALI lighting devices are supported per line
Max number of BACnet objects per DALI device	60	Number of available signals will vary according to device type
Max number of BACnet objects per DALI group	14	Number of available signals will vary according to device type

Max number of BACnet objects per LINE	4078	14 broadcast signals + 14 signals/DALI group + 60 signals/DALI device
---------------------------------------	------	---

There are 2 different models of *IntesisBox® BACnet Server – DALI* with different capacity. The table above shows the capacity for the top model (with maximum capacity).

The 2 different models allow integrating respectively: 1 or 2 DALI channels.

Their **order codes** are:

- **IBBACDAL0640000**. Model supporting 1 DALI channel (up to 64 DALI devices)
- **IBBACDAL1280000**. Model supporting 2 DALI channels (up to 64 DALI devices per channel, 128 in total)

2 Protocol Implementation Conformance Statement

BACnet Protocol Implementation Conformance Statement (PICS)

Date: 2018-05-09

Vendor Name: Intesis Software SLU

Product Name: IBOX-BAC-DALI

Product Model Number: IBOX-BAC-DALI

Application Software Version: 1.0

Firmware Revision: 1.0.0.0

BACnet Protocol Revision: 14

Product Description:

DALI – BACnet MS/TP & BACnet IP Gateway

Abstraction of DALI lighting ballasts registers as BACnet Objects.

2.1 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)

Additional BACnet Interoperability Building Blocks Supported (Annex K):
Reference of BIBBs List

2.2 Segmentation Capability:

Segmented request supported	☐ No	☒ Yes	Window Size · 16 ·
Segmented responses supported	☐ No	☒ Yes	Window Size · 16 ·

2.3 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) _____
- ☒ MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800, 115200
- ☐ 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): _____
- ☐ LonTalk, (Clause 11), medium: _____
- ☐ Other: _____

2.4 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

2.5 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

2.6 Character Sets Supported

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

- | | | |
|---|---|-------------------------------------|
| ☒ ISO 10646 (UTF-8) | ☐ IBM™/Microsoft™ DBCS | ☐ ISO 8859-1 |
| ☐ ISO 10646 (UCS-2) | ☐ ISO 10646 (UCS-4) | ☐ JIS X 0208 |

2.7 Gateway

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

DALI lighting ballasts.

3 BACnet Interoperability Building Blocks Supported (BIBBs)

3.1 Data Sharing BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
DS-RP-A	Data Sharing-ReadProperty–A	☐	ReadProperty	☒	☐
DS-RP-B	Data Sharing-ReadProperty–B	☒	ReadProperty	☐	☒
DS-RPM-A	Data Sharing-ReadPropertyMultiple–A	☐	ReadPropertyMultiple	☒	☐
DS-RPM-B	Data Sharing-ReadPropertyMultiple–B	☒	ReadPropertyMultiple	☐	☒
DS-RPC-A	Data Sharing-ReadPropertyConditional–A	☐	ReadPropertyConditional	☒	☐
DS-RPC-B	Data Sharing-ReadPropertyConditional–B	☐	ReadPropertyConditional	☐	☒
DS-WP-A	Data Sharing-WriteProperty–A	☐	WriteProperty	☒	☐
DS-WP-B	Data Sharing-WriteProperty–B	☒	WriteProperty	☐	☒
DS-WPM-A	Data Sharing-WritePropertyMultiple–A	☐	WritePropertyMultiple	☒	☐
DS-WPM-B	Data Sharing-WritePropertyMultiple–B	☒	WritePropertyMultiple	☐	☒
DS-COV-A	Data Sharing-COV–A	☐	SubscribeCOV	☒	☐
		☐	ConfirmedCOVNotification	☐	☒
		☐	UnconfirmedCOVNotification	☐	☒
DS-COV-B	Data Sharing-COV–B	☒	SubscribeCOV	☐	☒
		☒	ConfirmedCOVNotification	☒	☐
		☒	UnconfirmedCOVNotification	☒	☐
DS-COVP-A	Data Sharing-COVP–A	☐	SubscribeCOVProperty	☒	☐
		☐	ConfirmedCOVNotification	☐	☒
		☐	UnconfirmedCOVNotification	☐	☒
DS-COVP-B	Data Sharing-COVP–B	☐	SubscribeCOVProperty	☐	☒
		☐	ConfirmedCOVNotification	☒	☐
		☐	UnconfirmedCOVNotification	☒	☐
DS-COVU-A	Data Sharing-COV-Unsubscribed–A	☐	UnconfirmedCOVNotification	☐	☒
DS-COVU-B	Data Sharing-COV-Unsubscribed –B	☐	UnconfirmedCOVNotification	☒	☐

3.2 Alarm and Event Management BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
AE-N-A	Alarm and Event-Notification–A	☐	ConfirmedEventNotification	☐	☒
		☐	UnconfirmedEventNotification	☐	☒
AE-N-I-B	Alarm and Event-Notification Internal–B	☒	ConfirmedEventNotification	☒	☐
		☒	UnconfirmedEventNotification	☒	☐
AE-N-E-B	Alarm and Event-Notification External–B	☐	ConfirmedEventNotification	☒	☐
		☐	UnconfirmedEventNotification	☒	☐
AE-ACK-A	Alarm and Event-ACK–A	☐	AcknowledgeAlarm	☒	☐
AE-ACK-B	Alarm and Event-ACK–B	☒	AcknowledgeAlarm	☐	☒
AE-ASUM-A	Alarm and Event-Alarm Summary–A	☐	GetAlarmSummary	☒	☐
AE-ASUM-B	Alarm and Event-Alarm Summary–B	☒	GetAlarmSummary	☐	☒
AE-ESUM-A	Alarm and Event-Enrollment Summary-A	☐	GetEnrollmentSummary	☒	☐
AE-ESUM-B	Alarm and Event-Enrollment Summary-B	☐	GetEnrollmentSummary	☐	☒
AE-INFO-A	Alarm and Event-Information–A	☐	GetEventInformation	☒	☐
AE-INFO-B	Alarm and Event-Information–B	☒	GetEventInformation	☐	☒
AE-LS-A	Alarm and Event-LifeSafety–A	☐	LifeSafetyOperation	☒	☐
AE-LS-B	Alarm and Event-LifeSafety–B	☐	LifeSafetyOperation	☐	☒

3.3 Scheduling BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
SCHED-A	Scheduling–A (must support DS-RP-A and DS-WP-A)	☐			
SCHED-I-B	Scheduling-Internal–B (shall support DS-RP-B and DS-WP-B) (shall also support either DM-TS-B or DS-UTC-B)	☒			
SCHED-E-B	Scheduling-External–B (shall support SCHED-I-B and DS-WP-A)	☐			

3.4 Trending BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
T-VMT-A	Trending - Viewing and Modifying Trends–A	☐	ReadRange	☒	☐
T-VMT-I-B	Trending - Viewing and Modifying Trends Internal–B	☒	ReadRange	☐	☒
T-VMT-E-B	Trending - Viewing and Modifying Trends External–B	☐	ReadRange	☐	☒
T-ATR-A	Trending - Automated Trend Retrieval–A	☐	ConfirmedEventNotification	☐	☒
		☐	ReadRange	☒	☐
T-ATR-B	Trending - Automated Trend Retrieval–B	☒	ConfirmedEventNotification	☒	☐
		☒	ReadRange	☐	☒
T-VMMV-I-B	Trending – Viewing and Modifying Multiple Values Internal–B	☒	ReadRange	☐	☒

3.5 Network Management BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
NM-CE-A	Network Management - Connection Establishment–A	☐	Establish-Connection-To-Network	☒	☐
		☐	Disconnect-Connection-To-Network	☒	☐
NM-CE-B	Network Management - Connection Establishment– B	☐	Establish-Connection-To-Network	☐	☒
		☐	Disconnect-Connection-To-Network	☐	☒
NM-RC-A	Network Management - Router Configuration–A	☐	Who-Is-Router-To-Network	☒	☐
		☐	I-Am-Router-To-Network	☐	☒
		☐	I-Could-Be-Router-To-Network	☐	☒
		☐	Initialize-Routing-Table	☒	☐
NM-RC-B	Network Management - Router Configuration–B	☐	Initialize-Routing-Table-Ack	☐	☒
		☐	Who-Is-Router-To-Network	☒	☒
		☐	I-Am-Router-To-Network	☒	☒
		☐	Initialize-Routing-Table	☐	☒
		☐	Initialize-Routing-Table-Ack	☒	☐

3.6 Device Management BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
DM-DDB-A	Device Management - Dynamic Device Binding–A	☒	Who-Is	☒	☐
		☒	I-Am	☐	☒
DM-DDB-B	Device Management - Dynamic Device Binding–B	☒	Who-Is	☐	☒
		☒	I-Am	☒	☐
DM-DOB-A	Device Management - Dynamic Object Binding–A	☐	Who-Has	☒	☐
		☐	I-Have	☐	☒
DM-DOB-B	Device Management - Dynamic Object Binding–B	☒	Who-Has	☐	☒
		☒	I-Have	☒	☐
DM-DCC-A	Device Management - DeviceCommunicationControl–A	☐	DeviceCommunicationControl	☒	☐
DM-DCC-B	Device Management - DeviceCommunicationControl–B	☒	DeviceCommunicationControl	☐	☒
DM-PT-A	Device Management - PrivateTransfer–A	☐	ConfirmedPrivateTransfer	☒	☐
		☐	UnconfirmedPrivateTransfer	☒	☐
DM-PT-B	Device Management - PrivateTransfer–B	☐	ConfirmedPrivateTransfer	☐	☒
		☐	UnconfirmedPrivateTransfer	☐	☒
DM-TM-A	Device Management - Text Message–A	☐	ConfirmedTextMessage	☒	☐
		☐	UnconfirmedTextMessage	☒	☐
DM-TM-B	Device Management - Text Message–B	☐	ConfirmedTextMessage	☐	☒
		☐	UnconfirmedTextMessage	☐	☒
DM-TS-A	Device Management - TimeSynchronization–A	☐	TimeSynchronization	☒	☐
DM-TS-B	Device Management - TimeSynchronization–B	☒	TimeSynchronization	☐	☒
DM-UTC-A	Device Management - UTCTimeSynchronization–A	☐	UTCTimeSynchronization	☒	☐
DM-UTC-B	Device Management - UTCTimeSynchronization–B	☐	UTCTimeSynchronization	☐	☒
DM-RD-A	Device Management - ReinitializeDevice–A	☐	ReinitializeDevice	☒	☐
DM-RD-B	Device Management - ReinitializeDevice–B	☒	ReinitializeDevice	☐	☒
DM-BR-A	Device Management - Backup and Restore–A	☐	AtomicReadFile	☒	☐
		☐	AtomicWriteFile	☒	☐
		☐	CreateObject	☒	☐
		☐	ReinitializeDevice	☒	☐
DM-BR-B	Device Management - Backup and Restore–B	☐	AtomicReadFile	☐	☒
		☐	AtomicWriteFile	☐	☒
		☐	ReinitializeDevice	☐	☒
DM-R-A	Device Management - Restart–A	☐	UnconfirmedCOVNotification	☐	☒
DM-R-B	Device Management - Restart–B	☐	UnconfirmedCOVNotification	☒	☐
DM-LM-A	Device Management - List Manipulation–A	☐	AddListElement	☒	☐
		☐	RemoveListElement	☒	☐
DM-LM-B	Device Management - List Manipulation–B	☐	AddListElement	☐	☒
		☐	RemoveListElement	☐	☒
DM-OCD-A	Device Management - Object Creation and Deletion–A	☐	CreateObject	☒	☐
		☐	DeleteObject	☒	☐
DM-OCD-B	Device Management - Object Creation and Deletion–B	☐	CreateObject	☐	☒
		☐	DeleteObject	☐	☒
DM-VT-A	Device Management - Virtual Terminal–A	☐	VT-Open	☒	☐
		☐	VT-Close	☒	☒
		☐	VT-Data	☒	☒
DM-VT-B	Device Management - Virtual Terminal–B	☐	VT-Open	☐	☒
		☐	VT-Close	☒	☒
		☐	VT-Data	☒	☒

4 Service Types

Service type	Service name	Supported	Remarks
Alarm and Event Services	AcknowledgeAlarm	☒	
	ConfirmedCOVNotification	☐	
	ConfirmedEventNotification	☐	
	GetAlarmSummary	☒	
	GetEnrollmentSummary	☐	
	SubscribeCOV	☒	
File Access Services	AtomicReadFile	☐	
	AtomicWriteFile	☐	
Object Access Services	AddListElement	☐	
	RemoveListElement	☐	
	CreateObject	☐	
	DeleteObject	☐	
	ReadProperty	☒	
	ReadPropertyConditional	☐	
	ReadPropertyMultiple	☒	
	ReadRange	☒	
	WriteProperty	☒	
	WritePropertyMultiple	☒	
Remote Device Management Services	DeviceCommunicationControl	☒	
	ConfirmedPrivateTransfer	☐	
	ConfirmedTextMessage	☐	
	ReinitializeDevice	☒	
Virtual Terminal Services	VtOpen	☐	
	VtClose	☐	
	VtData	☐	
Security Services	Authenticate	☐	
	RequestKey	☐	
Unconfirmed Services	I-Am	☒	
	I-Have	☐	
	UnconfirmedCOVNotification	☐	
	UnconfirmedEventNotification	☐	
	UnconfirmedPrivateTransfer	☐	
	UnconfirmedTextMessage	☐	
	TimeSynchronization	☒	
	UtcTimeSynchronization	☐	
	Who-Has	☒	
	Who-Is	☒	
	LifeSafetyOperation	☐	
	SubscribeCOVProperty	☐	
	GetEventInformation	☒	

5 Objects

5.1 Supported Object Types

The objects supported are shown in the table below.

Object Type	ID	Supported	Management Point
Analog-Input	0	☒	Uyxx_Ballast Status Uyxx_Actual Level Uyxx_Device Type Uyxx_Physical Minimum Level Uyxx_Min Level Uyxx_Max Level Uyxx_Power On Level Uyxx_System Failure Level Uyxx_Fade Time Uyxx_Fade Rate Uyxx_Failure Status Uyxx_Emergency Mode Uyxx_Emergency Status Uyxx_Emergency Battery Charge Uyxx_Next Function Test Uyxx_Next Duration Test Uyxx_Function Test Interval Uyxx_Duration Test Interval Uyxx_Test Execution Timeout Uyxx_Prolong Time Uyxx_Duration Test Result Uyxx_Lamp Total Operation Time Uyxx_Emergency Level Uyxx_Emergency Min Level Uyxx_Emergency Max Level Uyxx_Rated Duration Uyxx_Features Uyxx_Lamp Emergency Time Uyxx_Failure Status Uyxx_Gear Type Uyxx_Possible Operating Modes Uyxx_Features Uyxx_Operating Mode Uyxx_Fast Fade Time Uyxx_Min Fast Fade Time
Analog-Output	1	☒	Uyxx_Arc Power Level Uyxx_Go to Scene Uyxx_Store Current Lvl as Scene Uyxx_Clear/Remove Scene Uyxx_Add to DALI Group Uyxx_Remove from DALI Group Uyxx_Set Fade Time Uyxx_Set Fade Rate Uyxx_Set Min Level Uyxx_Set Max Level Uyxx_Set Power-on Level Uyxx_Set System-failure Level Uyxx_Store T. Execution Timeout Uyxx_Store Prolong Time Uyxx_Store Function T. Interval Uyxx_Store Duration T. Interval Uyxx_Store Emergency Level Uyxx_Store Fast Fade Time Gyxx_Arc Power Level Gyxx_Go to Scene Gyxx_Store Current Lvl as Scene Gyxx_Clear/Remove Scene Gyxx_Set Fade Time Gyxx_Set Fade Rate

			Gyxx_Set Min Level Gyxx_Set Max Level Gyxx_Set Power-on Level Gyxx_Set System-failure Level By_Arc Power Level By_Go to Scene By_Store Current Level as Scene By_Clear/Remove Scene By_Set Fade Time By_Set Fade Rate By_Set Min Level By_Set Max Level By_Set Power-on Level By_Set System-failure Level
Analog-Value	2	☐	
Averaging	18	☐	
Binary-Input	3	☒	Uyxx_Ballast / Lamp Failure Uyxx_Dimming Curve Uyxx_Reference Running Uyxx_Current Protector
Binary-Output	4	☒	Uyxx_Arc Power Off / On Uyxx_Step Down / Up Uyxx_Recall Min Level Uyxx_Recall Max Level Uyxx_Rest Uyxx_Inhibit Uyxx_Re-Light/Reset Inhibit Uyxx_Start Function Test Uyxx_Start Duration Test Uyxx_Stop Test Uyxx_Reset Function T. Done Fl. Uyxx_Reset Duration T. Done Fl. Uyxx_Reset Lamp Time Uyxx_Reference System Power Uyxx_Enable/Disable Curr. Prot. Uyxx_Select Dimming Curve Gyxx_Arc Power Off / On Gyxx_Step Down / Up Gyxx_Recall Min Level Gyxx_Recall Max Level By_Arc Power Off / On By_Step Up / Down By_Recall Min Level By_Recall Max Level
Binary-Value	5	☒	Uyxx_Update All ECG Status
Calendar	6	☒	
Command	7	☐	
Device	8	☒	Device IBOX-BAC-DALI
Event-Enrollment	9	☐	
File	10	☐	
Group	11	☐	
Life-Safety-Point	21	☐	
Life-Safety-Zone	22	☐	
Loop	12	☐	
Multistate-Input	13	☐	
Multistate-Output	14	☐	
Multistate-Value	19	☐	
Notification-Class	15	☒	
Program	16	☐	
Schedule	17	☒	

Trend-Log	20	☒	
Trend-Log-Multiple	27	☒	

5.2 Member objects

5.2.1 Gateway objects

Object-name	Description	Object-type	Object-instance
Device IBOX-BAC-DALI* *Can be configured in MAPS	DALI to BACnet Gateway	Device	246* *Can be configured in MAPS

5.2.2 ECG objects – all ballasts

Object-name	Description	Object-type	Object-instance
Uyxx_Ballast / Lamp Failure y stands for line (A or B) xx stands for short address, 0 to 63		BI	$7000 * y + (100 * xx) + 0$ y stands for line number (0 or 1) xx stands for short address, 0 to 63
Uyxx_Update All ECG Status		BV	$7000 * y + (100 * xx) + 0$
Uyxx_Ballast Status		AI	$7000 * y + (100 * xx) + 0$
Uyxx_Actual Level		AI	$7000 * y + (100 * xx) + 1$
Uyxx_Device Type		AI	$7000 * y + (100 * xx) + 2$
Uyxx_Physical Minimum Level		AI	$7000 * y + (100 * xx) + 3$
Uyxx_Min Level		AI	$7000 * y + (100 * xx) + 4$
Uyxx_Max Level		AI	$7000 * y + (100 * xx) + 5$
Uyxx_Power On Level		AI	$7000 * y + (100 * xx) + 6$
Uyxx_System Failure Level		AI	$7000 * y + (100 * xx) + 7$
Uyxx_Fade Time		AI	$7000 * y + (100 * xx) + 8$
Uyxx_Fade Rate		AI	$7000 * y + (100 * xx) + 9$
Uyxx_Arc Power Level		AO	$7000 * y + (100 * xx) + 0$
Uyxx_Arc Power Off / On		BO	$7000 * y + (100 * xx) + 0$
Uyxx_Step Down / Up		BO	$7000 * y + (100 * xx) + 1$
Uyxx_Recall Min Level		BO	$7000 * y + (100 * xx) + 2$
Uyxx_Recall Max Level		BO	$7000 * y + (100 * xx) + 3$
Uyxx_Go to Scene		AO	$7000 * y + (100 * xx) + 1$
Uyxx_Store Current Lvl as Scene		AO	$7000 * y + (100 * xx) + 2$
Uyxx_Clear/Remove Scene		AO	$7000 * y + (100 * xx) + 3$
Uyxx_Add to DALI Group		AO	$7000 * y + (100 * xx) + 10$
Uyxx_Remove from DALI Group		AO	$7000 * y + (100 * xx) + 11$
Uyxx_Set Fade Time		AO	$7000 * y + (100 * xx) + 4$
Uyxx_Set Fade Rate		AO	$7000 * y + (100 * xx) + 5$
Uyxx_Set Min Level		AO	$7000 * y + (100 * xx) + 6$
Uyxx_Set Max Level		AO	$7000 * y + (100 * xx) + 7$
Uyxx_Set Power-on Level		AO	$7000 * y + (100 * xx) + 8$
Uyxx_Set System-failure Level		AO	$7000 * y + (100 * xx) + 9$

5.2.3 ECG objects – Emergency ballasts (type = 1)

Object-name	Description	Object-type	Object-instance
Uyxx_Failure Status y stands for line (A or B) xx stands for short address, 0 to 63		AI	$7000 * y + (100 * xx) + 15$ y stands for line number (0 or 1) xx stands for short address, 0 to 63
Uyxx_Emergency Mode		AI	$7000 * y + (100 * xx) + 16$
Uyxx_Emergency Status		AI	$7000 * y + (100 * xx) + 17$

Uyxx_Emergency Battery Charge		AI	$7000 * y + (100 * xx) + 18$
Uyxx_Next Function Test		AI	$7000 * y + (100 * xx) + 19$
Uyxx_Next Duration Test		AI	$7000 * y + (100 * xx) + 20$
Uyxx_Function Test Interval		AI	$7000 * y + (100 * xx) + 21$
Uyxx_Duration Test Interval		AI	$7000 * y + (100 * xx) + 22$
Uyxx_Test Execution Timeout		AI	$7000 * y + (100 * xx) + 23$
Uyxx_Prolong Time		AI	$7000 * y + (100 * xx) + 24$
Uyxx_Duration Test Result		AI	$7000 * y + (100 * xx) + 25$
Uyxx_Lamp Total Operation Time		AI	$7000 * y + (100 * xx) + 26$
Uyxx_Emergency Level		AI	$7000 * y + (100 * xx) + 27$
Uyxx_Emergency Min Level		AI	$7000 * y + (100 * xx) + 28$
Uyxx_Emergency Max Level		AI	$7000 * y + (100 * xx) + 29$
Uyxx_Rated Duration		AI	$7000 * y + (100 * xx) + 30$
Uyxx_Features		AI	$7000 * y + (100 * xx) + 31$
Uyxx_Lamp Emergency Time		AI	$7000 * y + (100 * xx) + 32$
Uyxx_Rest		BO	$7000 * y + (100 * xx) + 9$
Uyxx_Inhibit		BO	$7000 * y + (100 * xx) + 10$
Uyxx_Re-Light/Reset Inhibit		BO	$7000 * y + (100 * xx) + 11$
Uyxx_Start Function Test		BO	$7000 * y + (100 * xx) + 12$
Uyxx_Start Duration Test		BO	$7000 * y + (100 * xx) + 13$
Uyxx_Stop Test		BO	$7000 * y + (100 * xx) + 14$
Uyxx_Reset Function T. Done Fl.		BO	$7000 * y + (100 * xx) + 15$
Uyxx_Reset Duration T. Done Fl.		BO	$7000 * y + (100 * xx) + 16$
Uyxx_Reset Lamp Time		BO	$7000 * y + (100 * xx) + 17$
Uyxx_Store T. Execution Timeout		AO	$7000 * y + (100 * xx) + 21$
Uyxx_Store Prolong Time		AO	$7000 * y + (100 * xx) + 22$
Uyxx_Store Function T. Interval		AO	$7000 * y + (100 * xx) + 23$
Uyxx_Store Duration T. Interval		AO	$7000 * y + (100 * xx) + 24$
Uyxx_Store Emergency Level		AO	$7000 * y + (100 * xx) + 25$

5.2.4 ECG objects – LED ballasts (type = 6)

Object-name	Description	Object-type	Object-instance
Uyxx_Failure Status y stands for line (A or B) xx stands for short address, 0 to 63		AI	$7000 * y + (100 * xx) + 38$ y stands for line number (0 or 1) xx stands for short address, 0 to 63
Uyxx_Gear Type		AI	$7000 * y + (100 * xx) + 39$
Uyxx_Dimming Curve		BI	$7000 * y + (100 * xx) + 1$
Uyxx_Possible Operating Modes		AI	$7000 * y + (100 * xx) + 40$
Uyxx_Features		AI	$7000 * y + (100 * xx) + 41$
Uyxx_Reference Running		BI	$7000 * y + (100 * xx) + 2$
Uyxx_Current Protector		BI	$7000 * y + (100 * xx) + 3$
Uyxx_Operating Mode		AI	$7000 * y + (100 * xx) + 42$
Uyxx_Fast Fade Time		AI	$7000 * y + (100 * xx) + 43$
Uyxx_Min Fast Fade Time		AI	$7000 * y + (100 * xx) + 44$
Uyxx_Reference System Power		BO	$7000 * y + (100 * xx) + 23$
Uyxx_Enable/Disable Curr. Prot.		BO	$7000 * y + (100 * xx) + 24$
Uyxx_Select Dimming Curve		BO	$7000 * y + (100 * xx) + 25$
Uyxx_Store Fast Fade Time		AO	$7000 * y + (100 * xx) + 31$

5.2.5 Group objects

Object-name	Description	Object-type	Object-instance
Gyxx_Arc Power Level y stands for line (A or B) xx stands for group number, 0 to 15		AO	$7000 * y + (20 * xx) + 6400$ y stands for line number (0 or 1) xx stands for group number, 0 to 15
Gyxx_Arc Power Off / On		BO	$7000 * y + (20 * xx) + 6400$
Gyxx_Step Up / Down		BO	$7000 * y + (20 * xx) + 6401$
Gyxx_Recall Min Level		BO	$7000 * y + (20 * xx) + 6402$
Gyxx_Recall Max Level		BO	$7000 * y + (20 * xx) + 6403$
Gyxx_Go to Scene		AO	$7000 * y + (20 * xx) + 6401$
Gyxx_Store Current Lvl as Scene		AO	$7000 * y + (20 * xx) + 6402$
Gyxx_Clear/Remove Scene		AO	$7000 * y + (20 * xx) + 6403$
Gyxx_Set Fade Time		AO	$7000 * y + (20 * xx) + 6404$
Gyxx_Set Fade Rate		AO	$7000 * y + (20 * xx) + 6405$
Gyxx_Set Min Level		AO	$7000 * y + (20 * xx) + 6406$
Gyxx_Set Max Level		AO	$7000 * y + (20 * xx) + 6407$
Gyxx_Set Power-on Level		AO	$7000 * y + (20 * xx) + 6408$
Gyxx_Set System-failure Level		AO	$7000 * y + (20 * xx) + 6409$

5.2.6 Broadcast objects

Object-name	Description	Object-type	Object-instance
By_Arc Power Level y stands for line (A or B)		AO	$7000 * y + 6800$ y stands for line number (0 or 1)
By_Arc Power Off / On		BO	$7000 * y + 6800$
By_Step Up / Down		BO	$7000 * y + 6801$
By_Recall Min Level		BO	$7000 * y + 6802$
By_Recall Max Level		BO	$7000 * y + 6803$
By_Go to Scene		AO	$7000 * y + 6801$
By_Store Current Level as Scene		AO	$7000 * y + 6802$
By_Clear/Remove Scene		AO	$7000 * y + 6803$
By_Set Fade Time		AO	$7000 * y + 6804$
By_Set Fade Rate		AO	$7000 * y + 6805$
By_Set Min Level		AO	$7000 * y + 6806$
By_Set Max Level		AO	$7000 * y + 6807$
By_Set Power-on Level		AO	$7000 * y + 6808$
By_Set System-failure Level		AO	$7000 * y + 6809$

5.3 Objects and properties

5.3.1 IBOX-BAC-DALI (Device Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Device, 246000)	R	R
Object_Name	CharacterString	"IBOX-BAC-DALI"	R	R
Object_Type	BACnetObjectType	DEVICE (8) (Device Object Type)	R	R

System_Status	BACnetDeviceStatus	OPERATIONAL (0)	R	R
Vendor_Name	CharacterString	"Intesis Software SLU"	R	R
Vendor_Identifier	Unsigned16	246	R	R
Model_Name	CharacterString	"IBOX-BAC-DALI "	R	R
Firmware_Revision	CharacterString	"1.0.0.0"	R	R
Application_Software_Version	CharacterString	"1.0.0.0"	R	R
Location	CharacterString	""	O	-
Description	CharacterString	"DALI to BACnet Gateway"	O	-
Protocol_Version	Unsigned	1	R	R
Protocol_Revision	Unsigned	14	R	R
Protocol_Services_Supported	BACnetServiceSupported	Refer to section 4 [Service Types]	R	R
Protocol_Object_Types_Supported	BACnetObjectTypes Supported	Refer to section 5.1 [Object Types]	R	R
Object_List	BACnetArray[N] of BACnetObjectIdentifier	BACnetARRAY[N]	R	R
Structured_Object_List	BACnetArray[N] of BACnetObjectIdentifier	-	O	-
Max_APDU_Length_Accepted	Unsigned	480 when MSTP / 1476 when BACnet/IP	R	R
Segmentation_Supported	BACnetSegmentation	SEGMENTED-BOTH (0)	R	R
Max_Segments_accepted	Unsigned	16	O	R
VT_Classes_Supported	List of BACnetVTClass	-	O	-
Active_VT_Sessions	List of BACnetVTSession	-	O	-
Local_Date	Date	Current date	O	R
Local_Time	Time	Current time	O	R
UTC_Offset	INTEGER	-	O	-
Daylight_Savings_Status	BOOLEAN	-	O	-
APDU_Segment_Timeout	Unsigned	3000	R	R
APDU_Timeout	Unsigned	3000	R	R
Number_of_APDU_Retries	Unsigned	3	R	R
List_Of_Session_Keys	List of BACnetSessionKey	-	O	-
Time_Synchronization_Recipients	List of BACnetRecipient	-	O	-
Max_Master * **	Unsigned	127	R	W
Max_Info_Frames *	Unsigned	1	O	R
Device_Address_Binding	List of BACnetAddressBinding	NULL (empty)	R	R
Database_Revision	Unsigned	0	R	R
Configuration_Files	BACnetArray[N] of BACnetObjectIdentifier	-	O	-
Last_Restore_Time	BACnetTimeStamp	-	O	-

Backup_Failure_Timeout	Unsigned16	-	O	-
Active_COV_Subscriptions	List of BACnetCOVSubscription	List of BACnetCOVSubscription	O	R
Slave_Proxy_Enable	BACnetArray[N] of BOOLEAN	-	O	-
Manual_Slave_Address_Binding	List of BACnetAddressBinding	-	O	-
Auto_Slave_Discovery	BACnetArray[N] of BOOLEAN	-	O	-
Slave_Address_Binding	BACnetAddressBinding	-	O	-
Last_Restart_Reason	BACnetRestartReason	-	O	-
Time_Of_Device_Restart	BACnetTimeStamp	-	O	-
Restart_Notification_Recipients	List of BACnetRecipient	-	O	-
UTC_Time_Synchronization_Recipients	List of BACnetRecipient	-	O	-
Time_Synchronization_Interval	Unsigned	-	O	-
Align_Intervals	BOOLEAN	-	O	-
Interval_Offset	Unsigned	-	O	-
Profile_Name	CharacterString	-	O	-

* Only available when MSTP is used

** Configurable through the configuration tool.

5.3.2 Uyxx_Ballast / Lamp Failure

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 0$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Ballast / Lamp Failure y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"OK"	O	R
Active_Text	CharacterString	"Ballast / Lamp Failure"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.3 Uyxx_Update All ECG Status

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Value, $7000 * y + (100 * xx) + 0$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Update All ECG Status y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_VALUE (5)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Inactive_Text	CharacterString	"Update Finished"	O	R
Active_Text	CharacterString	"Trigger Update"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.4 Uyxx_Ballast Status

Present_value is encoded in bitfields, each with its own meaning:

- b7-PwrCycle
- b6-MissShAdd
- b5-ResetSt
- b4-FadeRun
- b3-BallLimErr
- b2-LampPwrOn
- b1-LampFail
- b0-BallFail

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 0$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Ballast Status y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*

Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.5 Uyxx_Actual Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 1$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Actual Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.6 Uyxx_Device Type

Present_value will take values 0 to 8, according to following list:

- 0-Fluorescent
- 1-Emergency
- 2-Discharge
- 3-Halogen
- 4-Incandescent
- 5-Digital signal
- 6-LED
- 7-Switching
- 8-Colour Control

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 2$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Device Type y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*

Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.7 Uyxx_Physical Minimum Level

Present_value will take values 0 to 8, according to following list:

- 0-Fluorescent
- 1-Emergency
- 2-Discharge
- 3-Halogen
- 4-Incandescent
- 5-Digital signal
- 6-LED
- 7-Switching
- 8-Colour Control

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 3$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Physical Minimum Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*

Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.8 Uyxx_Min Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 4$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Min Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.9 Uyxx_Max Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 5$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Max Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.10 Uyxx_Power On Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 6$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Power On Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.11 Uyxx_System Failure Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 7$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_System Failure Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.12 Uyxx_Fade Time

Present_value takes values 0 to 15, where each value corresponds to:

- 0: Extended fade time (not supported)
- 1: 0,7s
- 2: 1s
- 3: 1,4s
- 4: 2s
- 5: 2,8s
- 6: 4s
- 7: 5,7s
- 8: 8s
- 9: 11,3s
- 10: 16s
- 11: 22,6s
- 12: 32s
- 13: 45,3s
- 14: 64s
- 15: 90,5s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 8$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Fade Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*

Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.13 Uyxx_Fade Rate

Present_value takes values 1 to 15, where each value corresponds to:

- 1: 358 steps/s
- 2: 253 steps/s
- 3: 179 steps/s
- 4: 127 steps/s
- 5: 89,4 steps/s
- 6: 63,3 steps/s
- 7: 44,7 steps/s
- 8: 31,6 steps/s
- 9: 22,4 steps/s
- 10: 15,8 steps/s
- 11: 11,2 steps/s
- 12: 7,9 steps/s
- 13: 5,6 steps/s
- 14: 4 steps/s
- 15: 2,8 steps/s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 9$) y stands for line number (0 or 1), xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Fade Rate y stands for line (A or B), xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*

Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.14 Uyxx_Arc Power Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 0$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Arc Power Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.15 Uyxx_Arc Power Off / On

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 0$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Arc Power Off / On y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"On"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.16 Uyxx_Step Down / Up

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 1$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Step Down / Up y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Step Down"	O	R
Active_Text	CharacterString	"Step Up"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.17 Uyxx_Recall Min Level

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 2$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Recall Min Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Recall Min Level"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.18 Uyxx_Recall Max Level

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 3$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Recall Max Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Recall Max Level"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.19 Uyxx_Go to Scene

Present_value takes values 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 1$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Go to Scene y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.20 Uyxx_Store Current Lvl as Scene

Present_value takes values 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 2$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Current Lvl as Scene y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.21 Uyxx_Clear/Remove Scene

Present_value takes values 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 3$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Current Lvl as Scene y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.22 Uyxx_Add to DALI Group

Present_value takes values 0 to 15 (group number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 10$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Add to DALI Group y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.23 Uyxx_Remove to DALI Group

Present_value takes values 0 to 15 (group number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 11$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Remove from DALI Group y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.24 Uyxx_Set Fade Time

Present_value takes values 0 to 15, where each value corresponds to:

- 0: Extended fade time (not supported)
- 1: 0,7s
- 2: 1s
- 3: 1,4s
- 4: 2s
- 5: 2,8s
- 6: 4s
- 7: 5,7s
- 8: 8s
- 9: 11,3s
- 10: 16s
- 11: 22,6s
- 12: 32s
- 13: 45,3s
- 14: 64s
- 15: 90,5s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 4$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Set Fade Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*

High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.25 Uyxx_Set Fade Rate

Present_value takes values 1 to 15, where each value corresponds to:

- 1: 358 steps/s
- 2: 253 steps/s
- 3: 179 steps/s
- 4: 127 steps/s
- 5: 89,4 steps/s
- 6: 63,3 steps/s
- 7: 44,7 steps/s
- 8: 31,6 steps/s
- 9: 22,4 steps/s
- 10: 15,8 steps/s
- 11: 11,2 steps/s
- 12: 7,9 steps/s
- 13: 5,6 steps/s
- 14: 4 steps/s
- 15: 2,8 steps/s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 5$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Set Fade Rate y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*

High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.26 Uyxx_Min Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 6$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Min Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.27 Uyxx_Max Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 7$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Max Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.28 Uyxx_Set Power-on Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 8$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Power-on Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.29 Uyxx_Set System-failure Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 9$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Set System-failure level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.30 Uyxx_Failure Status

Present_value is encoded in bitfields, each with its own meaning:

- b7-FunctFail
- b6-DurFail
- b5-DurTestDelay
- b4-FunctTestDelay
- b3-EmLampFail
- b2-BattFail
- b1-BattDurFail
- b0-CircFail

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 15$) y stands for line number (0 or 1), xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Failure Status y stands for line (A or B), xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*

Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.31 Uyxx_Emergency Mode

Present_value is encoded in bitfields, each with its own meaning:

- b7-HardSwOn
- b6-HardInhibit
- b5-DurTestProg
- b4-FunctTestProg
- b3-ExtdEmMode
- b2-EmMode
- b1-NormMode
- b0-RestMode

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 16$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Emergency Mode y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*

Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.32 Uyxx_Emergency Status

Present_value is encoded in bitfields, each with its own meaning:

- b7-PhysicSel
- b6-Ident
- b5-DurTestPend
- b4-FunctTestPend
- b3-BattFull
- b2-DurTestDone
- b1-FunctTestDone
- b0-InhibitMode

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 17$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Emergency Status y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*

Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.3 Uyxx_Emergency battery charge

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 18$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Emergency Status y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.34 Uyxx_Next Function Test

Present_value takes values 0 to 16384 hours

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 19$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Next Function Test y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	hours (71)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.35 Uyxx_Next Duration Test

Present_value takes values 0 to 16384 hours

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 20$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Next Function Test y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	hours (71)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.36 Uyxx_Function Test Interval

Present_value takes values 0 (disabled) and 1 to 255 days

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 21$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Function Test Interval y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	days (70)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.37 Uyxx_Duration Test Interval

Present_value takes values 0 (disabled) and 1 to 97 weeks

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 22$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Duration Test Interval y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	weeks (69)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.38 Uyxx_Test Execution Timeout

Present_value takes values 0 to 255 days

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 23$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Test Execution Timeout y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	days (70)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.39 Uyxx_Prolong Time

Present_value takes values 0 to 127.5 minutes

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 24$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Prolong Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	minutes (72)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.40 Uyxx_Duration Test Result

Present_value takes values 0 to 510 minutes

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 25$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Duration Test Result y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	minutes (72)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.41 Uyxx_Lamp Total Operation Time

Present_value takes values 0 to 1016 hours

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 26$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Lamp Total Operation Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	hours (71)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.42 Uyxx_Emergency Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 27$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Emergency Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.43 Uyxx_Emergency Min Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 28$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Emergency Min Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.44 Uyxx_Emergency Max Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 29$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Emergency Max Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.45 Uyxx_Rated Duration

Present_value takes values 0 to 510 minutes.

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 30$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Rated Duration y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	minutes (72)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.46 Uyxx_Features

Present_value is encoded in bitfields, each with its own meaning:

- b7-RelightRestSup
- b6-PhysicSelSup
- b5-HardInSup
- b4-AdjsEmLvl
- b3-AutoTestCap
- b2-SwitchMainCG
- b1-MainCG
- b0-IntegralEmCG

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 31$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Features y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*

Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.47 Uyxx_Lamp Emergency Time

Present_value takes values 0 to 254 hours

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 32$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Lamp Emergency Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	hours (72)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.48 Uyxx_Rest

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 9$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Rest y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Extinguish Lamp"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.49 Uyxx_Inhibit

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 10$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Inhibit y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Start Inhibit Mode"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.50 Uyxx_Re-Light/Reset Inhibit

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 11$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Re-Light/Reset Inhibit y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Cancel Inhibit Mode"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.51 Uyxx_Start Function Test

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 12$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Start Function Test y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Start Function Test"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.52 Uyxx_Start Duration Test

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 13$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Start Duration Test y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Start Duration Test"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.53 Uyxx_Stop Test

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 14$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Stop Test y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Start Duration Test"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.54 Uyxx_Reset Function T. Done Fl.

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 15$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Reset Function T. Done Fl. y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Reset Function Flag"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.55 Uyxx_Reset Duration T. Done Fl.

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 15$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Reset Duration T. Done Fl. y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Reset Duration Flag"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.56 Uyxx_Reset Lamp Time

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 17$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Reset Lamp Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Lamp Emg Time Reset"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.57 Uyxx_Store T. Execution Timeout

Present_value takes value 0 to 255 days

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 21$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store T. Execution Timeout y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	days (70)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.58 Uyxx_Store Prolong Time

Present_value takes value 0 to 127.5 minutes

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 22$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Prolong Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	minutes (72)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.59 Uyxx_Store Function T. Interval

Present_value takes value 0 (disabled), 1 to 255 days

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 23$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Function T. Interval y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	days (70)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.60 Uyxx_Store Duration T. Interval

Present_value takes value 0 (disabled), 1 to 97 weeks

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 24$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Duration T. Interval y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	weeks (69)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.61 Uyxx_Store Emergency Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 25$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Emergency Level y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percent (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.62 Uyxx_Failure Status

Present_value is encoded in bitfields, each with its own meaning:

- b7-RefMeasurFail
- b6-ThermLightLvl
- b5-ThermShut
- b4-CurrProtAct
- b3-LoadInc
- b2-LoadDec
- b1-OpenC
- b0-ShortC

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 38$) y stands for line number (0 or 1), xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Failure Status y stands for line (A or B), xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*

Profile_Name	CharacterString	-	O	-
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* Only available when specific object has a Notification Class configured

5.3.63 Uyxx_Gear Type

Present_value is encoded in bitfields, each with its own meaning:

- b3-dcSuppPoss
- b2-acSuppPoss
- b1-LEDModInt
- b0-LEDPowerSInt

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 39$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Gear Type y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.64 Uyxx_Dimming Curve

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 1$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Dimming Curve y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Std Log Dim Curve"	O	R
Active_Text	CharacterString	"Linear Dim Curve"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.65 Uyxx_Possible Operating Modes

Present_value is encoded in bitfields, each with its own meaning:

- b3-HighCurrPulMod
- b2-OutCurrContr
- b1-AMModePoss
- b0-PWMMModePoss

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 40$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Possible Operating Modes y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.66 Uyxx_Features

Present_value is encoded in bitfields, each with its own meaning:

- b7-PhysicSelSupp
- b6-LightLvlRedReq
- b5-ThermShutReq
- b4-CurrProtActReq
- b3-LoadIncReq
- b2-LoadDecReq
- b1-OpenCQ
- b0-ShortCQ

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 41$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Features y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*

Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.67 Uyxx_Reference Running

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 2$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Reference Running y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"No"	O	R
Active_Text	CharacterString	"Yes"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.68 Uyxx_Current Protector

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, $7000 * y + (100 * xx) + 3$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Current Protector y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Disabled"	O	R
Active_Text	CharacterString	"Enabled"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.69 Uyxx_Operating Mode

Present_value is encoded in bitfields, each with its own meaning:

- b4-NonLogDimCurveAct
- b3-HighCurrPulModeAct
- b2-OutCurrContr
- b1-AMModeAct
- b0-PWMModeAct

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 42$) y stands for line number (0 or 1), xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Operating Mode y stands for line (A or B), xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.70 Uyxx_Fast Fade Time

Present_value takes value 0 to 27, encoded in the following way:

- 0: <25 ms
- 1: 25 ms
- 2: 50 ms
- 3: 75 ms
- 4: 100 ms
- 5: 125 ms
- 6: 150 ms
- 7: 175 ms
- 8: 200 ms
- 9: 225 ms
- 10: 250 ms
- 11: 275 ms
- 12: 300 ms
- 13: 325 ms
- 14: 350 ms
- 15: 375 ms
- 16: 400 ms
- 17: 425 ms
- 18: 450 ms
- 19: 475 ms
- 20: 500 ms
- 21: 525 ms
- 22: 550 ms
- 23: 575 ms
- 24: 600 ms
- 25: 625 ms
- 26: 650 ms
- 27: 675 ms

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 43$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Fast Fade Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-

Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.71 Uyxx_Min Fast Fade Time

Present_value takes value 1 to 27, encoded in the following way:

- 1: 25 ms
- 2: 50 ms
- 3: 75 ms
- 4: 100 ms
- 5: 125 ms
- 6: 150 ms
- 7: 175 ms
- 8: 200 ms
- 9: 225 ms
- 10: 250 ms
- 11: 275 ms
- 12: 300 ms
- 13: 325 ms
- 14: 350 ms
- 15: 375 ms
- 16: 400 ms
- 17: 425 ms
- 18: 450 ms
- 19: 475 ms
- 20: 500 ms
- 21: 525 ms
- 22: 550 ms
- 23: 575 ms
- 24: 600 ms
- 25: 625 ms
- 26: 650 ms
- 27: 675 ms

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, $7000 * y + (100 * xx) + 44$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Min Fast Fade Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	x	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-

Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.72 Uyxx_Reference System Power

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + (100 * xx) + 23$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Reference System Power y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Trigger Pwr Ref"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.73 Uyxx_Enable/Disable Curr. Prot.

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 24$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Enable/Disable Curr. Prot. y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Disabled"	O	R
Active_Text	CharacterString	"Enabled"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.74 Uyxx_Select Dimming Curve

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 25$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Select Dimming Curve y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Std Log Dim Curve"	O	R
Active_Text	CharacterString	"Linear Dim Curve"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.75 Uyxx_Store Fast Fade Time

Present_value takes value 0 to 27, encoded in the following way:

- 0: <25 ms
- 1: 25 ms
- 2: 50 ms
- 3: 75 ms
- 4: 100 ms
- 5: 125 ms
- 6: 150 ms
- 7: 175 ms
- 8: 200 ms
- 9: 225 ms
- 10: 250 ms
- 11: 275 ms
- 12: 300 ms
- 13: 325 ms
- 14: 350 ms
- 15: 375 ms
- 16: 400 ms
- 17: 425 ms
- 18: 450 ms
- 19: 475 ms
- 20: 500 ms
- 21: 525 ms
- 22: 550 ms
- 23: 575 ms
- 24: 600 ms
- 25: 625 ms
- 26: 650 ms
- 27: 675 ms

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (100 * xx) + 31$) y stands for line number (0 or 1) xx stands for short address, 0 to 63	R	R
Object_Name	CharacterString	Uyxx_Store Fast Fade Time y stands for line (A or B) xx stands for short address, 0 to 63	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-

Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	<i>Configurable through BACnet and Config Tool</i>	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.76 Gyxx_Arc Power Level

Present_value takes value 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6400$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Arc Power Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percent (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.77 Gyxx_Arc Power Off / On

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + (20 * xx) + 6400$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Arc Power Off / On y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"100%"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.78 Gyxx_Step Down / Up

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + (20 * xx) + 6401$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Step Down / Up y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Step Down"	O	R
Active_Text	CharacterString	"Step Up"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.79 Gyxx_Recall Min Level

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + (20 * xx) + 6402$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Recall Min Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Recall Min Level"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.80 Gyxx_Recall Max Level

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + (20 * xx) + 6403$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Recall Max Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Recall Max Level"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.81 Gyxx_Go to Scene

Present_value takes value 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6401$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Go to Scene y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.82 Gyxx_Store Current Lvl as Scene

Present_value takes value 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6402$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Store Current Lvl as Scene y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.83 Gyxx_Clear/Remove Scene

Present_value takes value 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6403$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Clear/Remove Scene y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.84 Gyxx_Set Fade Time

Present_value takes value 0 to 15, with meaning:

- 0: Extended fade time (not supported)
- 1: 0,7s
- 2: 1s
- 3: 1,4s
- 4: 2s
- 5: 2,8s
- 6: 4s
- 7: 5,7s
- 8: 8s
- 9: 11,3s
- 10: 16s
- 11: 22,6s
- 12: 32s
- 13: 45,3s
- 14: 64s
- 15: 90,5s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6404$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Set Fade Time y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*

High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.85 Gyxx_Set Fade Rate

Present_value takes values 1 to 15, where each value corresponds to:

- 1: 358 steps/s
- 2: 253 steps/s
- 3: 179 steps/s
- 4: 127 steps/s
- 5: 89,4 steps/s
- 6: 63,3 steps/s
- 7: 44,7 steps/s
- 8: 31,6 steps/s
- 9: 22,4 steps/s
- 10: 15,8 steps/s
- 11: 11,2 steps/s
- 12: 7,9 steps/s
- 13: 5,6 steps/s
- 14: 4 steps/s
- 15: 2,8 steps/s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6405$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Set Fade Rate y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*

High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.86 Gyxx_Set Min Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6406$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Set Min Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.87 Gyxx_Set Max Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6407$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Set Max Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.88 Gyxx_Set Power-on Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6408$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Set Power-on Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.89 Gyxx_Set System-failure Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 * y + (20 * xx) + 6409$) y stands for line number (0 or 1) xx stands for group number, 0 to 15	R	R
Object_Name	CharacterString	Gyxx_Set System-failure Level y stands for line (A or B) xx stands for group number, 0 to 15	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.90 By_Arc Power Level

Present_value takes value 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6800$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Arc Power Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percent (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.91 By_Arc Power Off / On

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + 6800$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Arc Power Off / On y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"100%"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.92 By_Step Up / Down

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + 6801$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Step Up / Down y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Step Down"	O	R
Active_Text	CharacterString	"Step Up"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.93 By_Recall Min Level

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + 6802$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Recall Min Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Recall Min Level"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.94 By_Recall Max Level

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, $7000 * y + 6803$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Recall Max Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	""	O	R
Active_Text	CharacterString	"Recall Max Level"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransition Bits	-	O	R*
Acked_Transitions	BACnetEventTransition Bits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.95 By_Go to Scene

Present_value takes value 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6801$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Go to Scene y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.96 By_Store Current Lvl as Scene

Present_value takes value 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6802$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Store Current Lvl as Scene y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.97 By_Clear/Remove Scene

Present_value takes value 0 to 15 (scene number)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6803$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Clear/Remove Scene y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.98 By_Set Fade Time

Present_value takes value 0 to 15, with meaning:

- 0: Extended fade time (not supported)
- 1: 0,7s
- 2: 1s
- 3: 1,4s
- 4: 2s
- 5: 2,8s
- 6: 4s
- 7: 5,7s
- 8: 8s
- 9: 11,3s
- 10: 16s
- 11: 22,6s
- 12: 32s
- 13: 45,3s
- 14: 64s
- 15: 90,5s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6804$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Set Fade Time y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*

High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.99 By_Set Fade Rate

Present_value takes values 1 to 15, where each value corresponds to:

- 1: 358 steps/s
- 2: 253 steps/s
- 3: 179 steps/s
- 4: 127 steps/s
- 5: 89,4 steps/s
- 6: 63,3 steps/s
- 7: 44,7 steps/s
- 8: 31,6 steps/s
- 9: 22,4 steps/s
- 10: 15,8 steps/s
- 11: 11,2 steps/s
- 12: 7,9 steps/s
- 13: 5,6 steps/s
- 14: 4 steps/s
- 15: 2,8 steps/s

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6805$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Set Fade Rate y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	no_units (95)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*

Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.100 By_Set Min Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6806$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Set Min Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.101 By_Set Max Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6807$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Set Max Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.102 By_Set Power-on Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6808$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Set Power-on Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

5.3.103 By_Set System-failure Level

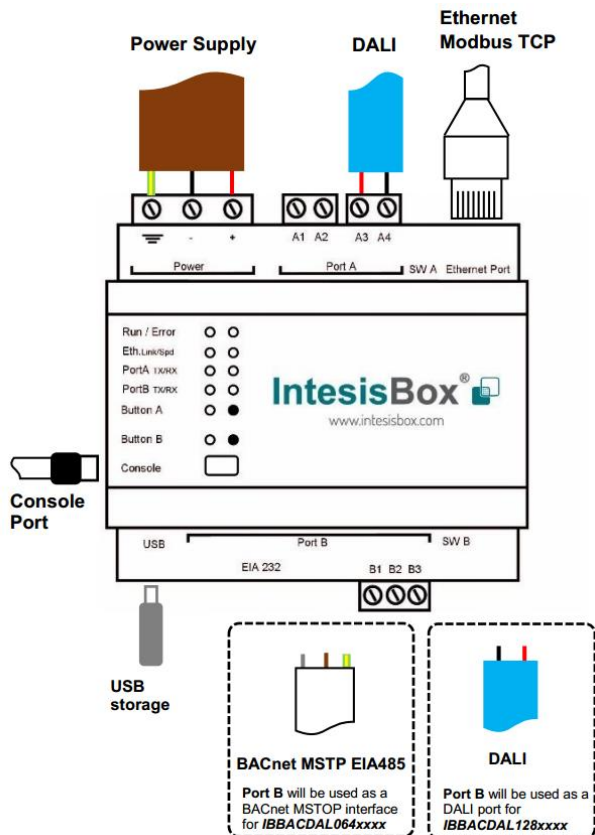
Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, $7000 \cdot y + 6809$) y stands for line number (0 or 1)	R	R
Object_Name	CharacterString	By_Set System-failure Level y stands for line (A or B)	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	x	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	percentage (98)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	Configurable through BACnet and Config Tool	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

* Only available when specific object has a Notification Class configured

6 Connections

Find below information regarding the IntesisBox connections available.



Power Supply

Must use NEC Class 2 or Limited Power Source (LPS) and SELV rated power supply.

Respect polarity applied of terminals (+) and (-). Be sure the voltage applied is within the range admitted (check table in section 8). The power supply can be connected to earth but only through the negative terminal, never through the positive terminal.

Ethernet / BACnet IP

Connect the cable coming from the IP network to the connector ETH of the gateway. Use an Ethernet CAT5 cable. If communicating through the LAN of the building, contact the network administrator and make sure traffic on the port used is allowed through all the LAN path (check the gateway user manual for more information). Default IP is 192.168.100.246. DHCP is enabled by default.

PortA / DALI

Connect the DALI bus to connectors A4 (+), A3 (-) of gateway's PortA. IntesisBox provides 16VDC (+/-2%) DALI voltage to the bus.

PortB / BACnet MSTP (IBBACDAL0640000 / 1 DALI channel)

Connect the EIA485 bus to connectors B1 (B+), B2 (A-) and B3 (SNGD) of gateway's PortB. Respect the polarity.

Remember the characteristics of the standard EIA485 bus: maximum distance of 1200 meters, maximum 32 devices connected to the bus, and in each end of the bus it must be a termination resistor of 120 Ω . The port includes a DIP-Switch for configuration of biasing circuit as well as termination:

SW1:

ON: 120 Ω termination active
OFF: 120 Ω termination inactive

SW2-3:

ON: Polarization active
OFF: Polarization inactive

If the gateway is installed in one bus end make sure that termination is active.

PortB / DALI (IBBACDAL1280000 / 2 DALI channels)

Connect the DALI bus to connectors B2 (+), B1 (-) of gateway's PortA. IntesisBox provides 16VDC (+/-2%) DALI voltage to the bus.

Console Port

Connect a mini-type B USB cable from your computer to the gateway to allow communication between the Configuration Software and the gateway. Remember that Ethernet connection is also allowed. Check the user manual for more information.

USB

Connect a USB storage device (not a HDD) if required. Check the user manual for more information.

Ensure proper space for all connectors when mounted (see section 9).

6.1 Powering the device

A power supply working with any of the voltage range allowed is needed (check section 8). Once connected the RUN led (Figure above) will turn on.

WARNING! In order to avoid earth loops that can damage the gateway and/or any other equipment connected to it, we strongly recommend the use of DC power supplies, floating or with the negative terminal connected to earth. **Never use a DC power supply with the positive terminal connected to earth.**

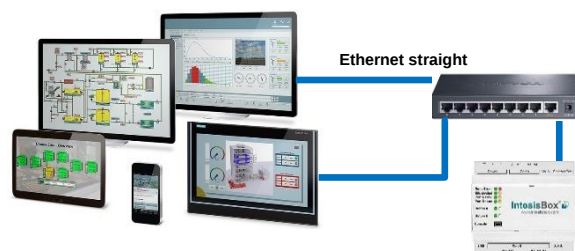
6.2 Connection to BACnet

6.2.1 BACnet IP

Connect the communication cable coming from the network hub or switch to the ETH port (Figure above) of IntesisBox. The cable to be used shall be a straight Ethernet UTP/FTP CAT5 cable

In case there is no response from the BACnet devices to the frames sent by IntesisBox, check that they are operative and reachable from the network connection used by IntesisBox. Check the IntesisBox Ethernet interface sending *Pings* to its IP address using a PC connected to the same Ethernet network.

Check as well with the network admin that there are no limitations regarding UDP communication or ports blocked.



BACnet IP connection using switch/hub and straight cable

6.2.2 BACnet MSTP

Connect the EIA485 bus to connectors B1 (B+), B2 (A-) and B3 (SNGD) of gateway's PortA. Respect the polarity.

Remember the characteristics of the standard EIA485 bus: maximum distance of 1200 meters, maximum 32 devices connected to the bus, and in each end of the bus it must be a termination resistor of 120 Ω . The port includes a DIP-Switch for configuration of biasing circuit as well as termination:

SW1:

ON: 120 Ω termination active

OFF: 120 Ω termination inactive

SW2-3:

ON: Polarization active

OFF: Polarization inactive

If the gateway is installed in one bus end make sure that termination is active.

6.3 Connection to DALI channel.

Connect + and – terminals of the DALI bus of your DALI channel to IntesisBox' DALI port. Bus has polarity, but most DALI ballasts are polarity insensitive.

Having your DALI channel powered up, you can perform a quick DALI connectivity test by pressing Port A / Port B buttons:

- When pressing Port A / Port B button, a broadcast command that will toggle the ballasts between 100% and 0% level will be sent.
- After 30s timeout of not pressing the button, ballasts will return back to its original level.

DALI commands coming from BACnet will continue to be executed while doing this test.

6.4 Connection to the configuration tool

This action allows the user to have access to configuration and monitoring of the device (more information can be found in the configuration tool User Manual). Two methods to connect to the PC can be used:

- **Ethernet:** Using the Ethernet port of IntesisBox.
- **USB:** Using the console port of IntesisBox, connect a USB cable from the console port to the PC.

7 Set-up process and troubleshooting

7.1 Pre-requisites

It is necessary to have a BACnet IP or MSTP client device (BMS side device) operative and properly connected to the corresponding port of the gateway. It is also required to have a DALI installation connected to the gateway, in its respective dali port/s.

Connectors, connection cables, PC for the usage of the Configuration Tool and other auxiliary material, if needed, are not supplied by Intesis for this standard integration.

Items supplied with this product for this integration are:

- IntesisBox gateway.
- Link to download the configuration tool.
- USB Console cable to communicate with IntesisBox.
- Product documentation.

7.2 IntesisBox MAPS. Configuration & monitoring tool for IntesisBox BACnet series

7.2.1 Introduction

IntesisBox MAPS is a Windows® compatible software developed specifically to monitor and configure IntesisBox BACnet series.

The installation procedure and main functions are explained in the *IntesisBox MAPS User Manual*. This document can be downloaded from the link indicated in the installation sheet supplied with the IntesisBox device or in the product website at www.intesisbox.com

In this section, only the specific case of DALI to BACnet will be covered.

Please check the IntesisBox MAPS user manual for specific information about the different parameters and how to configure them.

7.2.2 Connection

To configure the IntesisBox connection parameters press on the **Connection** button in the *menu bar*.

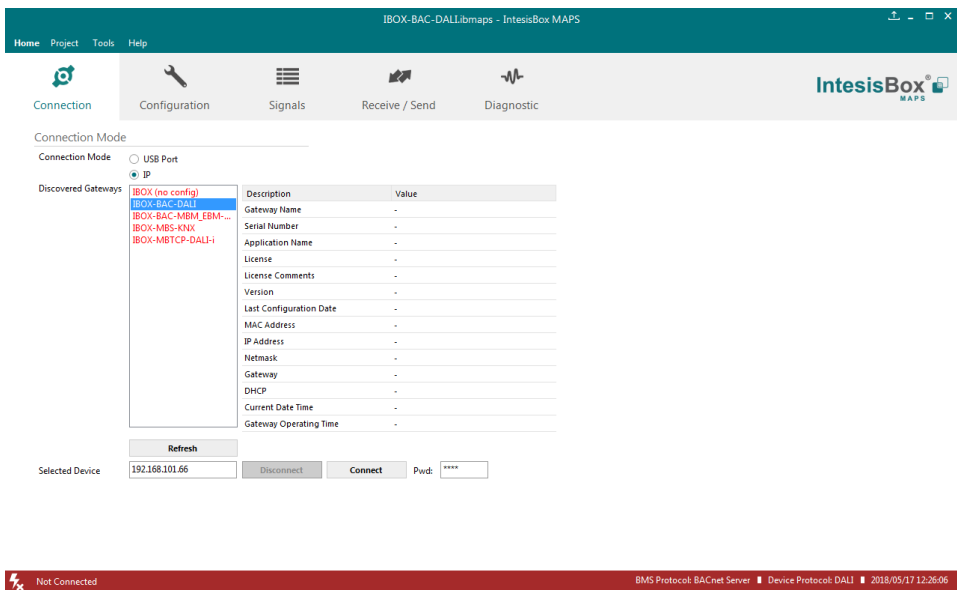


Figure 7.1 MAPS connection

7.2.3 Configuration tab

Select the **Configuration** tab to configure the connection parameters. Three subsets of information are shown in this window: General (Gateway general parameters), BACnet Server (BACnet interface configuration) and DALI (DALI interface parameters).

The screenshot shows the 'Configuration' tab in the IntesisBox MAPS application. The 'General' section is active, displaying 'General Configuration' with fields for 'Gateway Name' (IBOX-BAC-DALI) and 'Project Description' (IntesisBox DALI to BACnet Server Gateway). Below this is the 'Connection' section with a checked 'Enable DHCP' option and fields for 'IP Address' (192.168.100.246), 'Netmask' (255.255.255.0), 'Default Gateway', and 'Password'. The 'BACnet Server' and 'DALI' sections are visible but empty. The status bar at the bottom indicates 'Not Connected', 'BMS Protocol: BACnet Server', 'Device Protocol: DALI', and the date/time '2018/05/17 12:27:04'.

Figure 7.2 IntesisBox MAPS configuration tab

7.2.4 Signals

All available objects, Object Instances, its corresponding DALI signal and other main parameters are listed in the signals tab. More information on each parameter and how to configure it can be found in the IntesisBox MAPS user manual.

The screenshot shows the 'Signals' tab in the IntesisBox MAPS application. It displays a table with columns for '#', 'Active', 'Name', 'Type', 'Instance', 'Units', 'Channel', 'Unit ID', and 'Trig. / Poll'. The table lists 29 signals, including BACnet Server objects (e.g., UA09_Ballast / Lamp, UA09_Update All E...) and DALI objects (e.g., UA09_Actual Level, UA09_Device Type). The status bar at the bottom indicates 'Connected to: 192.168.101.66', 'BMS Protocol: BACnet Server', 'Device Protocol: DALI', and the date/time '2018/05/17 12:31:21'.

#	Active	Name	Type	Instance	Units	Channel	Unit ID	Trig. / Poll
1	✓	UA09_Ballast / Lam...	3: BI	900	-	A	ECG 9	T/P
2	✓	UA09_Update All E...	5: BV	900	-	A	ECG 9	-
3	✓	UA09_Ballast Status	0: AI	900	no_units (95)	A	ECG 9	T/P
4	✓	UA09_Actual Level	0: AI	901	percent (98)	A	ECG 9	T/P
5	✓	UA09_Device Type	0: AI	902	no_units (95)	A	ECG 9	T
6	✓	UA09_Physical Mini...	0: AI	903	percent (98)	A	ECG 9	T
7	✓	UA09_Min Level	0: AI	904	percent (98)	A	ECG 9	T
8	✓	UA09_Max Level	0: AI	905	percent (98)	A	ECG 9	T
9	✓	UA09_Power On Le...	0: AI	906	percent (98)	A	ECG 9	T
10	✓	UA09_System Failu...	0: AI	907	percent (98)	A	ECG 9	T
11	✓	UA09_Fade Time	0: AI	908	no_units (95)	A	ECG 9	T
12	✓	UA09_Fade Rate	0: AI	909	no_units (95)	A	ECG 9	T
13	✓	UA09_Arc Power Le...	1: AO	900	percent (98)	A	ECG 9	-
14	✓	UA09_Arc Power Of...	4: BO	900	-	A	ECG 9	-
15	✓	UA09_Step Down / ...	4: BO	901	-	A	ECG 9	-
16	✓	UA09_Recall Min Le...	4: BO	902	-	A	ECG 9	-
17	✓	UA09_Recall Max Le...	4: BO	903	-	A	ECG 9	-
18	✓	UA09_Go to Scene	1: AO	901	no_units (95)	A	ECG 9	-
19	✓	UA09_Store Current...	1: AO	902	no_units (95)	A	ECG 9	-
20	✓	UA09_Clear/Remov...	1: AO	903	no_units (95)	A	ECG 9	-
21	✓	UA09_Set Fade Time	1: AO	904	no_units (95)	A	ECG 9	-
22	✓	UA09_Set Fade Rate	1: AO	905	no_units (95)	A	ECG 9	-
23	✓	UA09_Set Min Level	1: AO	906	percent (98)	A	ECG 9	-
24	✓	UA09_Set Max Level	1: AO	907	percent (98)	A	ECG 9	-
25	✓	UA09_Set Power-on...	1: AO	908	percent (98)	A	ECG 9	-
26	✓	UA09_Set System-f...	1: AO	909	percent (98)	A	ECG 9	-
27	✓	UA09_Failure Status	0: AI	915	no_units (95)	A	ECG 9	T/P
28	✓	UA09_Emergency ...	0: AI	916	no_units (95)	A	ECG 9	T/P
29	✓	UA09_Emergency S...	0: AI	917	no_units (95)	A	ECG 9	T/P

Figure 7.3 IntesisBox MAPS Signals tab

7.2.5 Sending the configuration to IntesisBox

When the configuration is finished, follow the next steps.

- 1.- Save the project (Menu option **Project->Save**) on your hard disk (more information in IntesisBox MAPS User Manual).
- 2.- Go to tab '**Receive / Send**' of MAPS, and in **Send** section, press **Send** button. IntesisBox will reboot automatically once the new configuration is loaded.

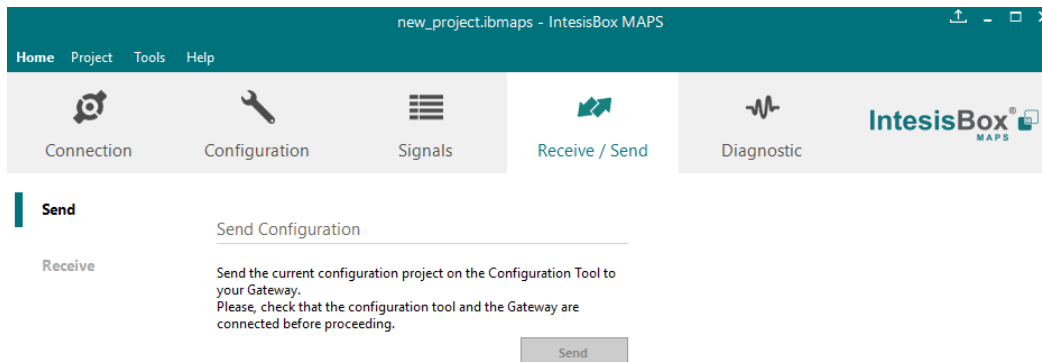


Figure 7.4 IntesisBox MAPS Receive/Send tab

After any configuration change, do not forget to send the configuration file to the IntesisBox using button Send in section Receive / Send.

7.2.6 Diagnostic

To help integrators in the commissioning tasks and troubleshooting, the Configuration Tool offers some specific tools and viewers.

In order to start using the diagnostic tools, connection with the Gateway is required.

The Diagnostic section is composed by two main parts: Tools and Viewers.

- **Tools**
Use the tools section to check the current hardware status of the box, log communications into compressed files to be sent to the support, change the Diagnostic panels' view or send commands to the gateway.
- **Viewers**
In order to check the current status, viewer for the Internal and External protocols are available. It is also available a generic Console viewer for general information about communications and the gateway status and finally a Signals Viewer to simulate the BMS behavior or to check the current values in the system.

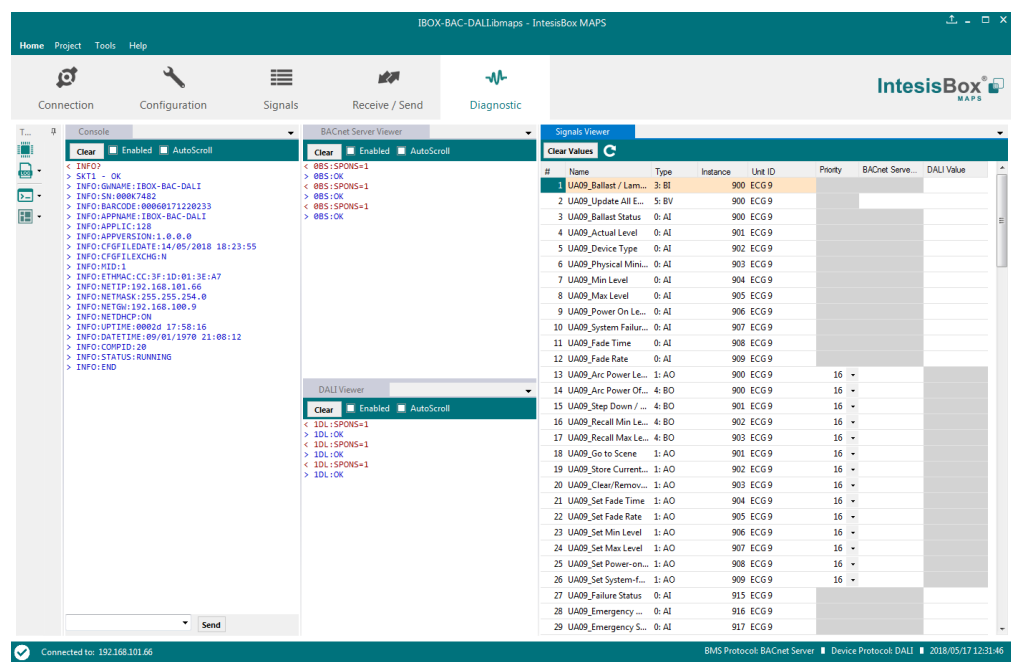


Figure 7.5 Diagnostic

More information about the Diagnostic section can be found in the Configuraion Tool manual.

7.3 Set-up procedure

1. Install IntesisBox MAPS on your laptop, use the setup program supplied for this and follow the instructions given by the Installation wizard.
2. Install IntesisBox in the desired installation site. Installation can be on DIN rail or on a stable not vibrating surface (DIN rail mounted inside a metallic industrial cabinet connected to ground is recommended).
3. If using BACnet IP, connect the communication cable coming from the BACnet IP network to the port marked as Ethernet on IntesisBox (More details in section 6).

If using BACnet MSTP, connect the communication cables coming from the BACnet MSTP network to the port marked as Port A on IntesisBox (More details in section 6).

4. Connect the communication cable coming from DALI network to the port marked as Port A of IntesisBox (More details in section 6).
5. If using two DALI channels, connect communication cable coming from second DALI network to the port marked as Port B of IntesisBox (More details in section 6).
6. Power up IntesisBox. The supply voltage should be 24VDC. Take care of the polarity of the supply voltage applied.

WARNING! In order to avoid earth loops that can damage IntesisBox and/or any other equipment connected to it, we strongly recommend the use of DC power supplies, floating or with the negative terminal connected to earth. **Never use a DC power supply with the positive terminal connected to earth.**

7. If you want to connect using IP, connect the Ethernet cable from the laptop PC to the port marked as USB of IntesisBox (More details in section 6).

If you want to connect using IP, connect the Ethernet cable from the laptop PC to the port marked as USB of IntesisBox (More details in section 6).

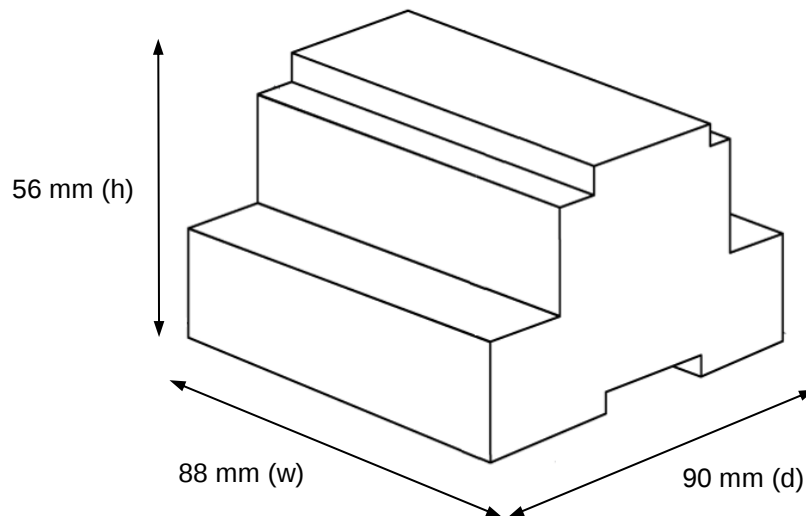
8. Open IntesisBox MAPS, create a new project selecting a copy of the one named **IBOX-BAC-DALI**.
9. Modify the configuration as desired, save it and download the configuration file to IntesisBox as explained in the IntesisBox MAPS user manual.
10. Visit the Diagnostic section and check that there is communication activity, some TX frames and some other RX frames. This means that the communication with the BACnet client device and DALI devices is OK. In case there is no communication activity between IntesisBox and the BACnet and/or DALI devices, check that those are operative: the communication cable used to connect all devices and any other communication parameter.

8 Electrical & Mechanical Features

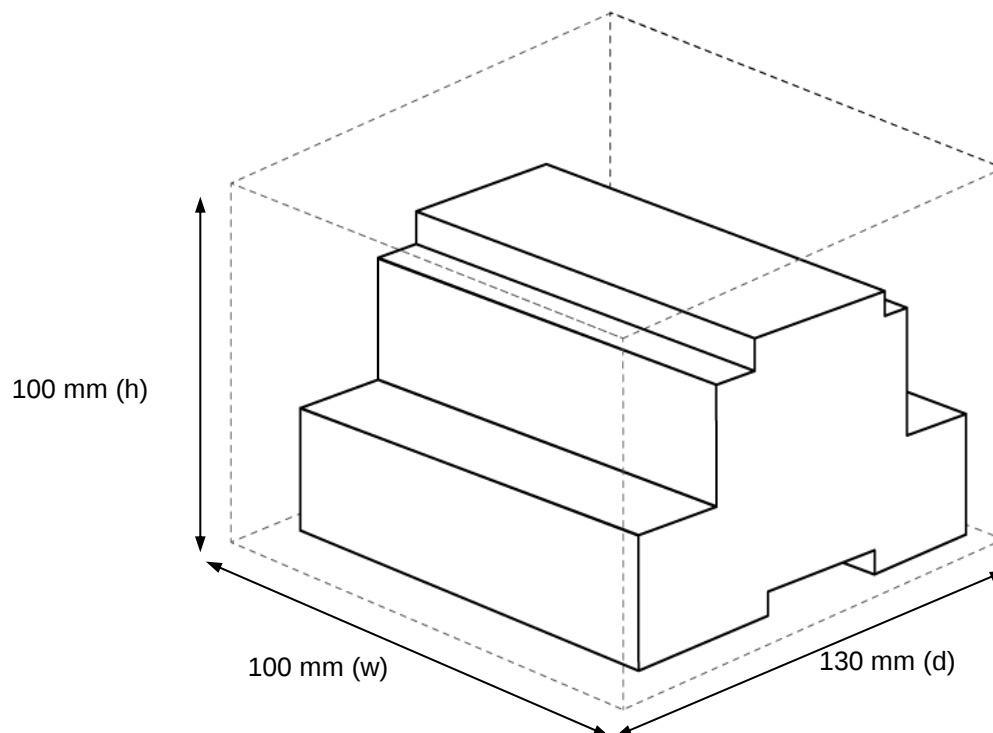


Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 90x88x56 mm Recommended space for installation (dxwxh): 130x100x100mm Color: Light Grey. RAL 7035	Battery	Size: Coin 20mm x 3.2mm Capacity: 3V / 225mAh Type: Manganese Dioxide Lithium
Mounting	Wall. DIN rail EN60715 TH35.	Console Port	Mini Type-B USB 2.0 compliant 1500VDC isolation
Terminal Wiring (for power supply and low-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5mm ² ... 2.5mm ² 2 cores: 0.5mm ² ... 1.5mm ² 3 cores: not permitted If cables are more than 3.05 meters long, Class 2 cable is required.	USB port	Type-A USB 2.0 compliant Only for USB flash storage device (USB pen drive) Power consumption limited to 150mA (HDD connection not allowed)
Power	1 x Plug-in screw terminal block (3 poles) Positive, Negative, Earth 24VDC / 6.5W (<i>IBBACDAL064xxxx</i>) 24VDC / 11W (<i>IBBACDAL128xxxx</i>)	Push Button	Button A: DALI test Button B: Broadcast of I-Am message (<i>IBBACDAL064xxxx</i>) or DALI test (<i>IBBACDAL128xxxx</i>).
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity	Operation Temperature	0°C to +60°C
Port A	1 x DALI port (Plug-in screw terminal block orange 2 poles) 1500VDC isolation from other ports DALI power consumption: 240mA Voltage rating: 16VDC 1 x Plug-in screw terminal block green (2 poles) Reserved for future use	Operational Humidity	5 to 95%, no condensation
Switch A (SWA)	1 x DIP-Switch for serial EIA485 configuration: Reserved for future use	Protection	IP20 (IEC60529)
PORT B	<i>IBMBSDAL064xxxx</i> 1 x Serial EIA232 (SUB-D9 male connector) Reserved for future use 1 x Serial EIA485 Plug-in screw terminal block (3 poles) A, B, SG (Reference ground or shield) 1500VDC isolation from other ports (except PORT B: EIA232) <i>IBMBSDAL128xxxx</i> 1 x Serial EIA232 (SUB-D9 male connector) Reserved for future use 1 x DALI port (Plug-in screw terminal block green 2 poles) 1500VDC isolation from other ports DALI power consumption: 240mA Voltage rating: 16VDC	LED Indicators	10 x On board LED indicators 1 x Error LED 1 x Power LED 2 x Ethernet Link/Speed 2 x Port A TX/RX 2 x Port B TX/RX 1 x Button A indicator 1 x Button B indicator
Switch B (SWB)	1 x DIP-Switch for serial EIA485 configuration: Position 1: ON: 120 Ω termination active Off: 120 Ω termination inactive Position 2-3: ON: Polarization active Off: Polarization inactive	100 mm	

9 Dimensions



Recommended available space for its installation into a cabinet (wall or DIN rail mounting), with space enough for external connections



Annex A – Quick setup and commissioning of a DALI network

This section provides a brief summary on commissioning a DALI channel using MAPS software tool. The process of commissioning involves:

- Scanning the existing ballasts (ECGs) in the DALI network
- Identifying their physical location
- Obtaining or setting up ECG short addresses
- Obtaining or editing ECG configuration parameters (preset levels, scenes, groups addressing...)

In that process, using MAPS, two workflows are possible for the commissioning:

1. “ECG declaration first”: First declaring or instantiating in MAPS the envisaged (planned) ballasts in the installation, setting up values for all their configuration parameters, and then scanning the network for existing ballasts. Process finalizes with assignation and download of planned configuration parameters (including short addresses) with existing ballasts in the installation.
2. “Existing ECG scan first”: Alternatively, and more common, it is possible to scan first the DALI network for existing ballasts, obtain their existing configuration (which will be default/factory if the ballasts are new), then change these parameters to match the desired ones (short address, preset levels, scenes...) and load the ballasts with the new configuration.

Typically, “Existing ECG scan first” method will be used when all commissioning is done in the installation itself, as it starts with a DALI bus scan. “ECG declaration first” allows to do some work in advance, defining the configuration parameters for the ballasts before accessing the actual installation. It is possible to understand the “ECG declaration first” as a previous step that can (but not must) be done before effectively scanning the network for ballasts (“Existing ECG scan first”), in order to advance configuration work (definition of preset levels, DALI groups, scene values, ...).

It is perfectly possible to mix the two methods. This is, configure a certain number of ballasts declaring them in MAPS (“ECG declaration first”), and once in the installation, assign their parameters to existing ballasts. Whenever more ballasts are installed, they can be added by scanning them in the network (“Existing ECG scan first”) and changing its configuration parameters to match the desired ones (without previous instantiation of them in MAPS).

9.1 Create project

You will need to create a new project, to do so, select ‘Create New project’ in MAPS start screen, and choose the appropriate template according to your device model (1 or 2 DALI channels / 64 or 128 max DALI devices):

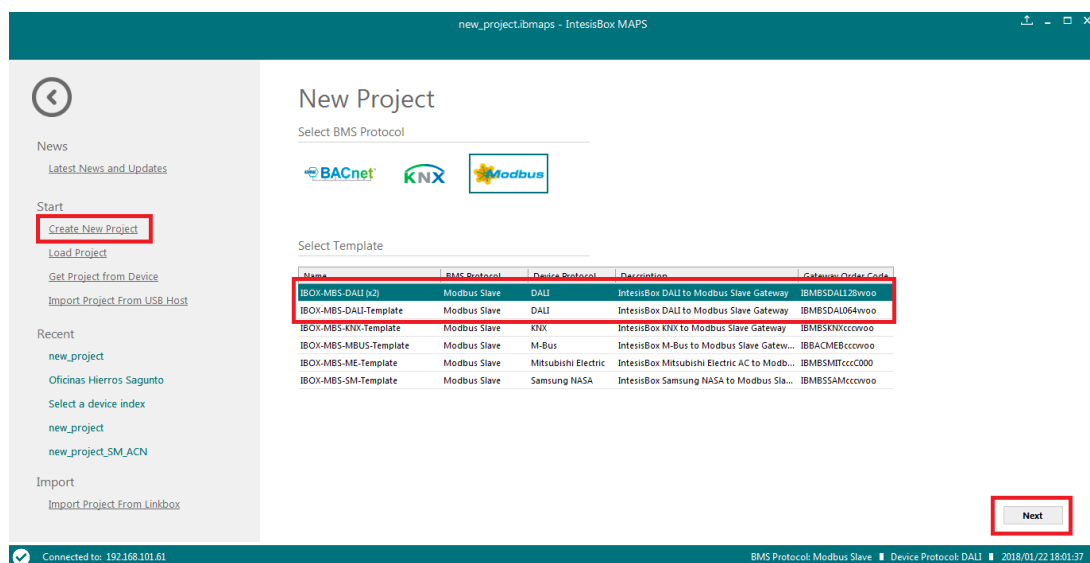


Figure A.1 New project creation

9.2 ECG declaration in project

Once new project has been created, ballasts can be added to the configured project, without the need of scanning them in bus.

As mentioned above, this allows defining its configuration parameters (preset values, groups, scenes, ...) before having actual access to the installation.

To do so, go to the 'Configuration' tab of IntesisBox, and select the 'DALI' section.

In it, choose the channel where you want to instantiate the ballasts (A or B are possible in case of having the product version supporting 2 DALI channels).

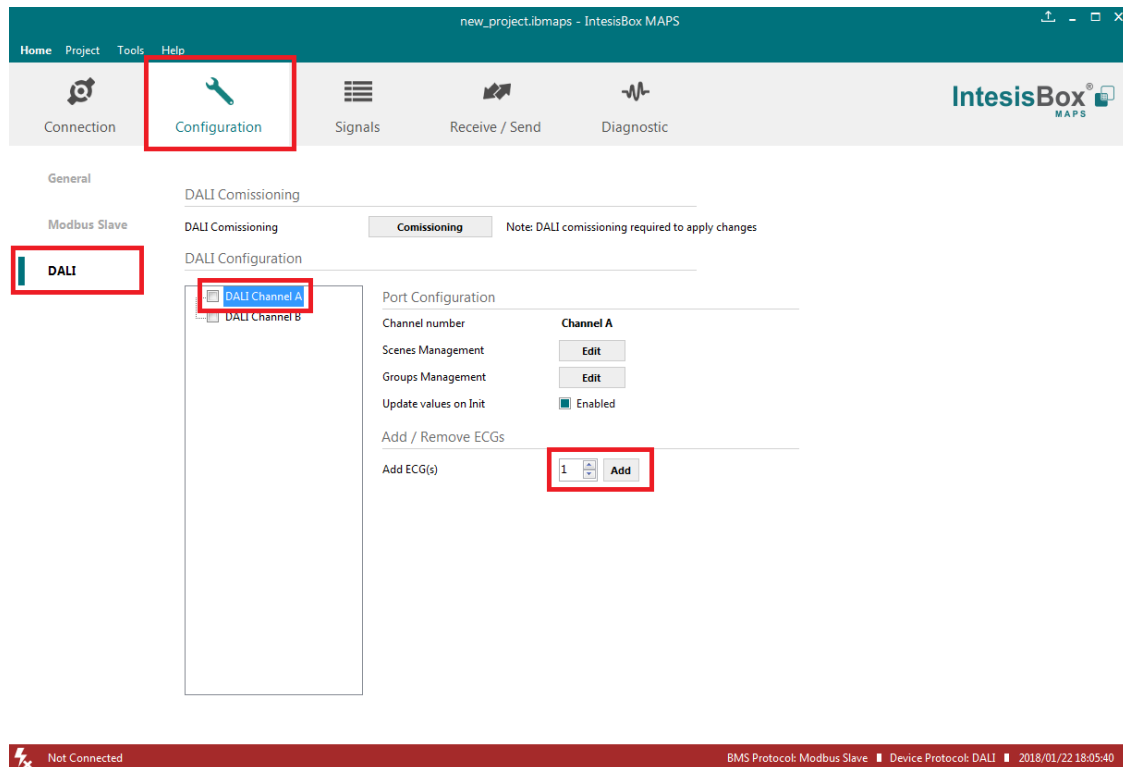


Figure A.2 DALI ECGs instantiation

With suitable DALI channel selected, enter in 'Add ECG(s)' field the number of ballasts/ECGs to instantiate, and click button Add.

Number of desired devices will appear:

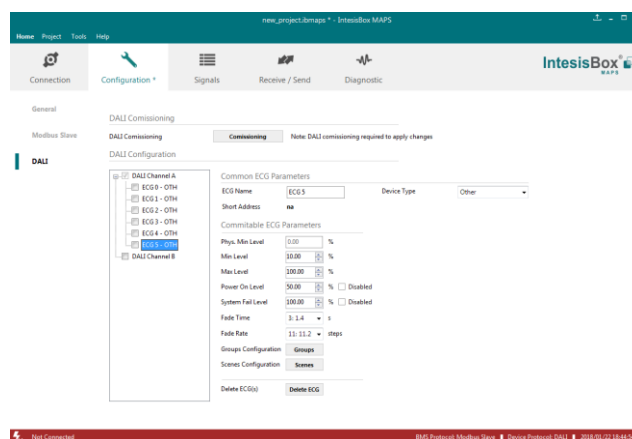


Figure A.3 Instantiation of DALI ECGs

If too many ECGs have been instantiated, they can be deleted by selecting them, and pressing button 'Delete ECG(s)'. Multiple selection is also possible.

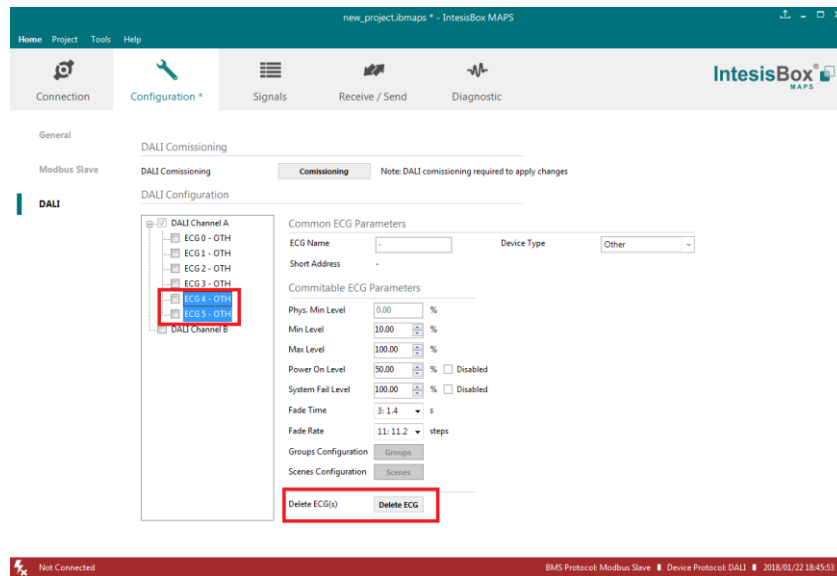


Figure A.4 Deleting DALI ECGs

Finally, for all ballasts in configuration, you will need to define:

- **ECG Name** (optional): Name to ease its identification in the network
- **Device type**: It's important that this field is suitably chosen and according to existing ballast in the network (device type 0: Fluorescent Light, device type 1: Emergency Light, device type 6: LED module or 'Other' (default) if none of the above matches the device type).
- **Commitable ECG Parameters**: This includes all preset values for the ballasts (min level, max level, power on level, etc), as well as group assignation and scene configuration.

9.3 Scan and commissioning of ECGs

First you need to get MAPS connected to the IntesisBox device. To do so, go to 'Connection' tab of MAPS. There, select appropriate connection mode (IP or USB). Select your device from the list of scanned devices (IP) or suitable COM port (USB).

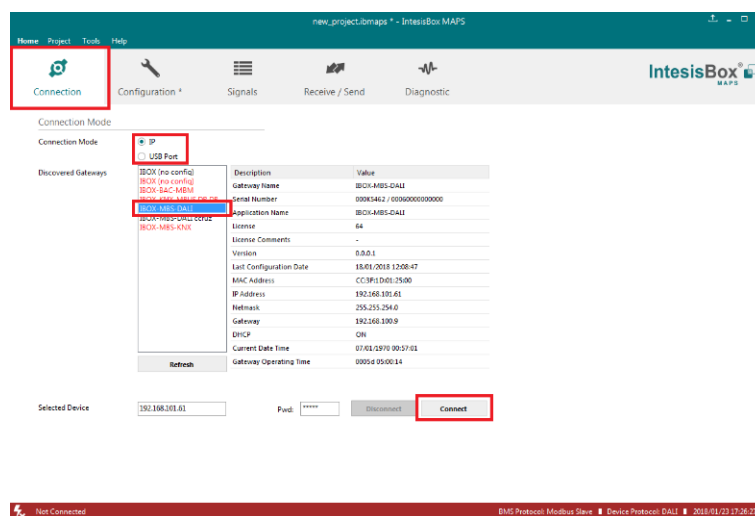


Figure A.5 Connecting MAPS to the IntesisBox

Finally, click on button 'Connect' in order to establish connection. Bar at the bottom in MAPS main window will become green, switching from 'Not Connected' to 'Connected'.

Now go back to 'Configuration' tab of MAPS, and click on button 'Commissioning':

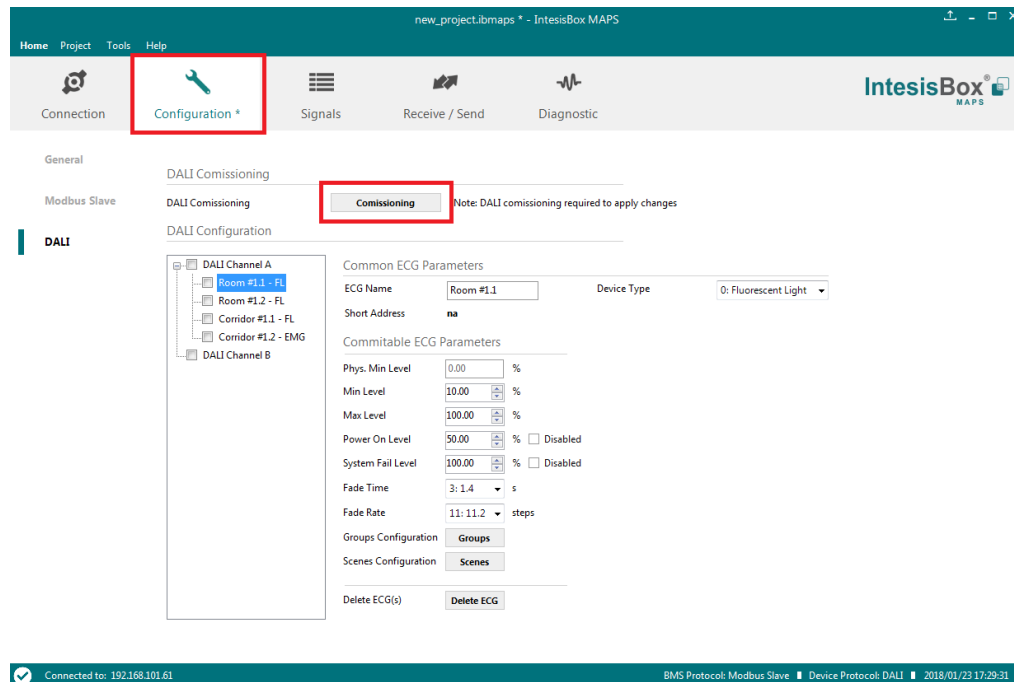


Figure A.6 DALI commissioning button

Commissioning window will appear:

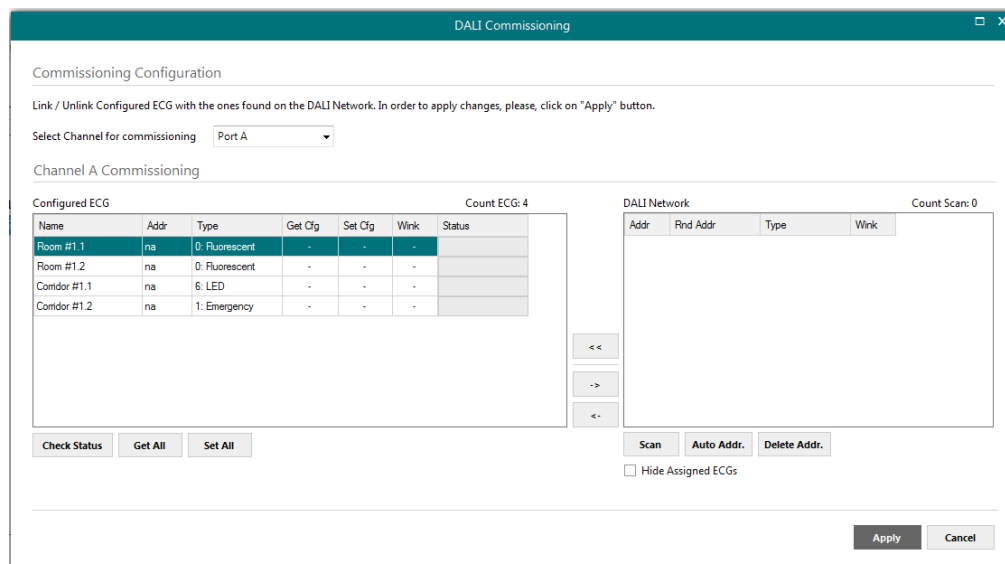


Figure A.7 DALI commissioning window

If having product version / template project supporting 2 DALI channels, channel to commission must be selected between 'Port A' (top of the device) or 'Port B' (bottom of the device). In case of version supporting single DALI channel, no selection is possible.

Also, if ballasts have been added to the configuration (see previous section 'ECG declaration in project') a list of ballasts will appear in Configured ECG.

There is also a 'DALI network' area that will show DALI scan results, empty by now.

In order to start a DALI network scan, select suitable DALI channel (if applicable) and then click on button 'Scan':

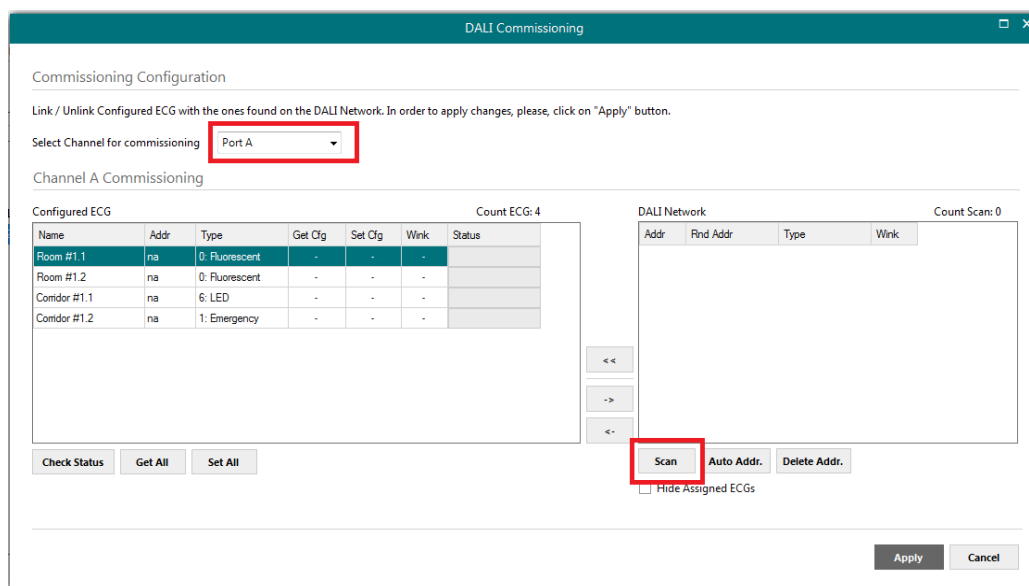


Figure A.8 Starting DALI scan process

New ballasts will appear in the 'DALI Network' area, as soon as they are scanned. Network scan might take from several seconds up to a few minutes, depending on number of ballasts to scan.

Field 'Addr' in list of 'DALI Network' will indicate 'na' if ballast has no associated group address (typical for new ballasts/factory settings) or a 0..63 value for its short address if device has already been given a short address.

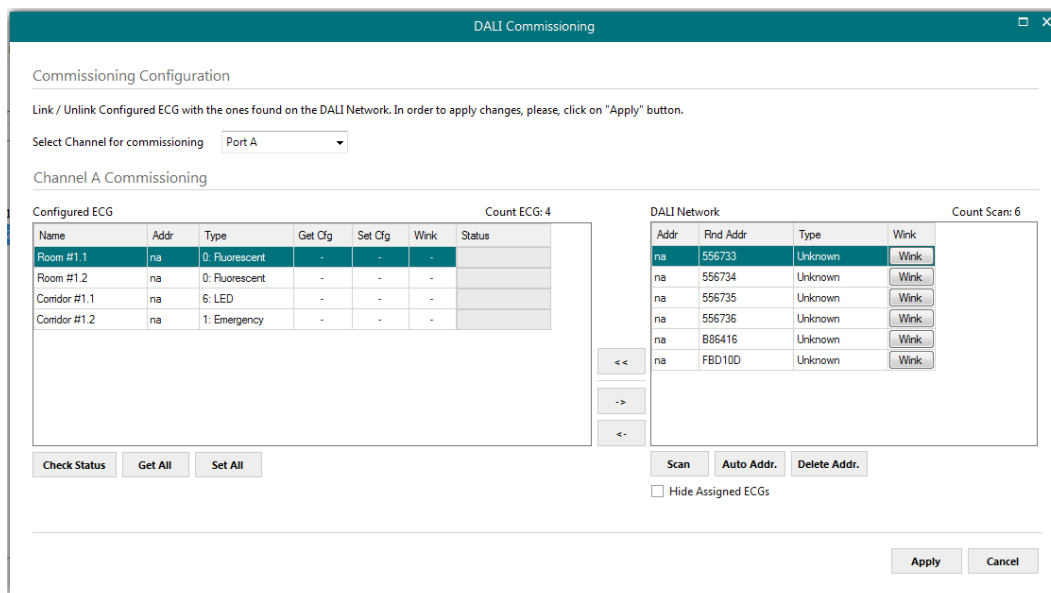


Figure A.9 Example of scan results

After scan is done, total number of found ballasts will be shown in 'Scanned ECGs:' label, below the 'DALI Network' section, at the right.

Next step is associating a short address between 0 to 63 to each found ballast. To do so, following options are possible:

1. Identify the ballast in the installation with the Wink button (it will set it to MAX level for a while), and then double click in short address field of the ballast in DALI Network window, and assign it an address 0..63.

2. Use the Auto Addr. Button to automatically assign a correlative address to each ballast.

Address of each ballast can be deleted at any time, using button Delete Addr. Multiple selection is possible (using Shift and Control keys together with mouse-clicks).

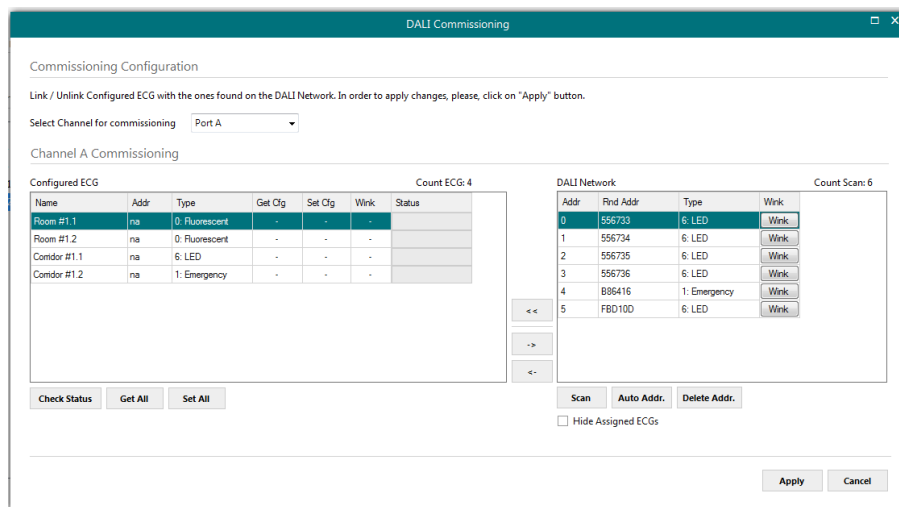


Figure A.10 Shot address association

Once each ballast has a short address, 'Wink' functionality in "DALI Network" window is available for each ballast. Wink functionality sets the ballast at maximum and minum level during a certain timeout, allowing to identify the physical location of the ballast in the installation. After identifying it in the installation, change in short address might be desired. It can be done again by using button 'Chg Addr.'.

After address association, ballasts can be added in config. There is two ways for doing that:

- Button '<<': Selected ballast or ballasts in 'DALI Network' window will be added as a new ballast in 'Configured ECG' window. It allows multiple selection of ballasts from DALI Network window (using 'shift' or 'control' keys).
- Button '<-': Selected ballast in 'DALI Network' window will be associated to existing/configured ballast in 'Configured ECG' window.

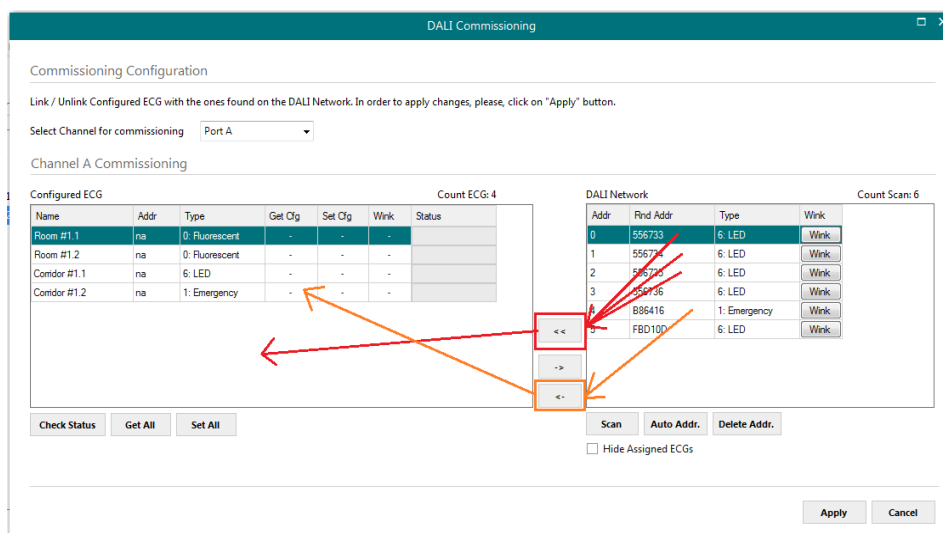


Figure A.11 Functionality of '<<' and '<-' buttons

In Figure's example, we'll associate LED ballasts with short address 0, 1 and 2 and Emergency light with short address 5 to existing ballasts (with '<-' button), and add ballasts from short addresses 3 and 4 as new ballasts in the configuration.

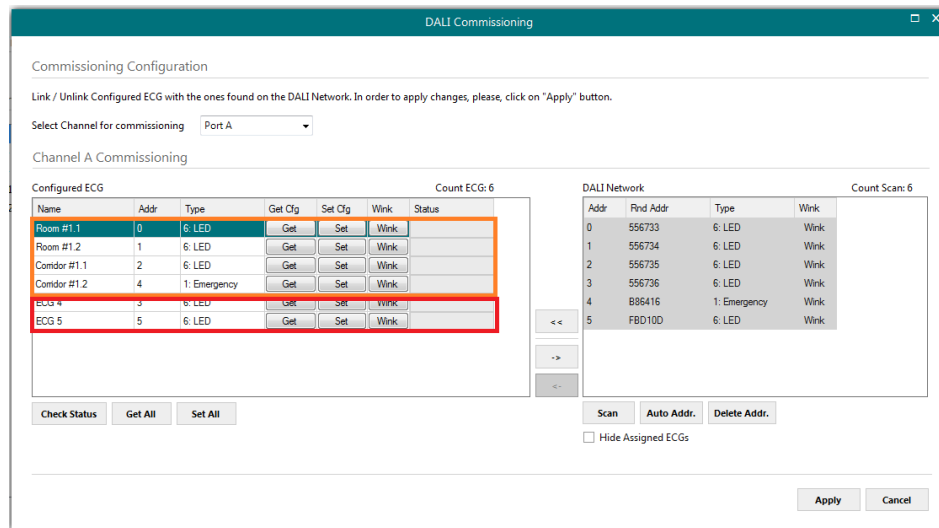


Figure A.12 Result after moving scanned ballasts to 'Configured ECG window'

Figure above shows the result. Now configured ECG's contains actual ballasts in the installation, each with its own short address. At this point, it's possible to:

- **Remove the ballast from configuration** (button '->'). This will move them back to 'DALI Network' area.
- **Wink the ballast to identify it in the installation** (button 'Wink', on each ECG).
- **Get the ballast configuration parameters** (button 'Get' on each ECG, or 'Get All' below the window). Warning, getting the configuration of a ballast will overwrite all configured parameters in MAPS config for that ballast (preset levels, group addressing, scenes, ...)
- **Set the ballast configuration parameters for each ballast** (button 'Set' on each ECG, or 'Set All' below the window).
- **Check status** for each ballast (if it's online, if it reports failure, etc).

Finally, pressing button 'Apply' will apply all changes to actual configuration in MAPS, and close the window.

Keep in mind that process done at window DALI commissioning changes configuration of parameters in DALI network, but it's still necessary to configure further parameters in IntesisBox and sending configuration file to IntesisBox using 'Send/Receive' tab of configuration section.