BACnet IP Server

Digitally Addressable Lighting Interface (DALI-2)

USER MANUAL

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

ORDER CODE
INBACDAL0640500

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1 Description

1.1 *Introduction*

This document describes the integration of DALI-2 lighting ballasts and sensors with BACnet/IP protocol compatible devices or systems using the gateway Intesis BACnet IP Server - DALI.

The aim of this integration is to monitor and control DALI-2 lighting ballasts and sensors (see section 2 for specific DALI parts), remotely, for your Control Centre 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 device in its BACnet interface, allowing other BACnet devices to perform subscription (COV) requests and reads/writes to its internal points.

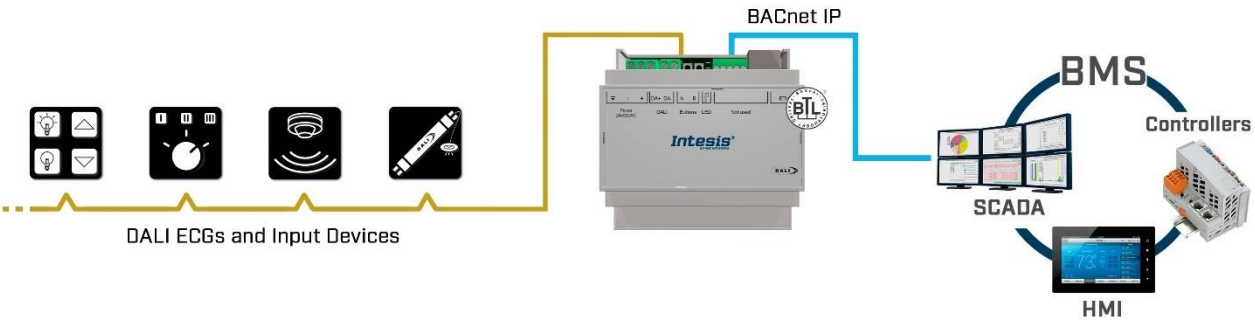
For Push buttons and Absolute input devices there is an option to have a direct control of the ECGs from the gateway itself called Input device local management, so you can create an action associated to an event of the Push Button and Absolute input devices, this can be a more effective way to achieve a reaction on the lights. You have also the option on controlling the ECG action from the BMS in cases where you are controlling other items together with the light.

Up to 64 addresses for DALI lighting devices (ECGs), and another 64 addresses for Input devices can be fitted in a single DALI channel, and therefore controlled and monitored from Intesis gateway.

The Intesis gateway needs to be configured using Intesis MAPS software configuration tool. In the software, BACnet and DALI lighting device parameters must be configured and downloaded to the Intesis gateway.

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

NOTE: Intesis is compatible with Ballasts and sensors implementeing DALI-2 standard and certified under DiiA guidelines for testing and certification. Use only DALI-2 devices having the DALI-2 logo with Intesis.



Integration of DALI into BACnet IP control systems

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1.2 *Functionality*

Intesis® continuously polls (reads) all the signals of the DALI ECGs and Input devices 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 gateway's memory and become available in the BACnet side.

When a change in any point configured as output in gateway is detected (this is, written from the BACnet side), the corresponding action in the DALI device 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.

From the configuration tool, it is also possible to scan each DALI channel for available ECGs and/or Input devices, add them in configuration, and configure its individual parameters (short address, pre-set levels, scenes, etc), according to their device type or instance.

1.3 *Gateway's capacity*

Intesis capacity is listed below:

Element	Max.	Notes
Number of DALI channels	1	Number of independent DALI channels
Number DALI ECGs addresses per line	64	64 DALI ECGs addresses are supported per line
Number DALI Sensors addresses per line	64*	64 DALI Sensors addresses are supported per line *The maximin number of devices is limited by the guaranteed power supply of the DALI network and max signals. Keep in mind when dimensioning each DALI channel. See Section 2 for more details.*
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
Maximum number of signals per gateway	10000	Can enable up to 10000 signals for the entire gateway regardless if they are ECG, Input devices, Groups or Broadcast

*16 would be recommended specially if using push buttons, have in mind that this would be limited for the maximum number of signals allowed, devices as the push buttons with several instances would consume several signals and input devices consume more power than ECGs, See Section 2 for more details.

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2 DALI Interface

Intesis gateway and its DALI interface complies with the new DALI-2 (IEC62386) standard thanks to its DALI-2 certification.

Intesis gateway enables the connection of up to 64 DALI/DALI-2 ECGs and 64 DALI-2 Input devices. In the current version of the device, the following device types are supported:

- General requirements (Part 101)
  - Part 201: DALI Fluorescent lamps (DALI type 0)
  - Part 202: Self-contained Emergency lighting (DALI type 1)
  - Part 207: LED modules (DALI type 6)
  - Others (Multiple DALI types)

- Input devices (Part 103):
  - Part 301: DALI-2 Push buttons
  - Part 302: DALI-2 Absolute input devices
  - Part 303: DALI-2 Occupancy sensors
  - Part 304: DALI-2 Light sensors

The maximum number of DALI devices (ECGs and/or input devices) depends on the sum current consumption of the specific devices. Intesis gateway supplies bus power of 235 mA for power supply of the DALI devices, so if all input devices (sensors) in the bus consumed 5 mA then we could connect 64 ECGs (standard defines max. consumption allowed for these devices is 2mA) and 16 sensors.

64 ECGs * 2 mA + 16 sensors * 5 mA = 208 mA < 235 mA * 90%

As the standard recommends, don't use the guaranteed current to calculate the maximum number of DALI devices, leave 10% of the current for future expansion or tolerances.

2.1 *Characteristics*

Element	Values
DALI voltage (V)	14 V – 17 V; typically, 16V
Guaranteed current (mA) available per line	230
Maximum Current (mA) available per line	250
Start-up time (ms)	1500
Shutdown time (sec)	7
Data transfer rate (bauds)	1200

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3 Protocol Implementation Conformance Statement

BACnet Protocol Implementation Conformance Statement (PICS)

Date: *2018-05-09*
Vendor Name: *HMS Industrial Networks S.L.U*
Product Name: *INBACDAL0640500*
Product Model Number: *INBACDAL---0000*
Application Software Version: *1.0*
Firmware Revision: *1.1.1.0*
BACnet Protocol Revision: *14*

Product Description:

DALI –BACnet IP Gateway

Abstraction of DALI lighting ballasts registers as BACnet Objects.

3.1 *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

3.2 *Segmentation Capability:*

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

3.3 *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:

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3.4 *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

3.5 *Networking Options:*

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

3.6 *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

3.7 *Gateway*

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

DALI lighting ballasts.

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4 BACnet Interoperability Building Blocks Supported (BIBBs)

4.1 *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	☒	☐

4.2 *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	☐	☒

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4.3 *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 ether DM-TS-B or DS-UTC-B)*	☒			
SCHED-E-B	Scheduling-External–B *(shall support SCHED-I-B and DS-WP-A)*	☐			

4.4 *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	☐	☒

4.5 *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	☒	☐
		☐	Initialize-Routing-Table-Ack	☐	☒
NM-RC-B	Network Management - Router Configuration–B	☐	Who-Is-Router-To-Network	☒	☒
		☐	I-Am-Router-To-Network	☒	☒
		☐	Initialize-Routing-Table	☐	☒
		☐	Initialize-Routing-Table-Ack	☒	☐

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4.6 *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	☐	UnconfimedCOVNotification	☐	☒
DM-R-B	Device Management - Restart–B	☐	UnconfimedCOVNotification	☒	☐
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	☒	☒

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5 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	DeviceComminicationControl	☒	
	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	☒	

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6 Objects

6.1 *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 Iyxx_Absolute input
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

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			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 Iyxx_Push button Input Value-Release Iyxx_Push button Input Value-Pressed Iyxx_Push button Input Value-Short Press Iyxx_Push button Input Value-Double Press Iyxx_Push button Input Value-Long press Start Iyxx_Push button Input Value-Long press Repeat Iyxx_Push button Input Value-Long Press Stop Iyxx_Push button Input Value-Button stuck
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 INBACDAL0640500
Event-Enrollment	9	☐	
File	10	☐	
Group	11	☐	
Life-Safety-Point	21	☐	
Life-Safety-Zone	22	☐	
Loop	12	☐	

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Multistate-Input	13	☐	
Multistate-Output	14	☐	
Multistate-Value	19	☐	
Notification-Class	15	☒	
Program	16	☐	
Schedule	17	☒	
Trend-Log	20	☒	
Trend-Log-Multiple	27	☒	

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6.2 *Member objects*

6.2.1 Gateway objects

Object-name	Description	Object-type	Object-instance
Device INBACDAL0640500* *Can be configured in MAPS	DALI to BACnet Gateway	Device	246* *Can be configured in MAPS

6.2.2 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

6.2.3 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

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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

6.2.4 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

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6.2.5 Input Device objects

Object-name	Description	Object-type	Object-instance
Iyxx_Light InputValue *y stands for line (A or B)* *xx stands for sensor index, 0 to 63*		AI	14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = sensor index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 0-7*
Iyxx_Occupancy InputValue		MI	
Iyxx_Push button Input Value-Release		BI	
Iyxx_Push button Input Value-Pressed		BI	
Iyxx_Push button Input Value-Short Press		BI	
Iyxx_Push button Input Value-Double Press		BI	
Iyxx_Push button Input Value-Long press Start		BI	
Iyxx_Push button Input Value-Long press Repeat		BI	
Iyxx_Push button Input Value-Long Press Stop		BI	
Iyxx_Push button Input Value-Button stuck		BI	
Iyxx_Absolute input		AI	

6.2.6 Group objects

Object-name	Description	Object-type	Object-instance
Gyxx_Arc Power Level *y stands for line (A or B)* *xx stands for sensor index, 0 to 63*		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

6.2.7 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

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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

6.3 *Objects and properties*

6.3.1 INBACDAL0640500 (Device Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Device, 246000)	R	R
Object_Name	CharacterString	"INBACDAL0640500"	R	R
Object_Type	BACnetObjectType	DEVICE (8) (Device Object Type)	R	R
System_Status	BACnetDeviceStatus	OPERATIONAL (0)	R	R
Vendor_Name	CharacterString	"HMS Industrial Networks S.L.U"	R	R
Vendor_Identifier	Unsigned16	246	R	R
Model_Name	CharacterString	"INBACDAL0640500 "	R	R
Firmware_Revision	CharacterString	"1.1.1.0"	R	R
Application_Software_ Version	CharacterString	"1.1.1.0"	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 5 [Service Types]	R	R
Protocol_Object_Types_ Supported	BACnetObjectTypes Supported	Refer to section 6.1 [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

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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.

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6.3.2 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

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6.3.3 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	-

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6.3.4 Uyxx_Ballast Status

Present_value is encoded in bitfieds, 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*

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

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6.3.5 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	-

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6.3.6 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*

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

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6.3.7 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*

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

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6.3.8 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	-

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6.3.9 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	-

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6.3.10 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	-

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6.3.11 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	-

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6.3.12 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*

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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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6.3.13 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*

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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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6.3.14 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	-

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6.3.15 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	-

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6.3.16 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	-

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6.3.17 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	-

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6.3.18 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	-

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6.3.19 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	-

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6.3.20 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	-

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6.3.21 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	-

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6.3.22 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	-

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6.3.23 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	-

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6.3.24 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*

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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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6.3.25 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*

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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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6.3.26 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	-

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6.3.27 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	-

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6.3.28 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	-

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6.3.29 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	-

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6.3.30 Uyxx_Failure Status

Present_value is encoded in bitfieds, 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*

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

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6.3.31 Uyxx_Emergency Mode

Present_value is encoded in bitfieds, 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*

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

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6.3.32 Uyxx_Emergency Status

Present_value is encoded in bitfieds, 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*

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

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6.3.33 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	-

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6.3.34 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	-

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6.3.35 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	-

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6.3.36 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	-

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6.3.37 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	-

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6.3.38 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	-

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6.3.39 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	-

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6.3.40 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	-

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6.3.41 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	-

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6.3.42 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	-

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6.3.43 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	-

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6.3.44 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	-

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6.3.45 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	-

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6.3.46 Uyxx_Features

Present_value is encoded in bitfieds, 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*

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

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6.3.47 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	-

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6.3.48 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	-

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6.3.49 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	-

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6.3.50 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	-

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6.3.51 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	-

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6.3.52 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	-

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6.3.53 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	-

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6.3.54 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	-

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6.3.55 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	-

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6.3.56 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	-

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6.3.57 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	-

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6.3.58 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	-

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6.3.59 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	-

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6.3.60 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	-

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6.3.61 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	-

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6.3.62 Uyxx_Failure Status

Present_value is encoded in bitfieds, 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*

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Profile_Name	CharacterString	-	O	-

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6.3.63 Uyxx_Gear Type

Present_value is encoded in bitfieds, 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	-

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6.3.64 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	-

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6.3.65 Uyxx_Possible Operating Modes

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

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

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	-

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6.3.66 Uyxx_Features

Present_value is encoded in bitfieds, 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*

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

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6.3.67 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	-

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6.3.68 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	-

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6.3.69 Uyxx_Operating Mode

Present_value is encoded in bitfieds, 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	-

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6.3.70 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	-

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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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6.3.71 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	-

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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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6.3.72 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	-

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6.3.73 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	-

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6.3.74 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	-

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6.3.75 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	-

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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	-

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6.3.76 Iyxx_Light InputValue

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = sensor index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 0*	R	R
Object_Name	CharacterString	Iyxx_Light InputValue *y stands for line (A or B)* *xx stands for sensor index, 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	*luxes (37)*	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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6.3.77 Iyxx_Occupancy InputValue

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = sensor index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 0*	R	R
Object_Name	CharacterString	Iyxx_Occupancy InputValue	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	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
Number_Of_States	Unsigned	*4*	R	R
State_Text	BACnetArray[N] of CharacterString	*Check **Occupancy table** below*	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	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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Occupancy table

Occupancy interpretation is possible using the value in the following correspondence table.

Pesent_Value	Contents displayed in State_Text
1	`Vacant + No Mov`
2	`Vacant + Mov`
3	`Occupied + No Mov`
4	`Occupied + Mov`

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6.3.78 Iyxx_ Push button Input Value-Release

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = sensor index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 0*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Release *y stands for line (A or B)* *xx stands for sensor index, 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	-	R	R
Inactive_Text	CharacterString	“Inactive”	O	R
Active_Text	CharacterString	“Button Released Event”	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.79 Iyxx_Push button Input Value-Pressed

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 1*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Pressed *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	“Inactive”	O	R
Active_Text	CharacterString	“Button Pressed Event”	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.80 Iyxx_Push button Input Value-Short Press

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 2*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Short Press *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	“Inactive”	O	R
Active_Text	CharacterString	“Button Short Press Event”	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.81 Iyxx_Push button Input Value-Double Press

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 3*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Double Press *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	"Inactive"	O	R
Active_Text	CharacterString	"Button Double Press Event"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.82 Iyxx_Push button Input Value-Long press Start

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 4*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Long Press Start *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	“Inactive”	O	R
Active_Text	CharacterString	“Button Long Press Start Event”	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.83 Iyxx_Push button Input Value-Long press Repeat

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 5*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Long Press Repeat *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	“Inactive”	O	R
Active_Text	CharacterString	“Button Long Press Repeat Event”	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.84 Iyxx_Push button Input Value-Long Press Stop

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 6*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Long Press Stop *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	“Inactive”	O	R
Active_Text	CharacterString	“Button Long Press Stop Event”	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.85 Iyxx_Push button Input Value-Button stuck

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Binary input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = Input device index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 7*	R	R
Object_Name	CharacterString	Iyxx_ Push button Input Value-Button Stuck *y stands for line (A or B)* *xx stands for Input device index, 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	-	R	R
Inactive_Text	CharacterString	"Button Free"	O	R
Active_Text	CharacterString	"Button Stuck"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	0	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	-

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6.3.86 Iyxx_Absolute input

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 14000 + (640 * y) + (10 * xx) + z+ (1280*v) *y = line number (0 or 1)* *xx = sensor index, 0 to 63* *z = instance index, 0 to 9* *v=signal index 0*	R	R
Object_Name	CharacterString	Iyxx_Absolute Input *y stands for line (A or B)* *xx stands for sensor index, 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	*Percent: 0…100% /* *Absolute value: 0…(2^resolution -1)*	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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6.3.87 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	-

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6.3.88 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	-

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6.3.89 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	-

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6.3.90 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	-

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6.3.91 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	-

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6.3.92 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	-

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6.3.93 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	-

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6.3.94 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	-

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6.3.95 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*

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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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6.3.96 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*

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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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6.3.97 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	-

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6.3.98 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	-

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6.3.99 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	-

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6.3.100 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	-

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6.3.101 By_Arc Power Level

Present_value takes value 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 7000* 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	-

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6.3.102 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	-

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6.3.103 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	-

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6.3.104 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	-

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6.3.105 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	-

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6.3.106 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* 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	-

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6.3.107 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* 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	-

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6.3.108 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* 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

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6.3.109 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* 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*

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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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6.3.110 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* 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*

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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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6.3.111 By_Set Min Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 7000* 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	-

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6.3.112 By_Set Max Level

Present_value takes values 0 to 100%

Property Identifier	Property Datatype	Value	ASHRAE	IBOX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 7000* 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	-

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6.3.113 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* 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	-

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6.3.114 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* 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	-

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7 Connections

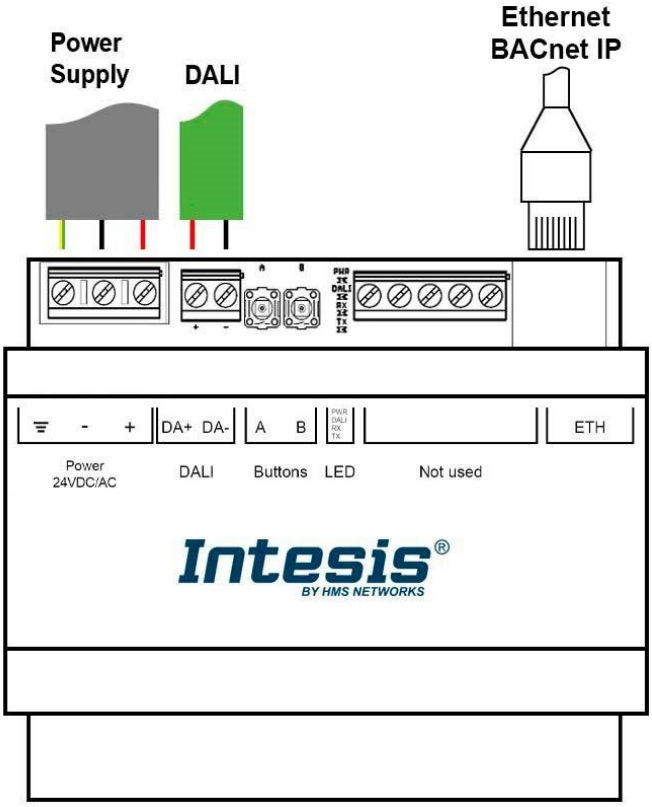

Figure 7.1 Gateway's connections

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 below). The power supply can be connected to earth but only through the negative terminal, never through the positive terminal.

Ethernet / BACnet IP(UDP) / Console (UDP & TCP)
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). With factory settings, after powering up the gateway, DHCP will be enabled for 30 seconds. After that time, if no IP is provided by a DHCP server, the default IP 192.168.100.246 will be set.

DALI
Connect the DALI bus to connectors DA+, DA- of gateway's DALI port. The Intesis gateway provides 16VDC DALI voltage to the bus. Please, respect polarity when other DALI power supplies are connected in the same DALI bus.

Ensure proper space for all connectors when mounted (see section 11).

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7.1 *Powering the device*

A power supply working with any of the voltage range allowed is needed (check section 0). Once connected the PWR 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**.

7.2 *Connection to BACnet IP*

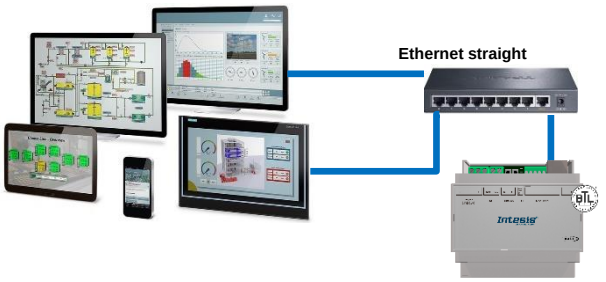

Figure 7.2 BACnet network

Connect the communication cable coming from the network hub or switch to the ETH port (Figure above) of Intesis. 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 Intesis, check that they are operative and reachable from the network connection used by Intesis. Check the Intesis 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.

7.3 *Connection to DALI channel.*

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

NOTE: The gateway comes with the DALI power supply disabled out of the box in case you are using one on the Bus.
If you want the gateway to be the main power supply on the DALI line you can enable it from MAPS, the change would be effective after a transfer. In the absence of power in the DALI bus you would have no communication and a hardware error would appear on the hardware test.

If using an external DALI power supply, ensure that:

- Is a DALI-2 standard and certified under the DiiA guidelines.
- Polarity is the same in between the gateway and the power supply(ies) on the DALI bus.
- That you follow the DALI standard guidelines for powering the Bus.

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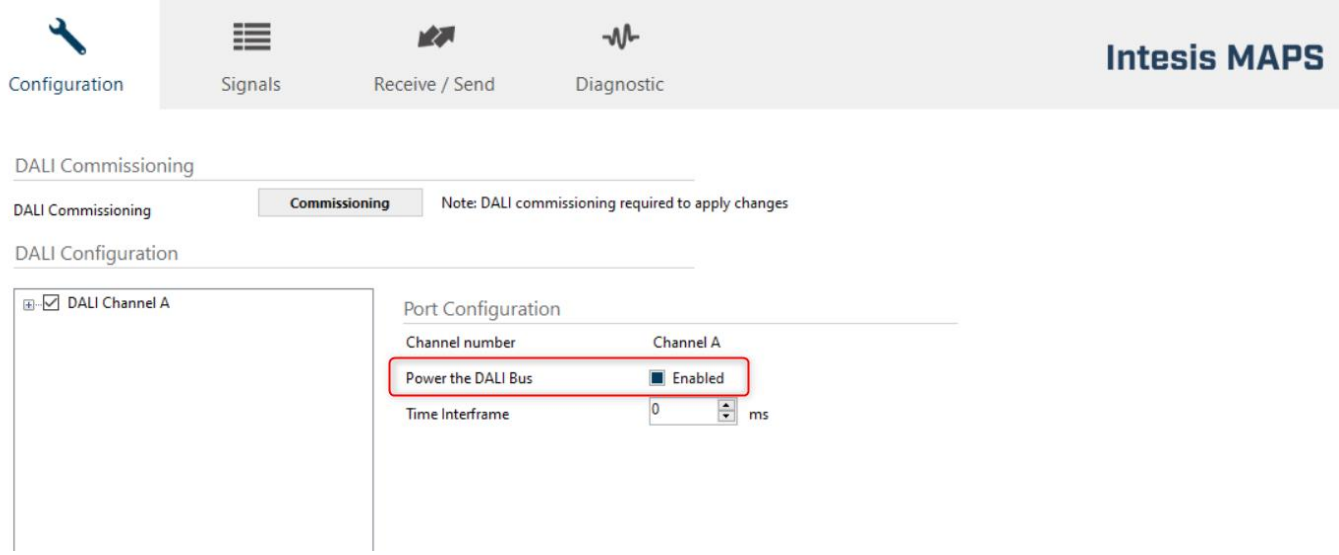

Figure 7.3 DALI bus power configuration

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

- When pressing Button A, 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.

7.4 *Connection to the configuration tool*

This action allows the user to have access to configuration and monitoring of the device Using the Ethernet port of Intesis. (more information can be found in the Intesis MAPS configuration tool User Manual).

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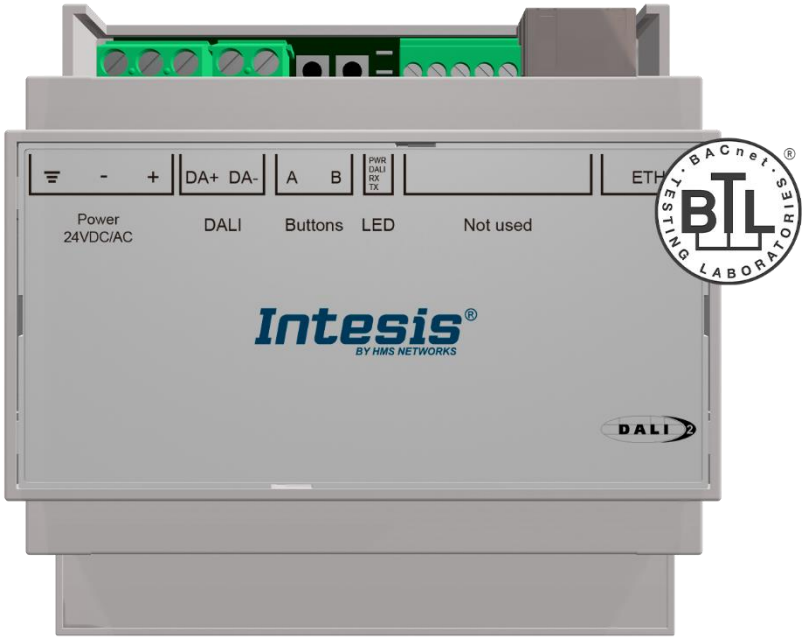
8 Status LEDs and push buttons



LED	Colour	Indication
PWR	Off	No power
	Green	Device powered and working.
DALI	Off	There is no activity on this port.
	Tx/Rx - Blinking green/yellow	Every data packet sent or received on the DALI link it blinks
TX	Off	There is no activity on this port.
	Tx - Blinking green	Every data packet sent to the Modbus Client it blinks
RX	Off	There is no activity on this port.
	Rx – Blinking yellow	Every data packet received from the Modbus Client it blinks
Button A – DALI	Off / Yellow	Indicates status of last command sent from the button (On-RECALL_MAX_LEVEL, Off-OFF) After 30 secs of not pushing the button, the LED turns OFF and next time the button is pushed it will begin with RECALL_MAX_LEVEL
Button B	Off / Yellow	Not used

Push button	Functionality
Button A – DALI	Sends to broadcast, alternatively: RECALL_MAX_LEVEL, OFF
Button B	Not used.

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9 Set-up process and troubleshooting

9.1 *Pre-requisites*

It is necessary to have a BACnet IP 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 DALI port.

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:

- Intesis gateway.
- Link to download the configuration tool.
- Product documentation.

9.2 *Intesis MAPS. Configuration & monitoring tool for Intesis BACnet series*

9.2.1 Introduction

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

The installation procedure and main functions are explained in the Intesis MAPS Modbus Server User Manual.

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

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

9.2.2 Connection

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

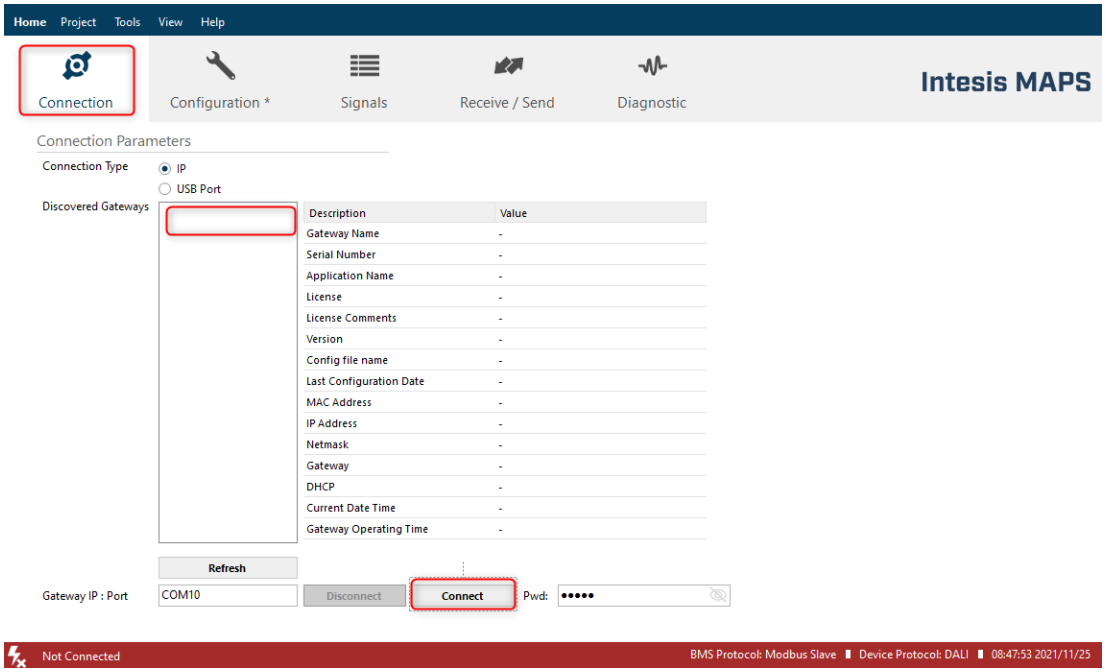

Figure 9.1 MAPS connection

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9.2.3 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).

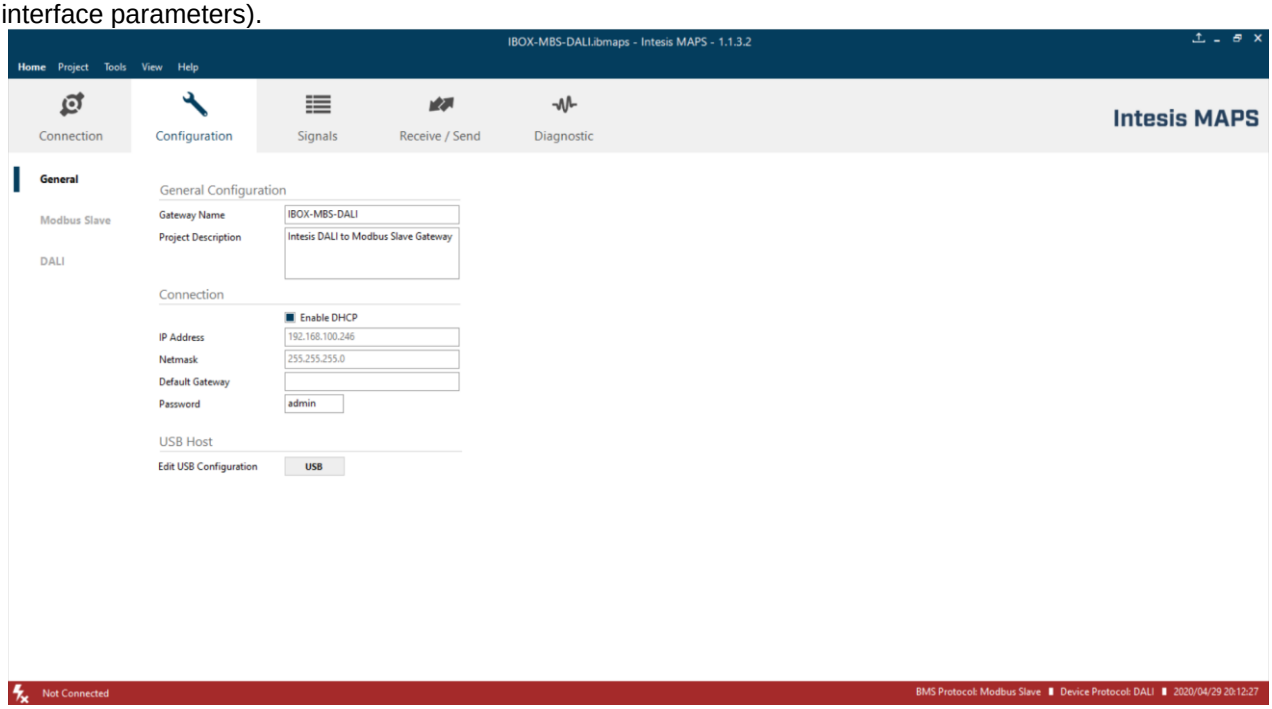
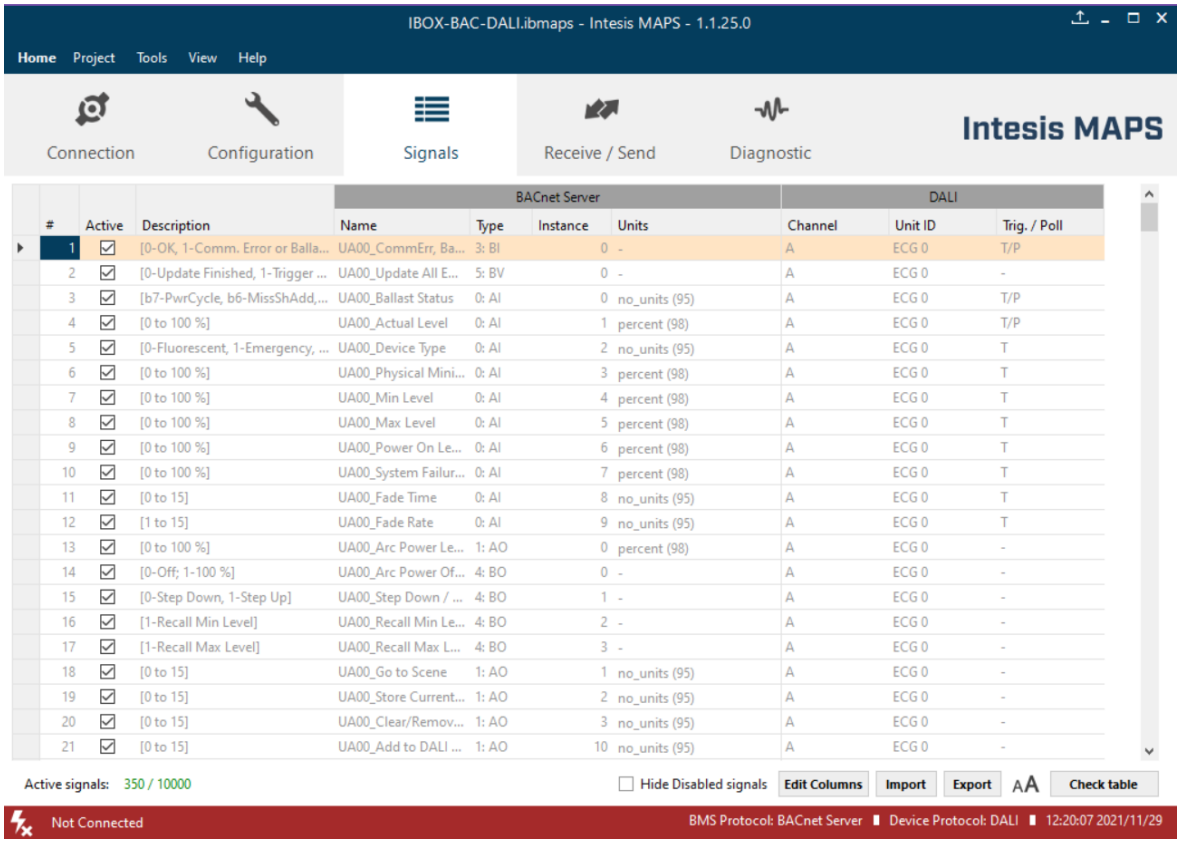


Figure 9.2 Intesis MAPS configuration tab

9.2.4 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 Intesis MAPS user manual.



			BACnet Server				DALI		
#	Active	Description	Name	Type	Instance	Units	Channel	Unit ID	Trig. / Poll
1	☑	[0-OK, 1-Comm. Error or Balla...	UA00_CommErr, Ba...	3: BI	0	-	A	ECG 0	T/P
2	☑	[0-Update Finished, 1-Trigger ...	UA00_Update All E...	5: BV	0	-	A	ECG 0	-
3	☑	[b7-PwrCycle, b6-MissShAdd,...	UA00_Ballast Status	0: AI	0	no_units (95)	A	ECG 0	T/P
4	☑	[0 to 100 %]	UA00_Actual Level	0: AI	1	percent (98)	A	ECG 0	T/P
5	☑	[0-Fluorescent, 1-Emergency, ...	UA00_Device Type	0: AI	2	no_units (95)	A	ECG 0	T
6	☑	[0 to 100 %]	UA00_Physical Mini...	0: AI	3	percent (98)	A	ECG 0	T
7	☑	[0 to 100 %]	UA00_Min Level	0: AI	4	percent (98)	A	ECG 0	T
8	☑	[0 to 100 %]	UA00_Max Level	0: AI	5	percent (98)	A	ECG 0	T
9	☑	[0 to 100 %]	UA00_Power On Le...	0: AI	6	percent (98)	A	ECG 0	T
10	☑	[0 to 100 %]	UA00_System Failur...	0: AI	7	percent (98)	A	ECG 0	T
11	☑	[0 to 15]	UA00_Fade Time	0: AI	8	no_units (95)	A	ECG 0	T
12	☑	[1 to 15]	UA00_Fade Rate	0: AI	9	no_units (95)	A	ECG 0	T
13	☑	[0 to 100 %]	UA00_Arc Power Le...	1: AO	0	percent (98)	A	ECG 0	-
14	☑	[0-Off; 1-100 %]	UA00_Arc Power Of...	4: BO	0	-	A	ECG 0	-
15	☑	[0-Step Down, 1-Step Up]	UA00_Step Down / ...	4: BO	1	-	A	ECG 0	-
16	☑	[1-Recall Min Level]	UA00_Recall Min Le...	4: BO	2	-	A	ECG 0	-
17	☑	[1-Recall Max Level]	UA00_Recall Max L...	4: BO	3	-	A	ECG 0	-
18	☑	[0 to 15]	UA00_Go to Scene	1: AO	1	no_units (95)	A	ECG 0	-
19	☑	[0 to 15]	UA00_Store Current...	1: AO	2	no_units (95)	A	ECG 0	-
20	☑	[0 to 15]	UA00_Clear/Remov...	1: AO	3	no_units (95)	A	ECG 0	-
21	☑	[0 to 15]	UA00_Add to DALI ...	1: AO	10	no_units (95)	A	ECG 0	-

Figure 9.3 Intesis MAPS Signals tab

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9.2.5 Sending the configuration to Intesis

When the configuration is finished, follow the steps to program the gateway.

1.- Click on ***Save*** button to save the project to the project folder on your hard disk (more information in Intesis MAPS User Manual).

2.- You will be prompted to generate the configuration file to be sent to the gateway.

a.- If ***Yes*** is selected, the file containing the configuration for the gateway will be generated and saved also into the project folder.

b.- If ***NO*** is selected, remember that the binary file with the project needs to be generated before the Intesis starts to work as expected.

3.- Press the ***Send File*** button to send the binary file to the Intesis device. The process of file transmission can be monitored in the Intesis Communication Console window. Intesis will reboot automatically once the new configuration is loaded.

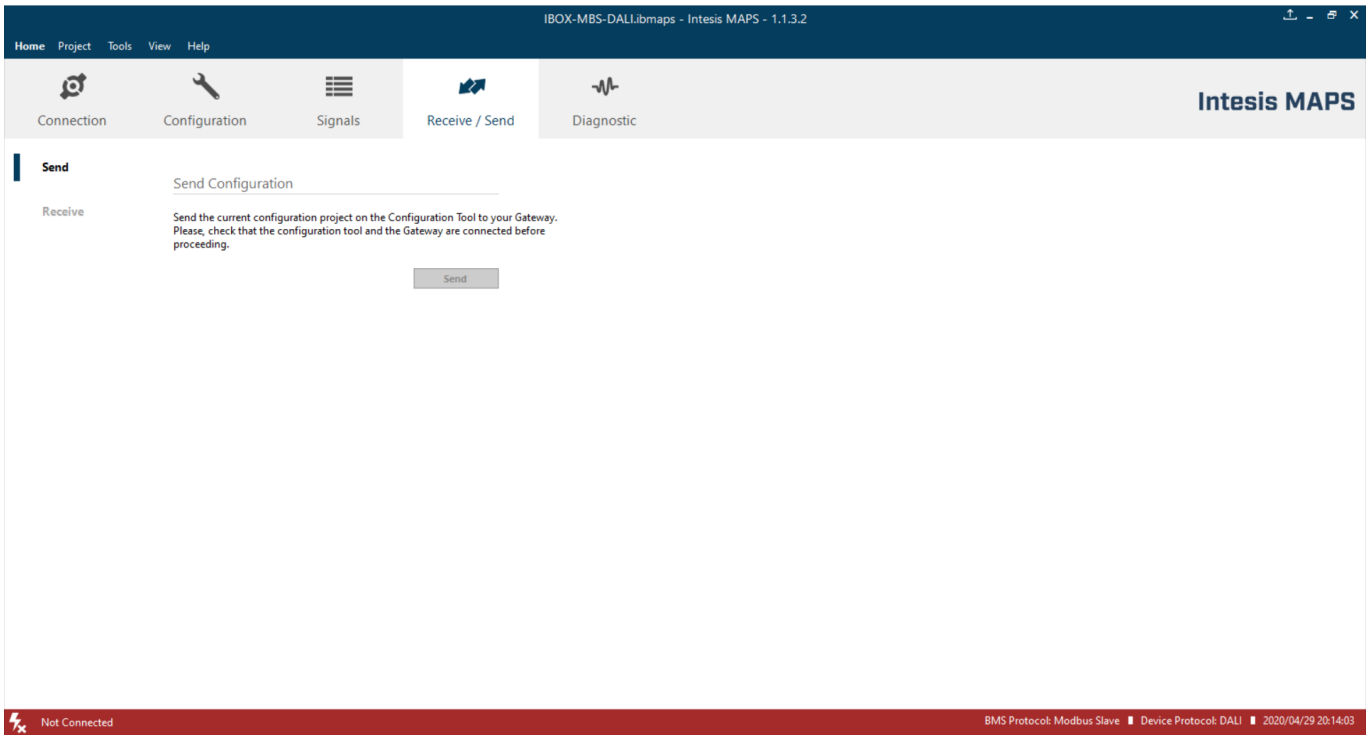

Figure 9.4 Intesis MAPS Receive/Send tab

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

9.2.6 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.

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- **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 behaviour or to check the current values in the system.

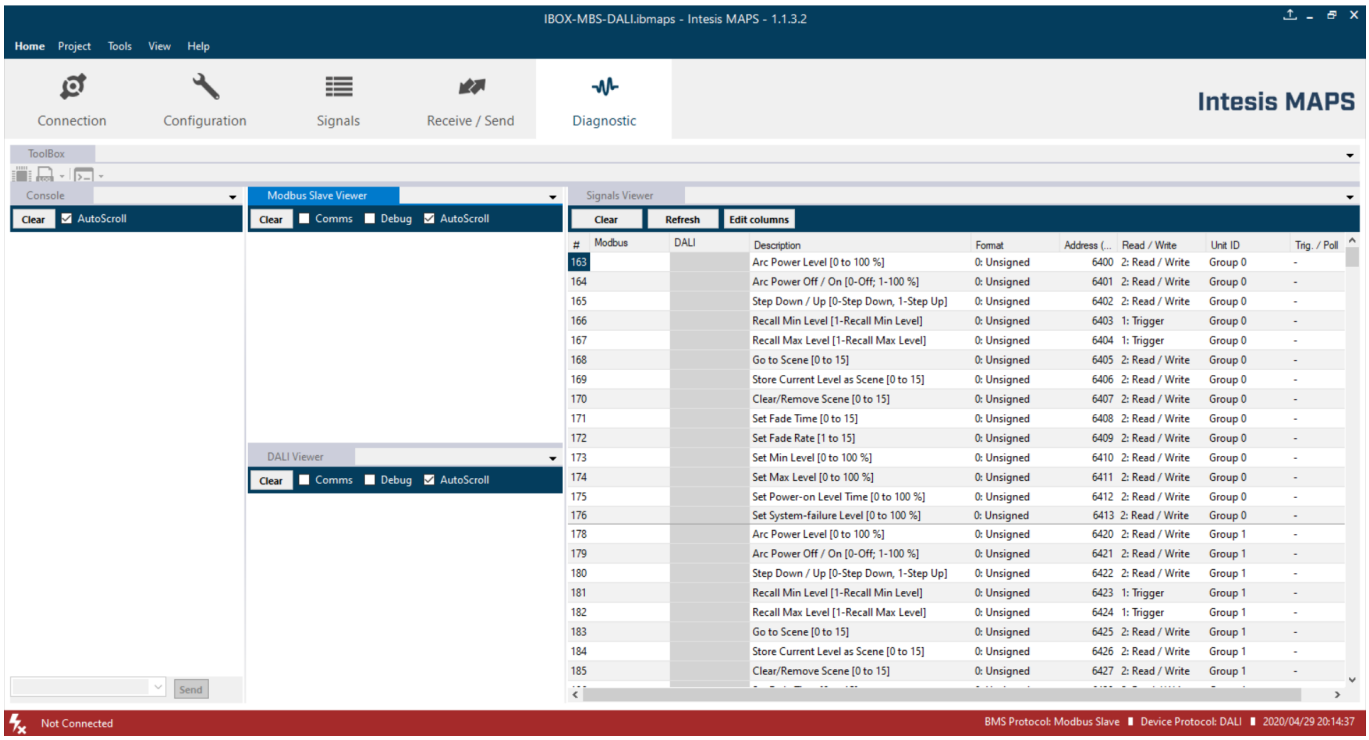

Figure 9.5 Diagnostic

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

9.3 *Summary of Set-up procedure*

1. Install Intesis MAPS on your laptop, use the setup program supplied for this and follow the instructions given by the Installation wizard.

2. Install Intesis 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. Connect the communication cable coming from the BACnet IP network to the port marked as Ethernet on Intesis (More details in section 7).

4. Connect the communication cable coming from DALI network to the port marked as DALI of Intesis (More details in section 7).

5. Power up Intesis. The supply voltage should be any of the voltage range allowed (check section 0). Take care of the polarity of the supply voltage applied.

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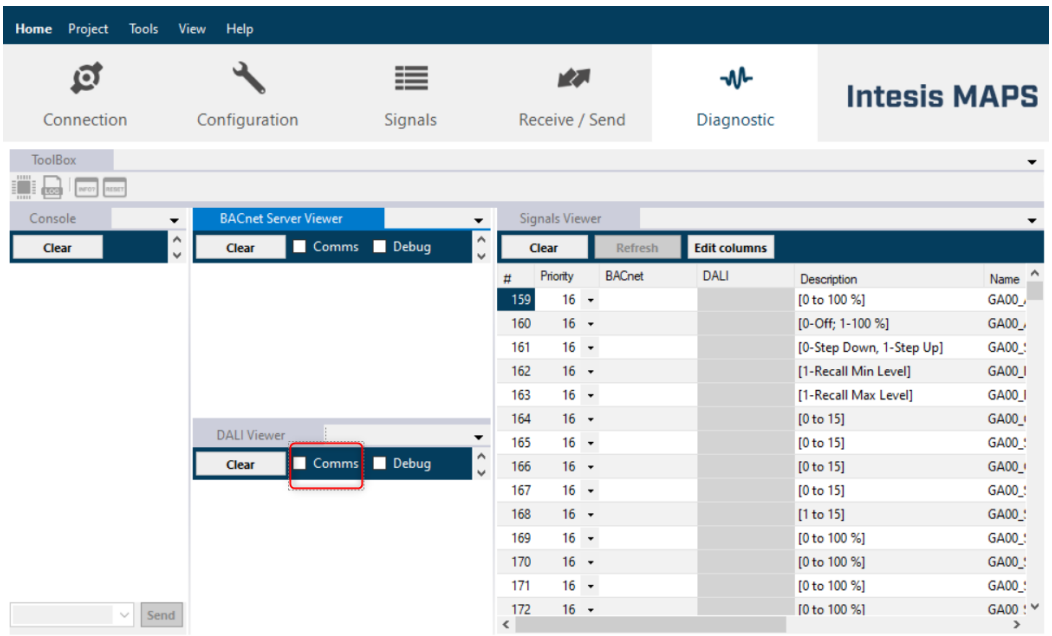
WARNING! In order to avoid earth loops that can damage Intesis and/or any other equipment connected to it, we strongly recommend the use of DC power supplies, floating or with the negative terminal connected to earth. **Never use a DC power supply with the positive terminal connected to earth**.

6. Connect the Ethernet cable from the laptop PC to the port marked as Ethernet of Intesis (More details in section 7).

7. Open Intesis MAPS, create a new project selecting a copy of the one named **INBACDAL064VV00**.

8. Modify the configuration as desired, save it and download the configuration file to Intesis as explained in the Intesis MAPS user manual.

9. Visit the Diagnostic section, enable COMMS 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 Intesis 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.



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10 Electrical & Mechanical Features

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 88x106x56 mm Recommended space for installation (dxwxh): 130x115x100mm Colour: Light Grey. RAL 7035
Mounting	Wall. DIN rail EN60715 TH35.
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
Power	1 x Plug-in screw terminal block (3 poles) Positive, Negative, Earth 24VDC/AC +/-10% 6W(250mA)
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity
DALI	1 x DALI port (Plug-in screw terminal block 2 poles) 1500VDC isolation from other communication ports DALI guaranteed power: 235mA DALI Maximum Power:250mA Voltage rating: 16VDC

Push Button	See Status LEDs and Push buttons
Operation Temperature	0°C to +50°C
Operational Humidity	5 to 95%, no condensation
Protection	IP20 (IEC60529)
LED Indicators	6 x On board LED indicators 1 x Power LED (Green) 1 x DALI (Yellow) 1 x RX (Green) 1 x TX (Yellow) 1 x Button A indicator 1 x Button B indicator

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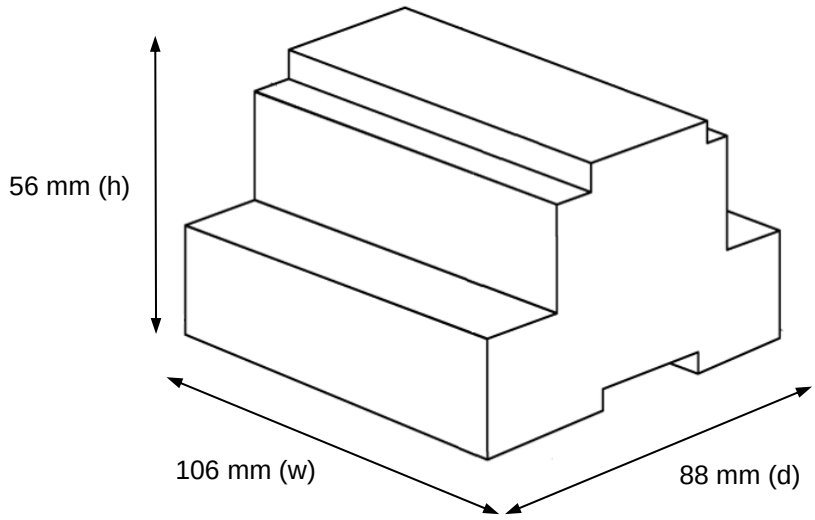
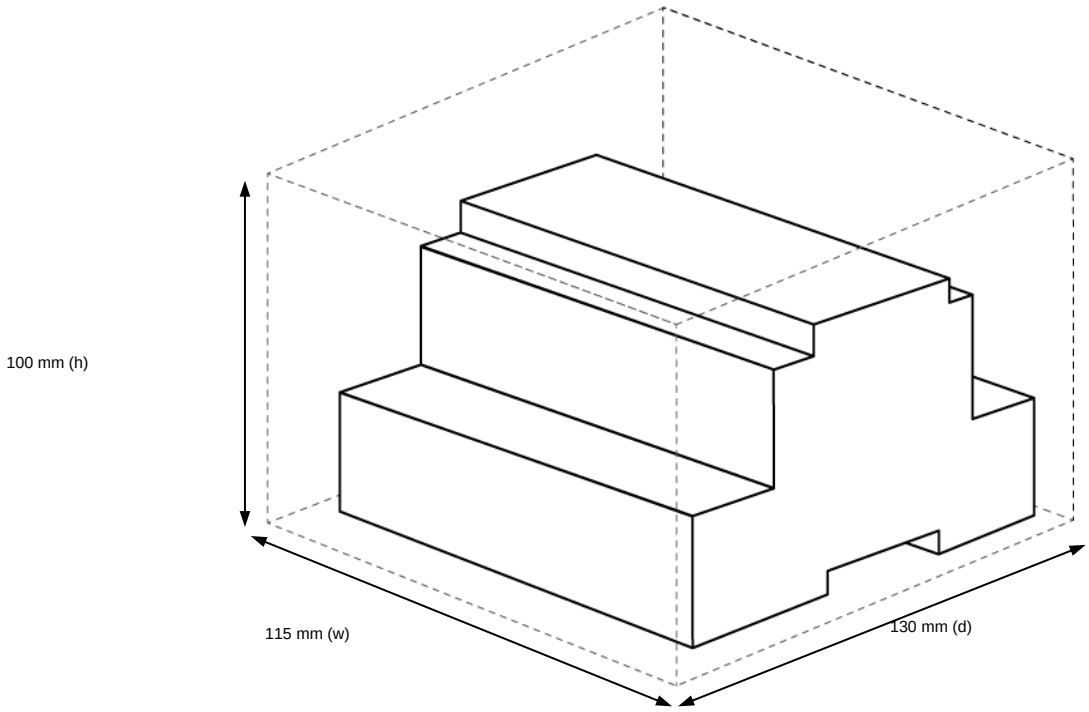
11 Dimensions



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



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Annex A – Quick setup and commissioning of a DALI network

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

- Scanning the existing ballasts (ECGs) and sensors (Input Devices) in the DALI network
- Identifying their physical location
- Obtaining or setting up device short addresses
- Obtaining or editing devices configuration parameters (pre-set levels, scenes, groups addressing…)

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

1. "Device declaration first": First declaring or instantiating in MAPS the envisaged (planned) devices in the installation, setting up values for all their configuration parameters, and then scanning the network for existing devices. Process finalizes with assignation and download of planned configuration parameters (including short addresses) with existing devices in the installation.

2. "Existing devices scan first": Alternatively, and more common, it is possible to scan first the DALI network for existing devices, obtain their existing configuration (which will be default/factory if the devices are new), then change these parameters to match the desired ones (short address, pre-set levels, scenes…) and load the devices with the new configuration.

Typically, "Existing devices scan first" method will be used when all commissioning is done at the installation itself, as it starts with a DALI bus scan. "Device declaration first" allows to do some work in advance, defining the configuration parameters for the ballasts and sensors before accessing the actual installation. It is possible to understand the "Device declaration first" as a previous step that can (but not must) be done before effectively scanning the network for devices ("Existing devices scan first"), in order to advance configuration work (definition of pre-set 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 ("Device declaration first"), and once at the installation, assign their parameters to existing ballasts and sensors. Whenever more devices are installed, they can be added by scanning them in the network ("Existing devices scan first") and changing its configuration parameters to match the desired ones (without previous instantiation of them in MAPS).

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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 64 version of the template for this model.

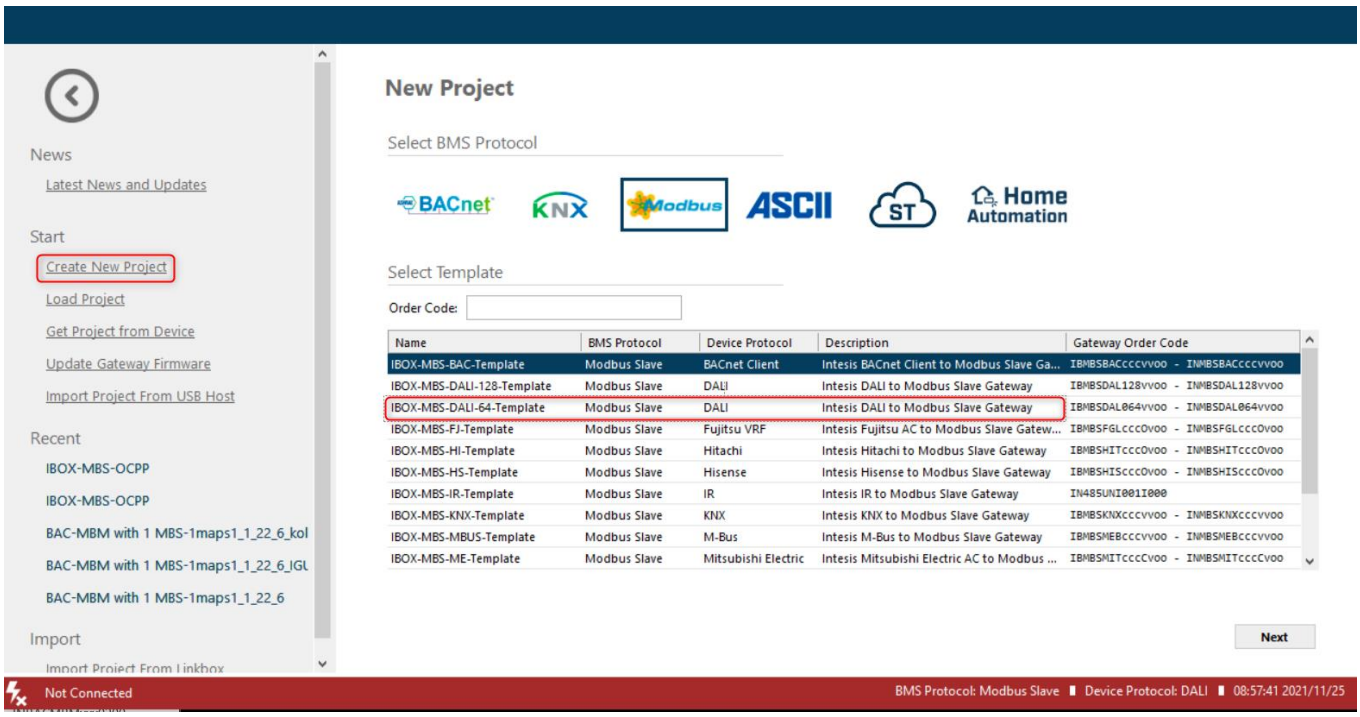

Figure **A.1** New project creation

2 Device declaration in project

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

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

To do so, go to the ‘Configuration’ tab of MAPS, and select the ‘DALI’ section, then select ECG node to add new ECG(s), or select the Input device node to add new Input devices.

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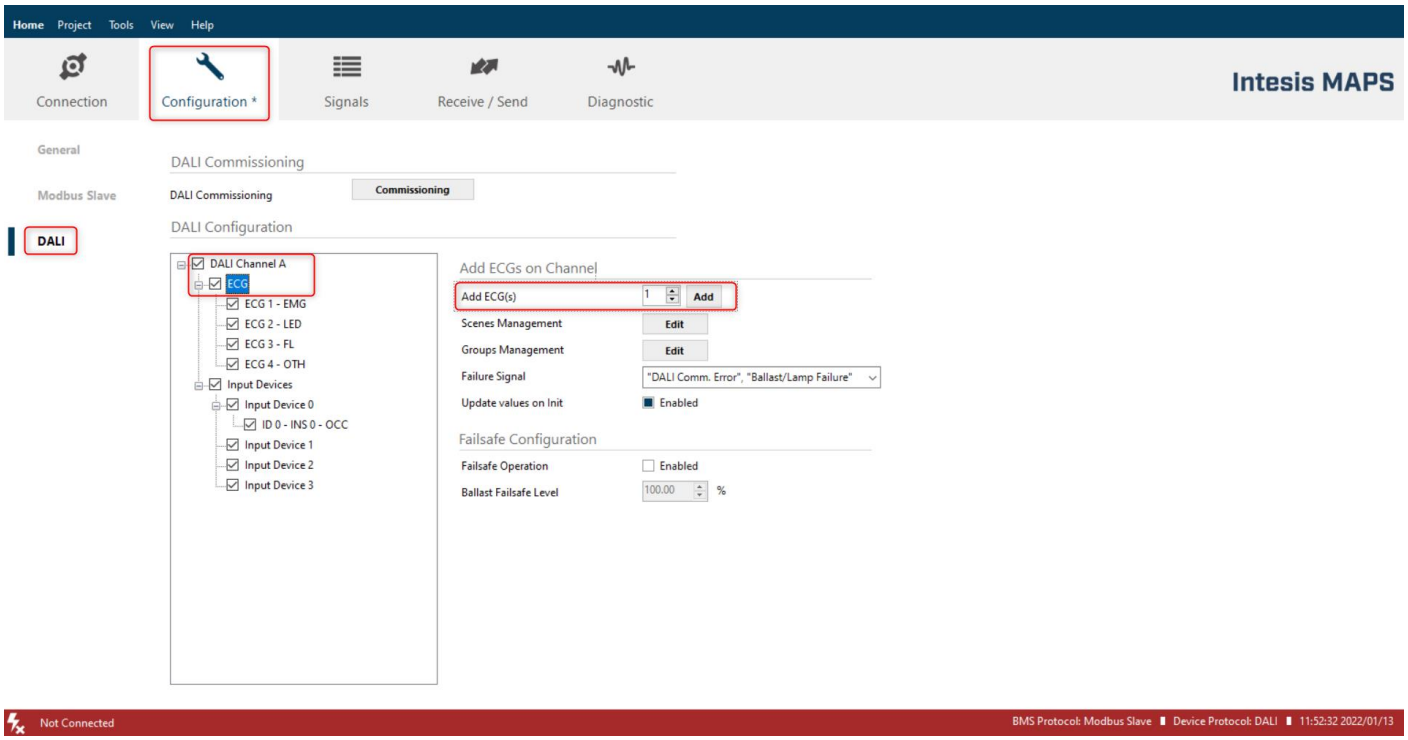

Figure **A.2** Add new devices

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

Number of desired devices will appear:

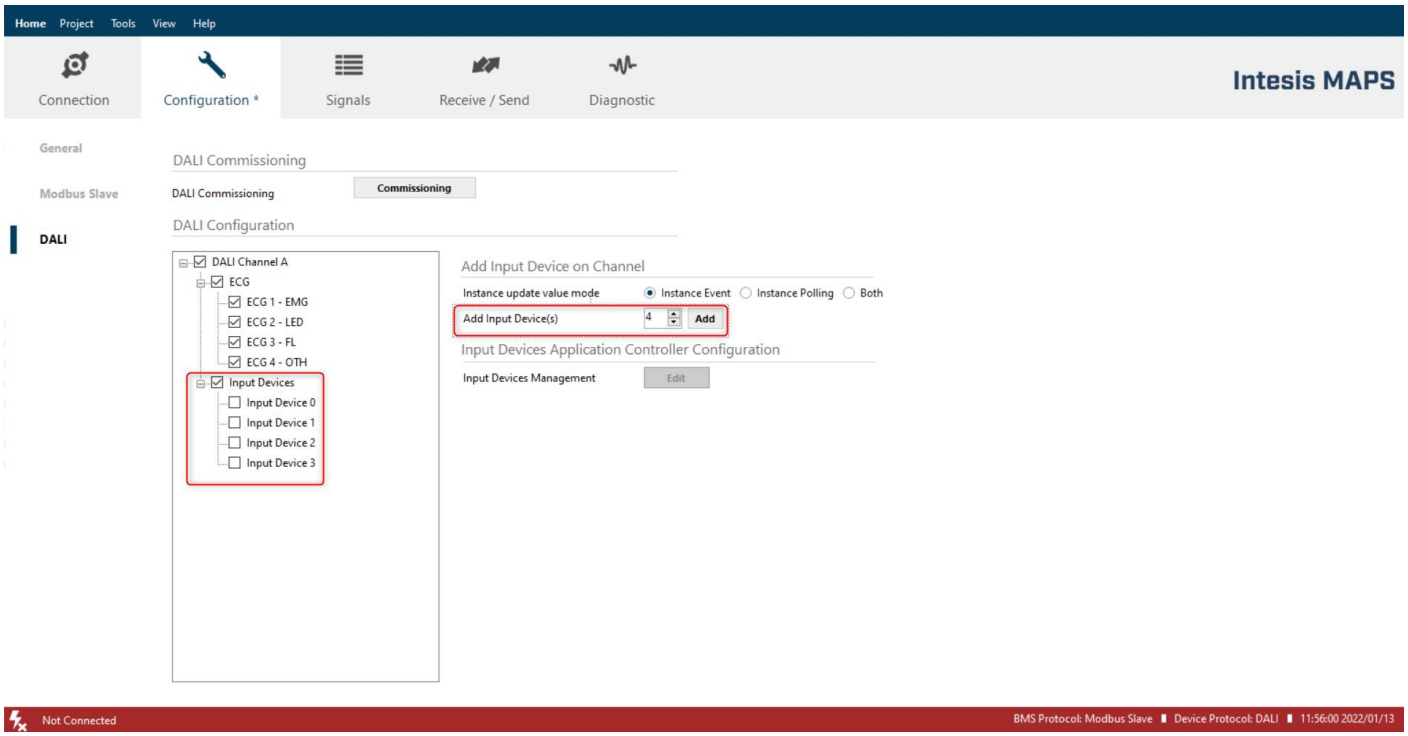

Figure **A.3** Adding new Input devices

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

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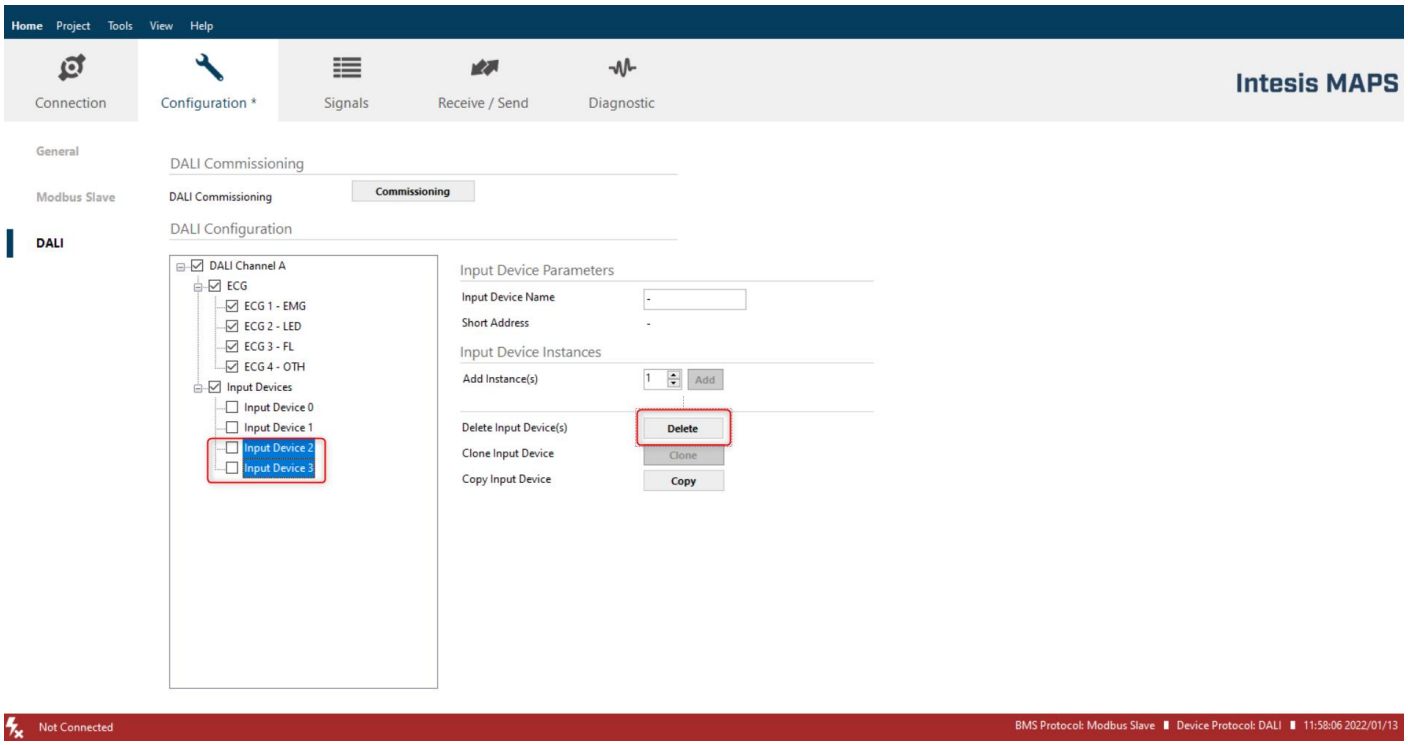

Figure **A.4** Deleting devices

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

- For ECGs:
  - **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).
  - **Committable ECG Parameters**: This includes all pre-set values for the ballasts (min level, max level, power on level, etc), as well as group assignation and scene configuration.
- For Input Devices:
  - **Input device name** (optional): Name to ease its identification in the network.
  - **Add required Instances**: Each input device can include up to 10 different instance types (i.e. instance type 1: Push Buttons, 2: Absolute Input, 3: Occupancy sensor, or 4: Light sensor)

Remember that any changes done in the DALI parameters (Min/max level, fade, groups, scenes, input devices, etc.) required that you send them to the DALI devices thought the commissioning/set all option

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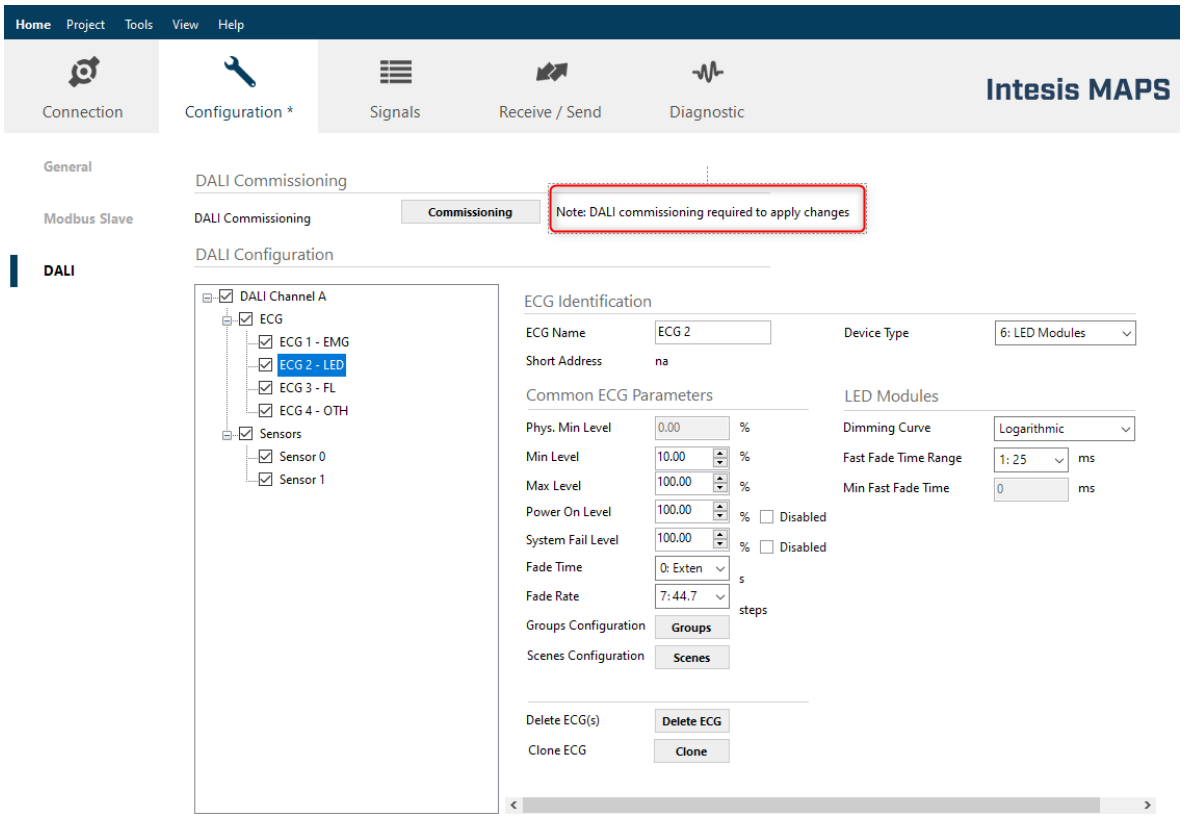

Figure **A.5** Commissioning required after changing any Device parameter

3 Scan and commissioning of devices

First you need to get MAPS connected to the Intesis device. To do so, go to 'Connection' tab of MAPS. There, Select your device from the list of scanned devices.

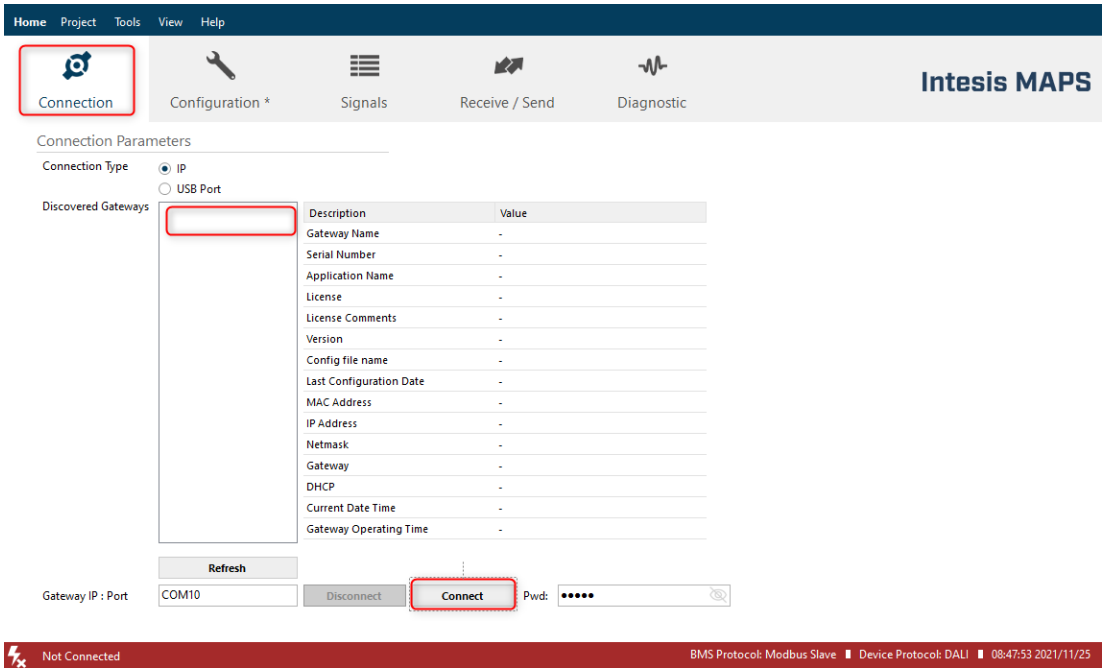

Figure **A.6** Connecting MAPS to the Intesis

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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':

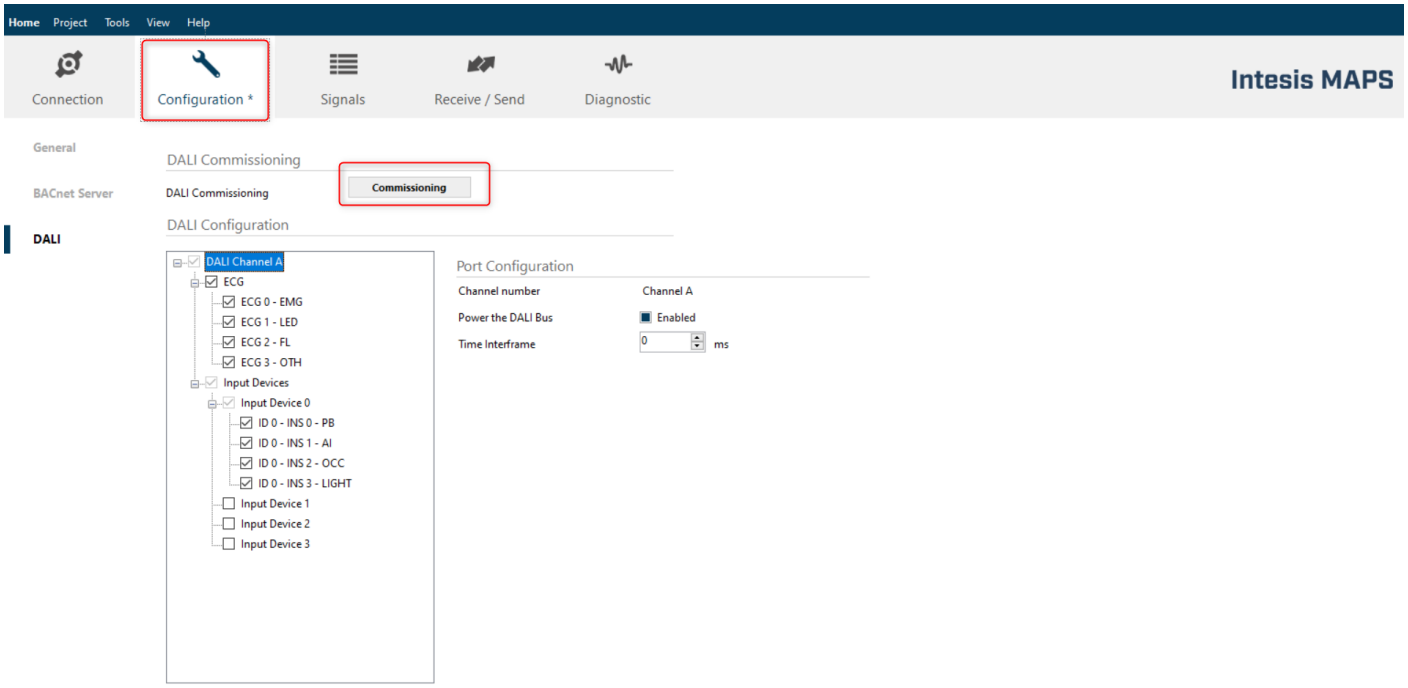

Figure **A.7** DALI commissioning button

Commissioning window will appear:

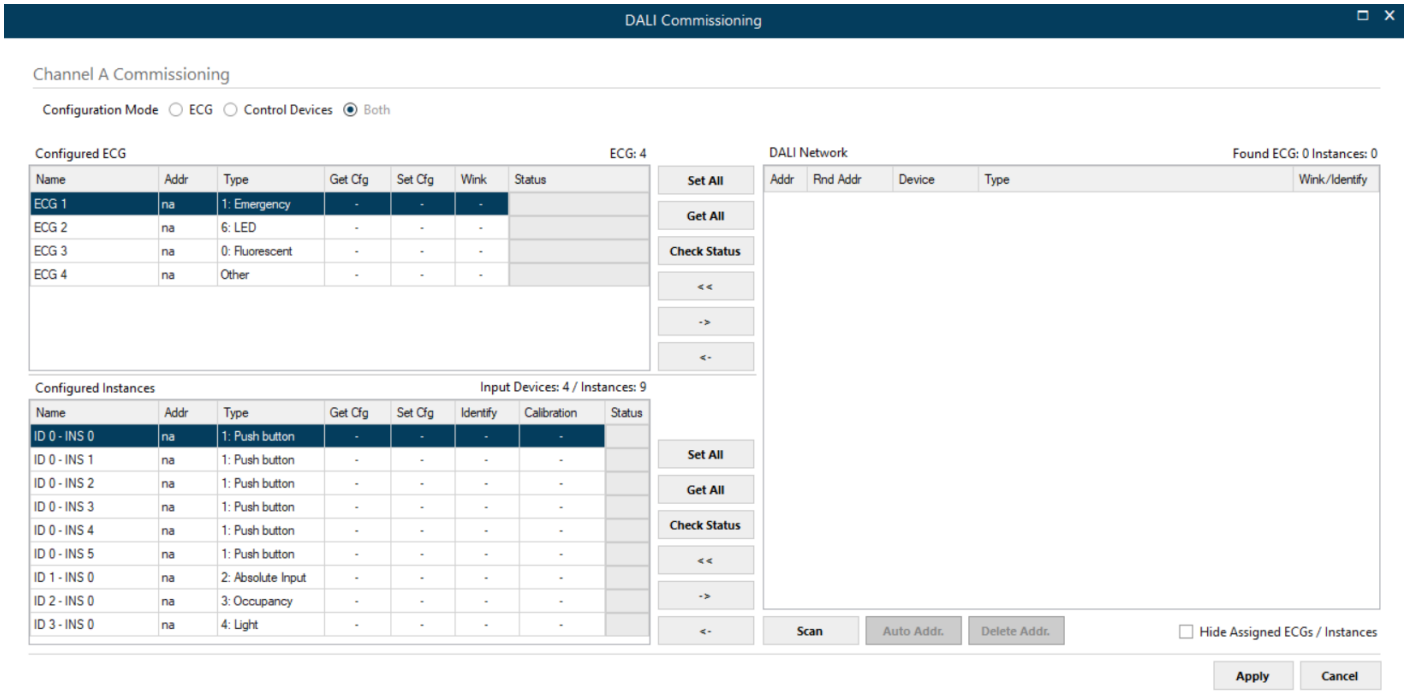

Figure **A.8** DALI commissioning window

If devices have been added to the configuration (see previous section 'Device declaration in project') a list of ballasts will appear in Configured ECG and a list of instances will appear in Configured Instances.

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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’:

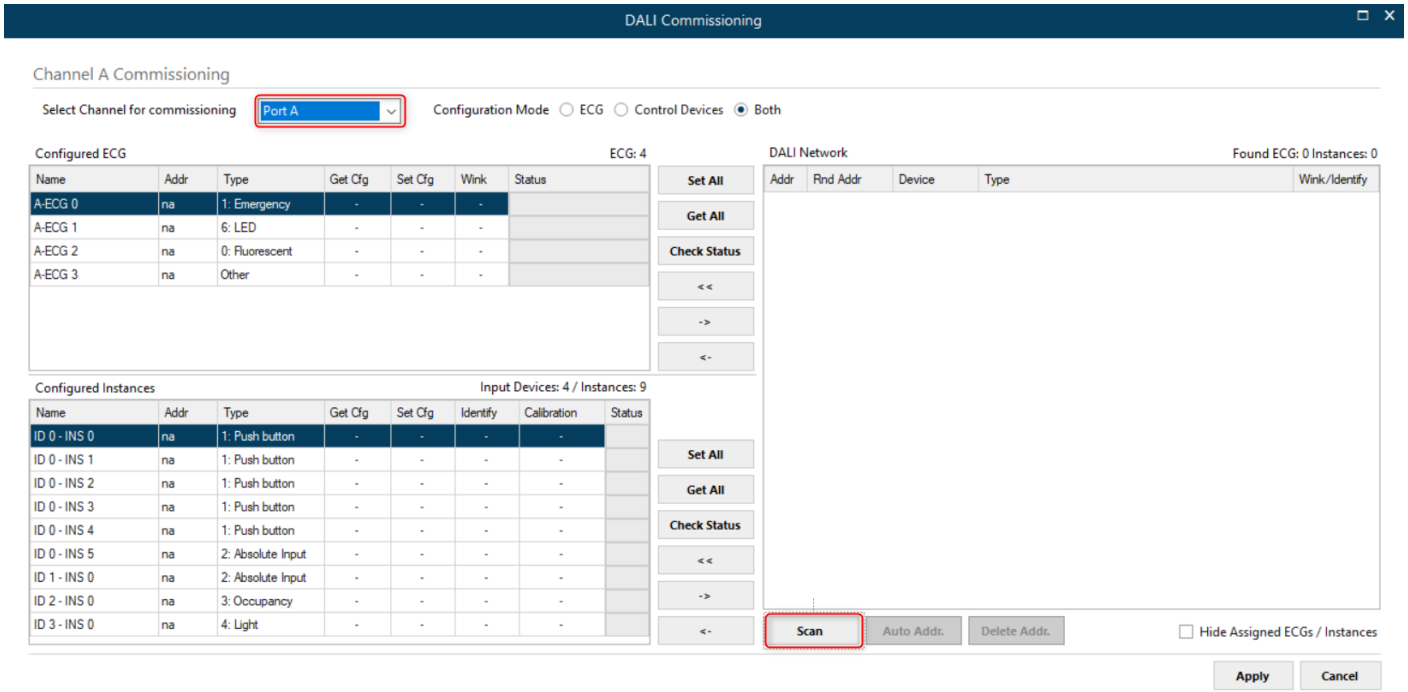

Figure **A.9** Starting DALI scan process

Discovered devices 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 devices to scan.

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

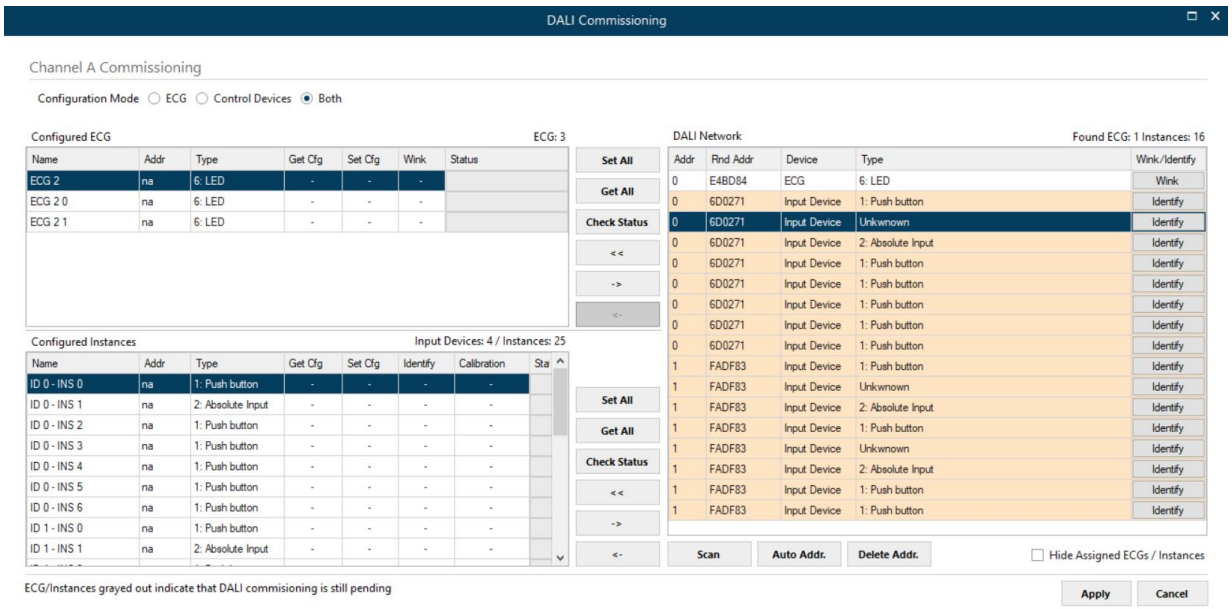

Figure **A.10** Example of scan results

After scan is done, total number of found devices will be shown in ‘DALI Network:’ label. Note that type column will fill only if device has a short address assigned, if not, type cannot be read.

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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 device in the installation with the Wink button, and then double click in short address field of the device 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).

Once each device has a short address, 'Wink' functionality in "DALI Network' window is available for each one. Wink functionality sets the ballast at maximum and minimum level while it is active, 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.

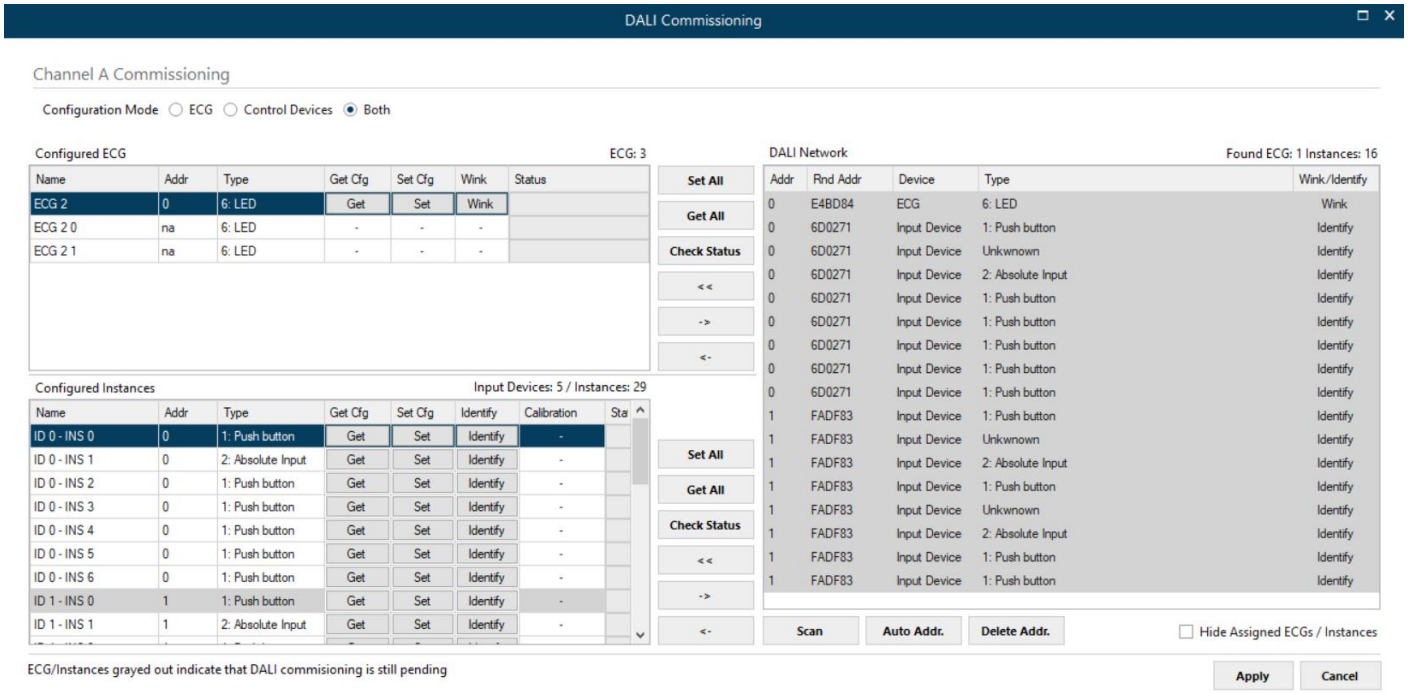

Figure **A.11** identify a device-Wink

After address association, devices 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.

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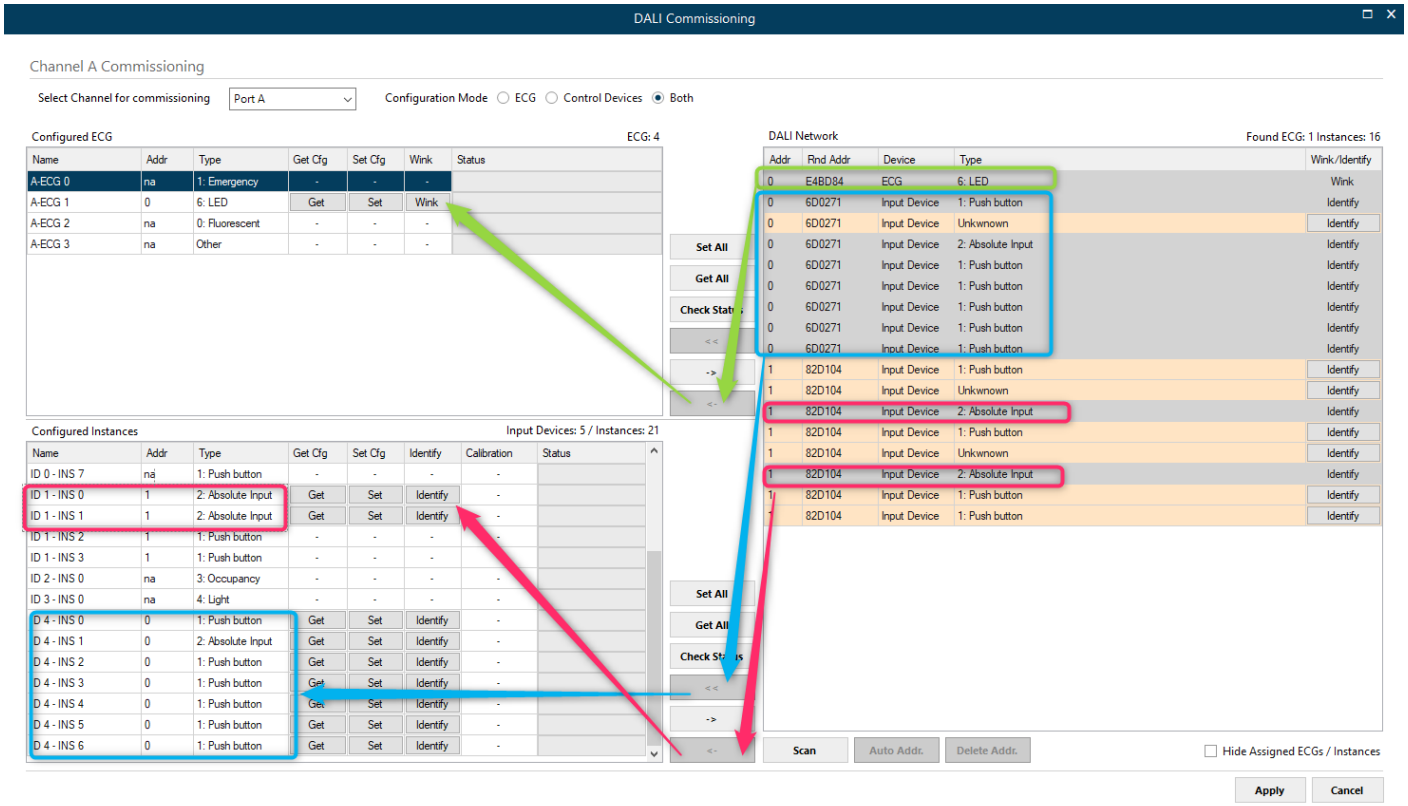

Figure **A.12** Functionality of '<<' and '<-' buttons

In figure above we associate:

- the LED with short address 0 to the A-ECG 1(in green) using the "<-" button this would **assign the ECG** to the existing ECG on the MAPs configuration.
- the Push buttons of Input device with short address 0 (in blue) using the "<<" button and **this would create** a new input device with these 7 instances, make sure you select all the instances of the same device at the same time as you cannot have instances of the same device associated with different devices on the MAPS configuration.
- and the absolute inputs of the input device with short address 1 (in red) using the "<-" button this would **assign each selected instance** to the existing Input device/Instance on the MAPs configuration. Remember you cannot have instances of the same device associated with different devices on the MAPS configuration.

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

- **Remove the ballast or input device 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).
- **Identify the Input device** ("Identify" button on each input device) the feedback would depend on each manufacturer some had a beep or LED that blinks, some may not have any means of feedback.
- **Get the ballast or input device configuration parameters** (button 'Get' on each ECG or input device, or 'Get All' on the side). Warning, getting the configuration of an ECG or Input device will overwrite all configured parameters in MAPS config for the devices (pre-set levels, group addressing, scenes, times, input device local management …)
- **Set the ballast configuration parameters for each ECG or Input device** (button 'Set' on each ECG or input devices, or 'Set All' on the side).
- **Calibrate** (only for lighting sensors) to calibrate sensor measures with real lux measurement in the surface area.

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

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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 Intesis and sending configuration file to Intesis using 'Send/Receive' tab of configuration section.

4 Input device programming options

As some input device type may require a quicker reaction time, we offer 2 options for the Push buttons and the Absolute input devices. One option is the sensor or Device would share the status or readings to the BMS (in this case over Modbus TCP) and then it would decide what actions need to be taken over the DALI lights or ECG (ex. Go to scene1, turn off, etc.)

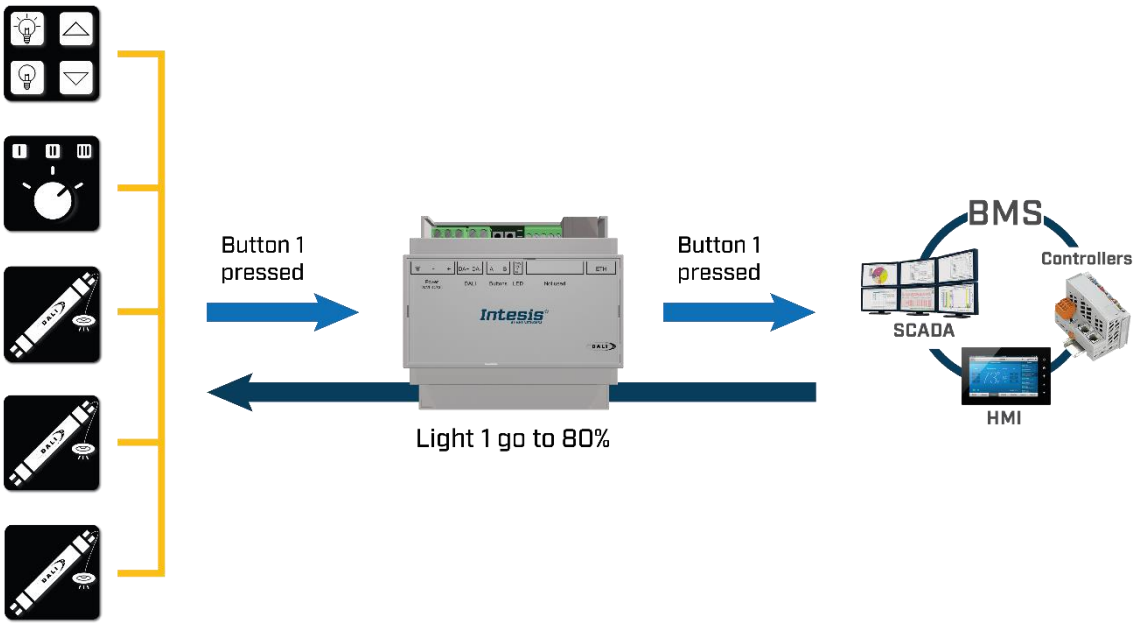

Figure **A.13** Instance´s Event Programming (action decided by the BMS)

The second option would be for the Gateway to directly act over the ECGs or DALI lights, which we can do trough the Input device local Management menu. Please note this is not available for Occupancy and Light Sensors at this point.

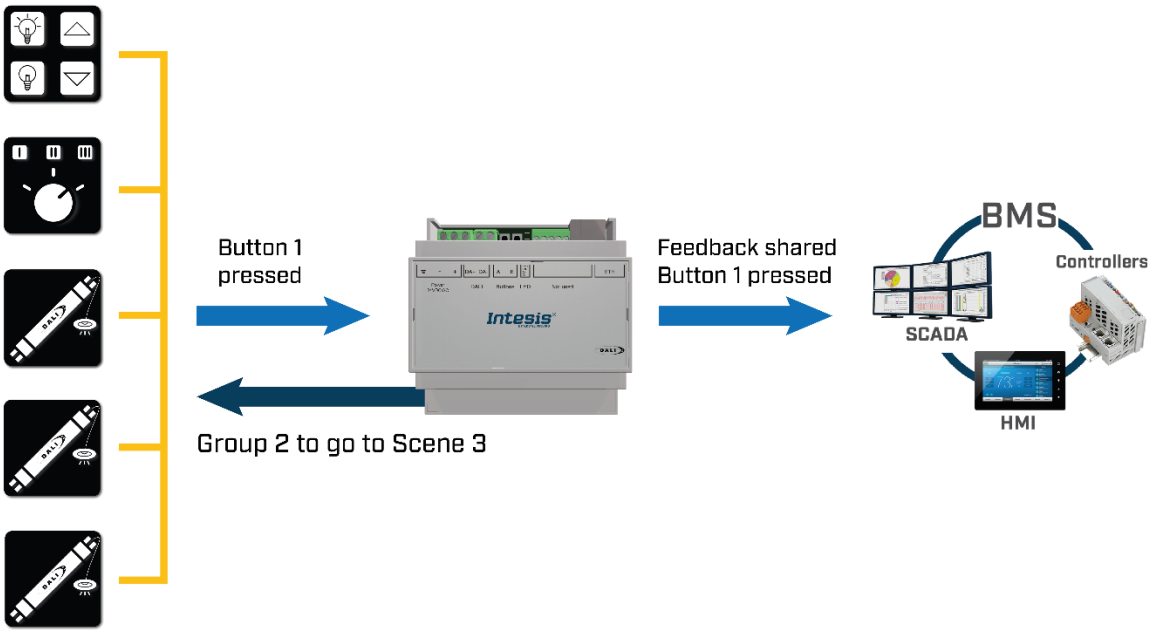

Figure **A.14** Input device local management.

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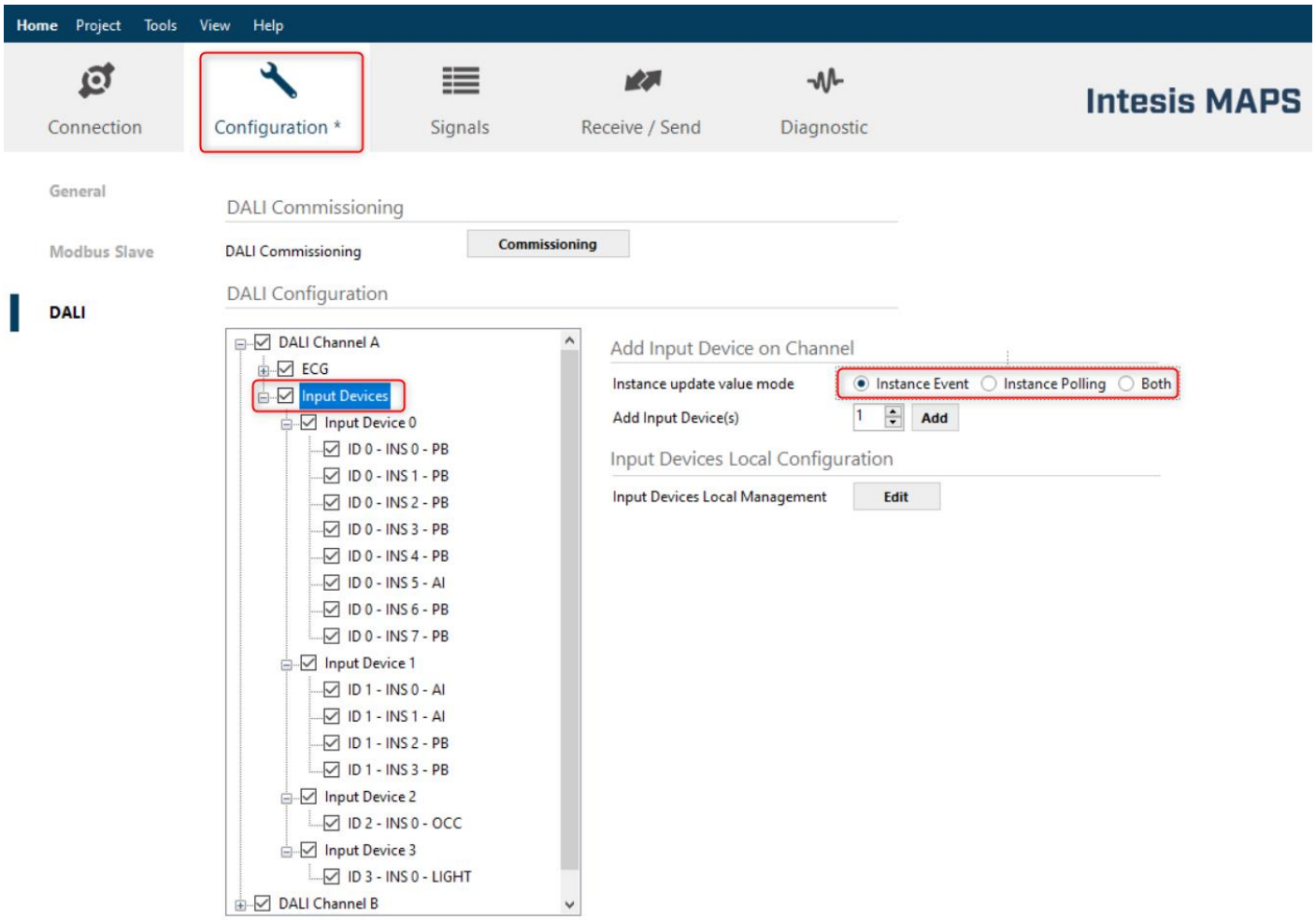
4.1 *Instance´s Event programming (action from the BMS)*

In this scenario the gateway would be passively passing along the information regarding the status of the events from the input devices. For this configuration, you would have to:

4.1.1 Set the update method on the DALI bus

You can choose if poll the bus to get their info or enable the events in the devices so they can notify of a change, please note that “instance event” is recommended and more if the DALI bus is heavily loaded with devices (you are near the limits of the DALI bus) this is also a more efficient way to communicate with the Input devices.



A15. Instance update value mode

4.1.2 Set the Input device properties

Then you can go to the specific input device and its instance to set its properties, including the events that would report to the bus and how would it communicate, as mention before we recommend that you use event over polling. In this case make sure that you set “Events active” to “yes” and depending on the type of instance/device, you would also need to set the type of events require by your application, to enable the correct communication with the BMS.

In the case of the Push buttons for example, you can select between the Instant value or Event Type (ex. Double, long or short press, etc.) This functionality will enable the signals values for the BMS, to be shown in bitfields within the register correspondent to this instance, keeping the bitfield active for the time stipulated in the “BMS bit event time”.

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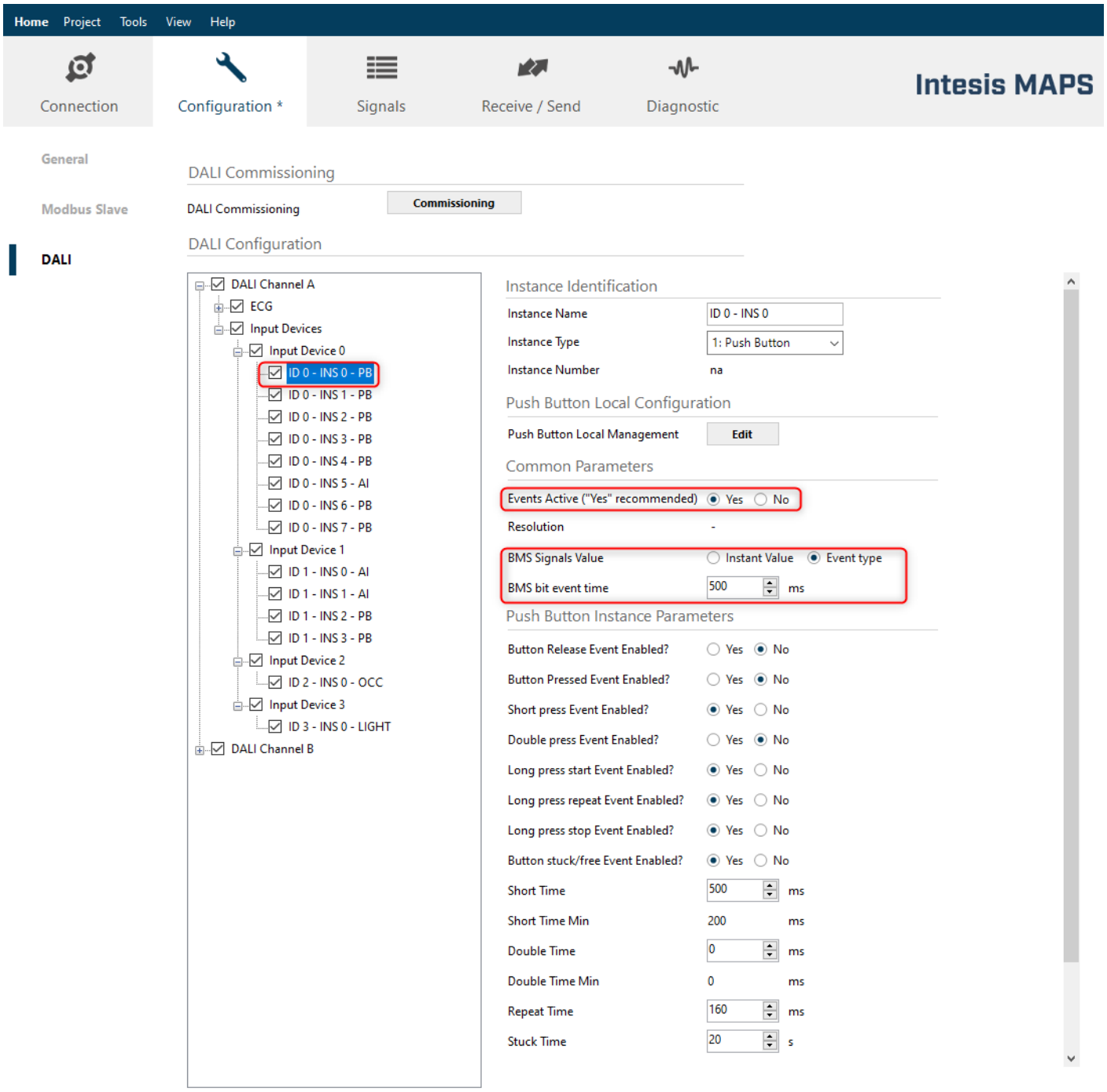
See the following image for details, if unsure please use the default values (they are always a good way to start) and then you can adjust as you see fit for your project.



A16. Input device properties

Remember to go to the DALI commissioning/Set all after finishing setting all the parameters or after each change so this can be transfer to the input device and ECGs. Please keep in mind that the “send” button in MAPS would only transfer the general parameters to the gateway but the DALI device properties, are only set trough the DALI commissioning.

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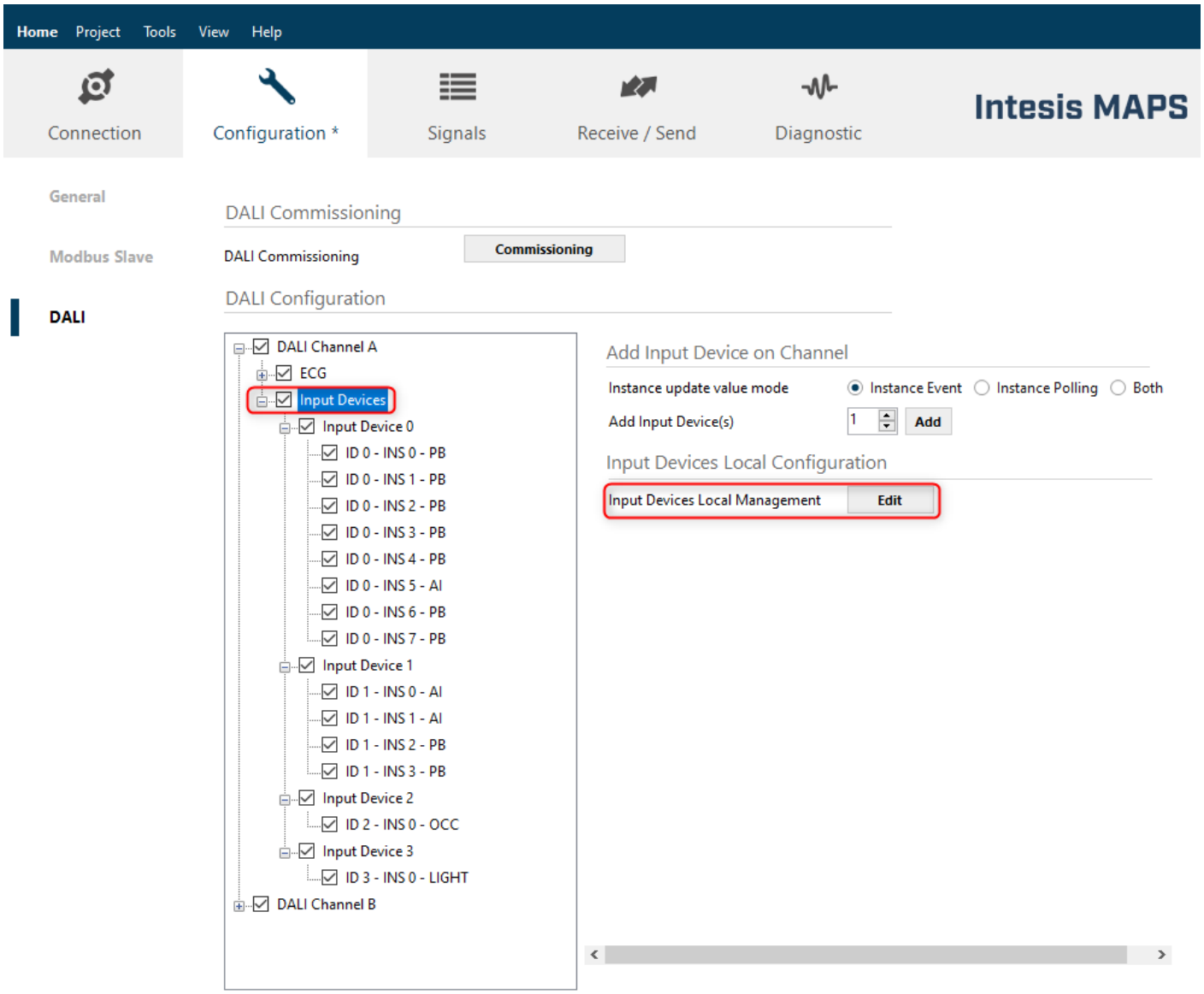
4.2 *Input device Local management (DALI local control)*

This feature allows that the gateway acts over the DALI lights or ECGs directly, at the moment it is available in the DALI push buttons and Absolute input devices only, for Occupancy and Light sensors they would be programmed only as per point 4.1.

To use this option, you need to set the input devices to work on events, you can do this as described in 4.1.1 and 4.1.2

Once the events are set, then go to “Input Device Local Management” at the input devices level on the DALI configuration tree. There you can access to all available instances that will operate on this mode or you can access individually to each of them at the instance´s property menu.



A17. Input device management

Once inside of this menu, you can choose what would need to happen in the DALI bus when an event from the Input device is detected.

Analogue input: the behaviour is set to slider that would adjust the light level according to feedback of the Input device, you can choose the target to be Broadcast to the entire DALI channel, a selected group, or a short address.

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For the Push button, you can choose between Single action, Dimmer, Toggle or Multiaction. Each option would have its own properties but in general you can choose the type of event and its associated action and the target short address, group or broadcast for the entire bus.

These different modes have the following features:

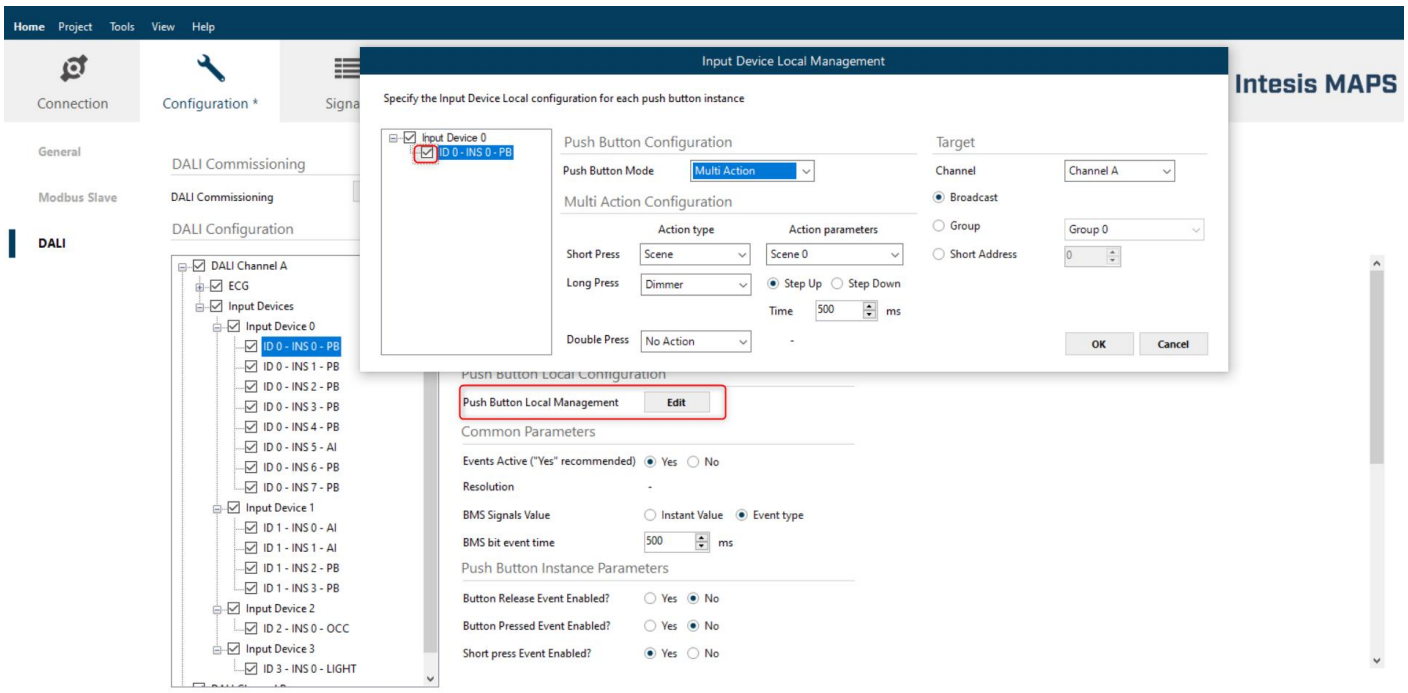
- **Single action**: Offers a simpler programming that fits well in a commercial application where the operation of the Push buttons needs to be intuitive. It would take effect with a short press, so it is the only event type required for this option. You can choose between go to level (0-100%) or go to scene and target the entire channel(broadcast), a single group or short address. (In the 2-channel dimmer you can choose which of the two channels).

- **Dimmer**: This option regulates the light level up or down of the selected Target. The options are step up or down and you can select how quickly the light would go in between a step and the next, the steps are the ones defined in the DALI dimming curve. It requires the long press repeat event to be active and it would follow the time of the repeat time parameter.

- **Toggle**: Is used to have 2 actions from a single button like One press would be ON and the other OFF, the options are by default ON/OFF or 2 different states where you can choose the type of action (Level, scene, dimmer, go to max, go to min, off, no action), the parameters of that action and the target (as in the single action)

- **Multiaction**: This is intended for applications looking for more functionality like the Push and Dim, where you want to have several actions from a single button depending on the type of press (Short Press, Long Press or Double Press). You then select the kind of action for each type of press (Level, scene, dimmer, go to max, go to min, off, and no action) and the relevant parameter (if required) together with the target, this one is the same for all the actions on the button. You need to make sure that the type of event (short/long/double press and long press repeat if using dimmer) is set to active on the Push button instance parameters.

See the image below for further guidance.



A18. Input device management options

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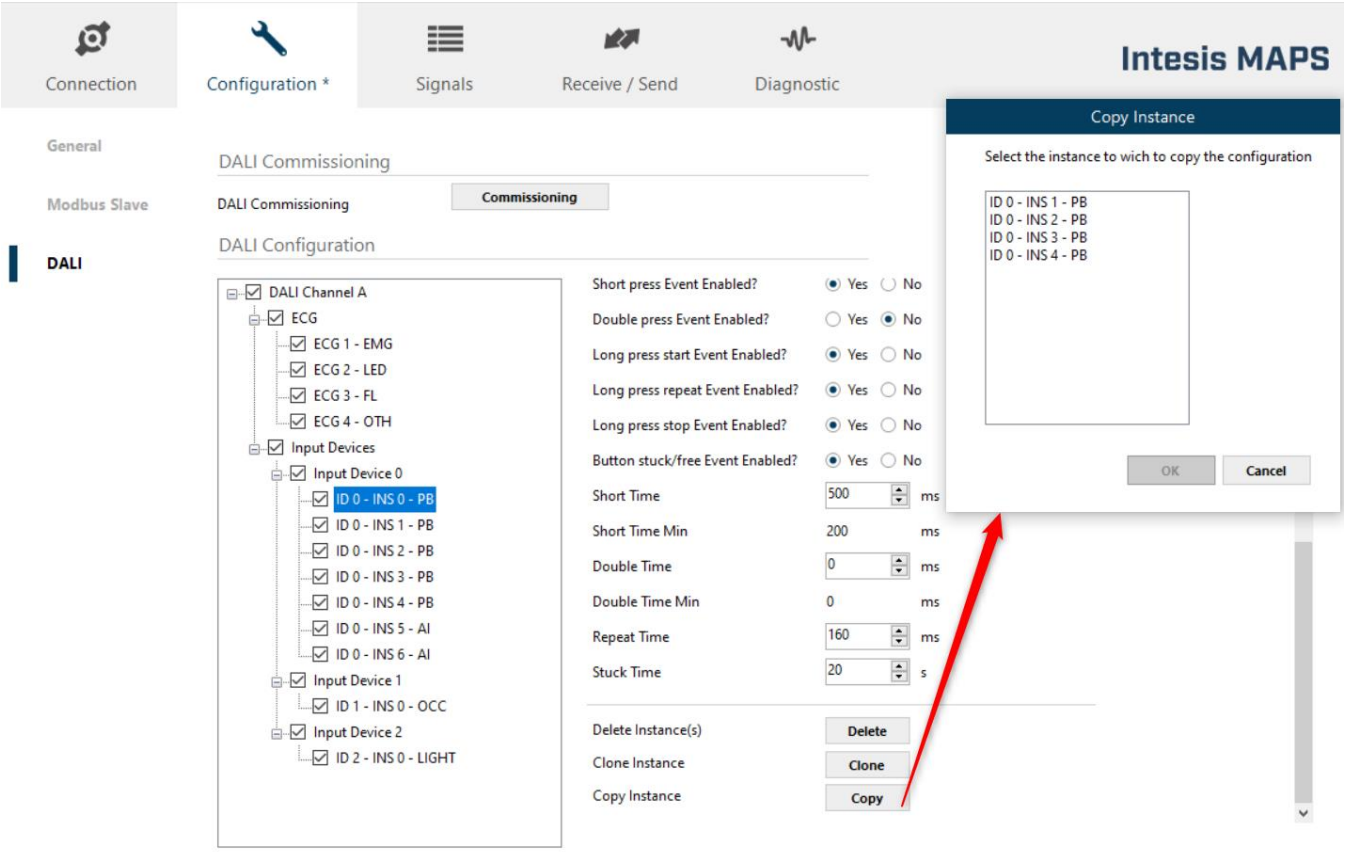
4.3 *Multi editing options*

There are several multi editing options to help speed up the commissioning, especially for the Push buttons as they have several parameters. For example, you can copy the instance configuration to another of the same kind or copy the whole device as far as they have the same number and type of instances, this would include the input device local management configuration, or clone the input device if you have several of the same kind, the parameters setting, and configuration would also be copied.



A19. Copy instance programming

Or select multiple instances at the time while holding the shift key and then adjust the parameters at the same time for all the instances selected.

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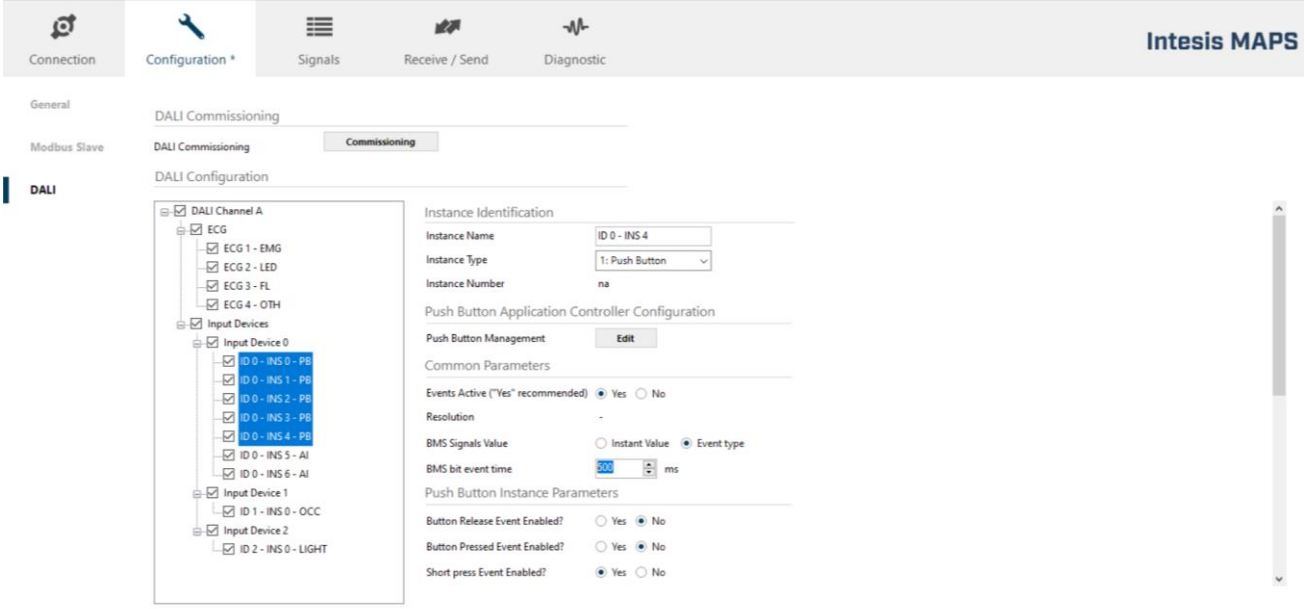
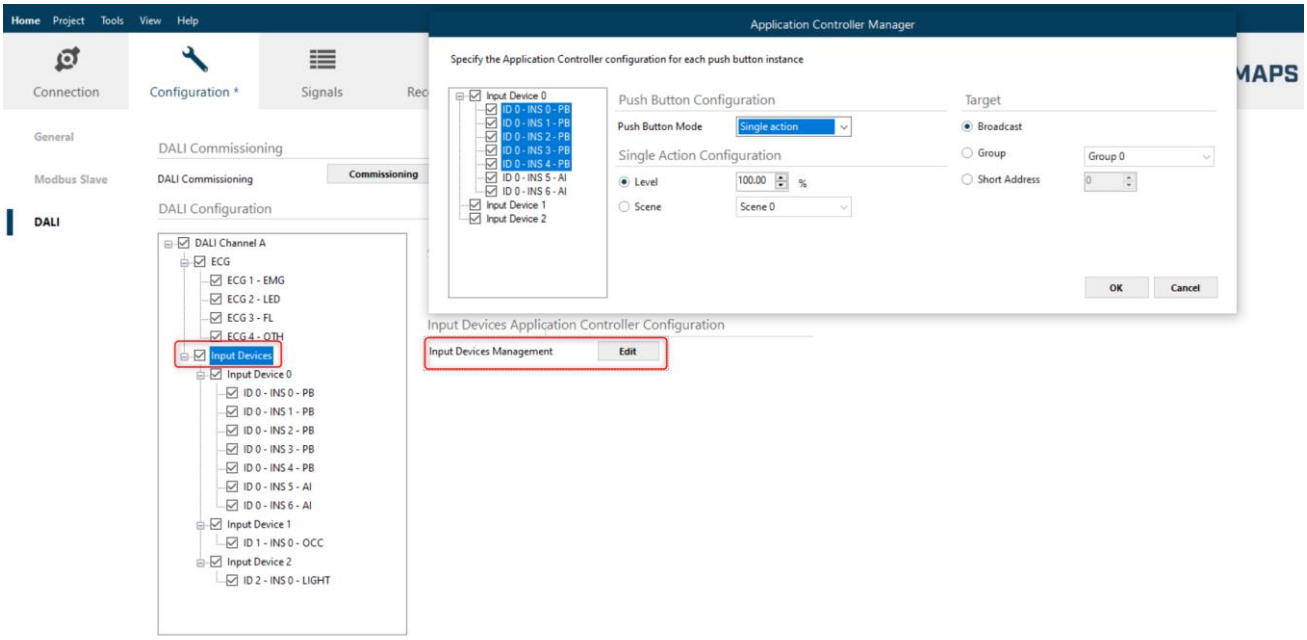


A20. Multiselect several instances at the time from the input device tree

Alternatively, you can also go to the input device management and using shift again select multiple instances at the same time and configure the actions that they need to take.



A21. Multiselect several instances at the time from the input device local management

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