Intesis DALI to BACnet Server gateway User Manual

Intesis DALI to BACnet Server gateway

Order Codes:
INBACDAL0640200 (64 ballasts, 1 DALI channel)
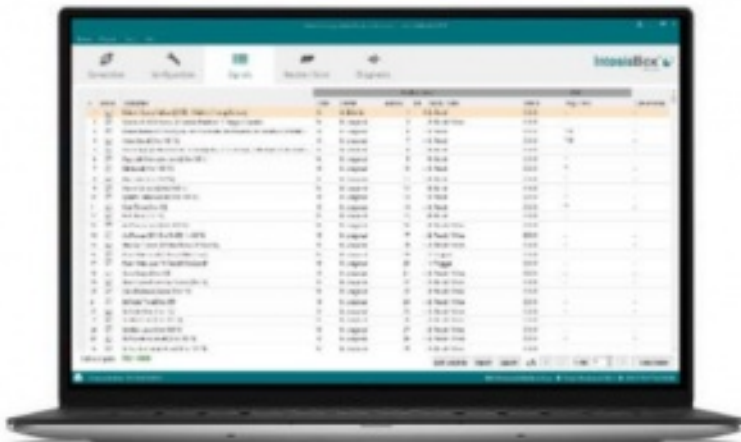INBACDAL1280200 (128 ballasts, 2 DALI channels)

Contents

HOW IT WORKS

The Intesis INBACDAL***0200 Gateway has been specially designed to work as a translator between a DALI installation and BACnet IP or BACnet MSTP based control and monitoring systems.

Intesis acts as a master in the DALI bus, allowing both BACnet IP and BACnet MSTP client/master devices to read and write on all configured DALI signals.

BACnet MSTP devices are connected to the serial port of the gateway, while BACnet IP devices are connected to the Ethernet port. On the DALI side, the gateway simulates a DALI-2 master device allowing other DALI/DALI-2 devices to be present in the DALI channels.

Configuration project and DALI commissioning is done through Intesis MAPS.
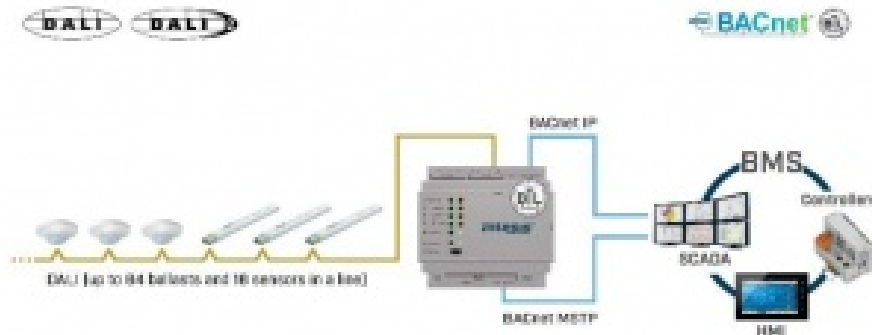

FEATURES

- Handles conversion between BACnet (IP & MSTP) and DALI/DALI2 ballasts and DALI-2 sensors (occupancy and light instances)
- Support for BACnet IP or BACnet MSTP, not both simultaneously*
- Designed following DALI IEC 62386 standard and certified by DiiA
- Supports parts 201, 202 y 207 for ECGs
- Supports parts 303 and 304 for Sensors
- DALI line scan (ballast detection) and commissioning
- Configuration through IP or USB (Console) port
- Front cover LED indicators to provide easy to check communication status on both the Ethernet and serial
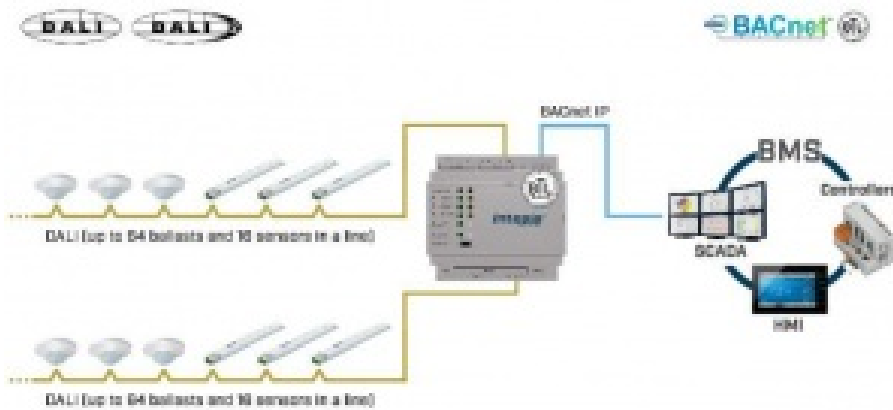
ports

- Includes Intesis MAPS with automatic updates for both Intesis MAPS and Gateway's firmware
  * INBACDAL1280200 does not offer BACnet MSTP communication
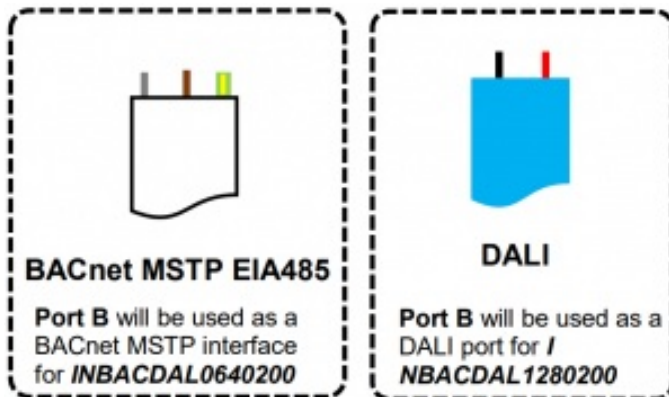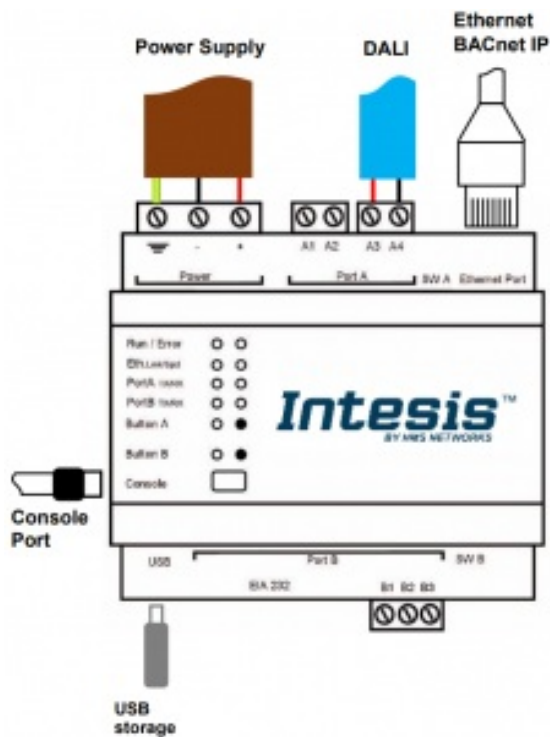
INTEGRATION EXAMPLE

VERSION SUPPORT 1 DALI CHANNEL

VERSION SUPPORT 2 DALI CHANNELS

CONNECTIONS

Power Supply · DALI · Ethernet BACnet IP

Console Port

USB storage

BACnet MSTP EIA485

Port B will be used as a BACnet MSTP interface for *INBACDAL0640200*

DALI

Port B will be used as a DALI port for *INBACDAL1280200*

PROTOCOLS

Ci Digital Illumination Interface Alliance

DALI is an industry-standardized protocol, for digital lighting control, and is specified in the multi-part international standard **IEC 62386**

The digital nature of DALI allows **two-way communication between** devices, so that a device can report a failure, or answer a query about its status or other information.

Wiring is relatively simple; DALI power and data is carried by the same pair of wires, without the need for a separate bus cable

For further information, please visit **https://www.digitalilluminationinterface.org**

BACnet is the Data Communication Protocol for Building Automation and Control Networks. Developed under the auspices of the American Society of Heating, Refrigerating and AirConditioning Engineers (ASHRAE).

BACnet is an American national standard, a European standard, a national standard in more than 30 countries and an ISO global standard. The protocol is supported and maintained by ASHRAE Standing Standard Project committee 135.

For further information, please visit **www.bacnet.org**
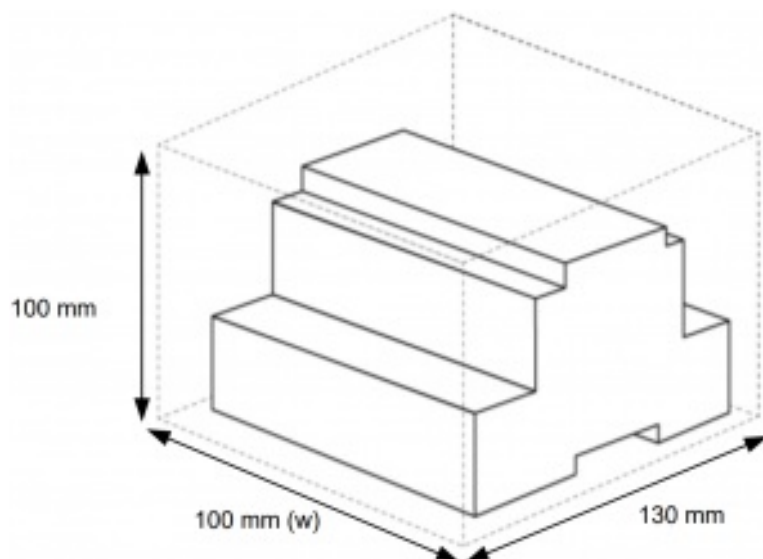
COMMUNICATION

	BACnet		DALI
	MSTP	**IP**	
Connection	EIA485 (3 wire isolated) 9.6, 19.2, 38.4, 57.6, 76.8, 115.2kbps	10BASE-T 100BASE-TX 10 Mbps 100 Mbps	DALI
Data rate			1.2 kbps
Data Types & Functions supported	**Object types** 0-AO (Analog Output) 1-AI (Analog Input) 2-AV (Analog Value) 3-BO (Binary Output) 4-BI (Binary Input) 5-BV (Binary Value) 13-MI (Multistate Input) 14-MO (Multistate Output) 15-MV (Multistate Value)	**Functions** Trend Logs Calendars Schedules	**Part 201:** Fluorescent lights (DALI type 0) **Part 202:** Emergency lights (DALI type 1) **Part 207:** LED modules (DALI type 6) **Part 103:** Control devices **Part 303:** Occupancy sensors **Part 304:** Light sensors

ELECTRICAL & MECHANICAL FEATURES

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 90x88x56 mm Recommended space for installation (dxwxh): 130x100x100mm Color: Light Grey. RAL 7035

Mounting	Wall. DIN rail EN60715 TH35.
Terminal Wiring (for power supply and l ow-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5mm2… 2.5mm2 2 cores: 0.5mm2… 1.5mm2 3 cores: not permitted If cables are more than 3.05 meters long, Class 2 cable is required
Power	1 x Plug-in screw terminal block (3 poles) Positive, Negative, Earth 24VDC +/-10%
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity
Port A	1 x DALI port (Plug-in screw terminal block orange 2 poles) 1500VDC isolation from other ports DALI guaranteed power: 235mA Voltage rating: 16VDC 1 x Plug-in screw terminal block green (2 poles) Reserved for future use
Switch A (SWA)	1 x DIP-Switch for serial EIA485 configuration: Reserved for future use
PORT B	**INBACDAL0640200** 1 x Serial EIA232 (SUB-D9 male connector) Reserved for future use 1 x Serial EIA485 Plug-in screw terminal block (3 poles) A, B, SG (Reference ground or shield) 1500VDC isolation from other ports (except PORT B: EIA232) **INBACDAL1280200** 1 x Serial EIA232 (SUB-D9 male connector) Reserved for future use 1 x DALI port (Plug-in screw terminal block green 2 poles) 1500VDC isolation from othe r ports DALI guaranteed power: 235mA Voltage rating: 16VDC

Switch B (SWB)	1 x DIP-Switch for serial EIA485 configuration: Position 1: **ON:** 120 Ω termination active **Off:** 120 Ω termination inactive Position 2-3: **ON:** Polarization active **Off:** Polarization inactive
Battery	Size: Coin 20mm x 3.2mm Capacity: 3V / 225mAh Type: Manganese Dioxide Lithium
Console Port	Mini Type-B USB 2.0 compliant 1500VDC isolation
USB port	Type-A USB 2.0 compliant Only for USB flash storage device *(USB pen drive)* Power consumption limited to 150mA *(HDD connection not allowed)*
Push Button	Button A: Check the user manual Button B: Check the user manual
Operation Temperature	0°C to +50°C
Operational Humidity	5 to 95%, no condensation
Protection	IP20 (IEC60529)
LED Indicators	10 x Onboard LED indicators 2 x Run (Power)/Error 2 x Ethernet Link/Speed 2 x Port A TX/RX 2 x Port B TX/RX 1 x Button A indicator 1 x Button B indicator

Web: www.intesis.com

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Documents / Resources

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Manuals+,