

## IBOX-KNX-DALI DALI to KNX Protocol Converter

Order Code: IBKNXDAL0640000

### Installation Sheet rev.1.1

Intesis Software S.L.U. © 2019

## SAFETY INSTRUCTIONS

### WARNING

Follow carefully this safety and installation instructions. Improper work may lead to serious harmful for your health and may damage seriously the IntesisBox and/or any other equipment connected to it too.

IntesisBox must be installed by accredited electrician or similar technical personnel, following all the safety instructions given here and in accordance always with the country legislation for installation of electric equipment.

IntesisBox cannot be installed outdoors or exposed to direct solar radiation, water, high relative humidity or dust.

IntesisBox must only be installed in a restricted access location.

In case of wall mount, fix firmly IntesisBox on a not vibrating surface following the instructions next.

In case of DIN rail mount fix IntesisBox properly to the DIN rail following the instructions below.

Mounting on DIN rail inside a metallic cabinet properly connected to earth is recommended.

Disconnect always power of any wires before manipulating and connecting them to IntesisBox.

A power supply with an NEC Class 2 or Limited Power Source (LPS) and SELV rated is to be used.

Respect always the expected polarity of power and communication cables when connecting them to IntesisBox.

Supply always a correct voltage to power IntesisBox, see details of voltage range admitted by the device in the technical characteristics below.

CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries according to the instructions. Battery replacement shall be done by an authorized installer.

CAUTION: The device is to be connected only to networks without routing to the outside plant, all communication ports are considered for indoor only and can be connected SELV circuits only.

This device was designed for installation in an enclosure. To avoid electrostatic discharge to the unit in environments with static levels above 4 kV, precautions should be taken when the device is mounted outside an enclosure. When working in an enclosure (ex. making adjustments, setting switches etc.) typical anti-static precautions should be observed before touching the unit.

Safety instructions in other languages can be found at:

[https://www.intesisbox.com/intesis/product/media/v6\\_safety.pdf](https://www.intesisbox.com/intesis/product/media/v6_safety.pdf)

## CONFIGURATION

Use the **Configuration Tool** to configure the gateway.

See instructions to download and install the latest version at:

[https://intesisbox.com/intesis/software/intesisbox\\_maps\\_installer.exe](https://intesisbox.com/intesis/software/intesisbox_maps_installer.exe)

Use the Ethernet connection or the Console Port (mini USB type B connector included) for communication between the gateway and the configuration tool. See CONNECTIONS below and follow instructions of user's manual for more details.

### Owner's Record

The serial number is located at the rear of the gateway. Record this information in the space provided below. Refer to it whenever you contact upon your gateway dealer or support team regarding this product.

Serial No. \_\_\_\_\_

## INSTALLATION

Follow instructions next to properly install the gateway.

Disconnect from mains the power supply before connecting it to IntesisBox.

Disconnect power of any bus or communication cable before connecting it to IntesisBox.

Mount IntesisBox on the wall or DIN rail following the instruction given below, respecting the safety instructions given above.

Connect a NEC Class 2 or Limited Power Source (LPS) and SELV rated power supply to IntesisBox, respect the polarity if DC power or Line and Neutral if AC power. Apply always a voltage within the range admitted by IntesisBox and of enough power (see technical characteristics).

Circuit-breaker must be used before the power supply. Rating 250V-6A.

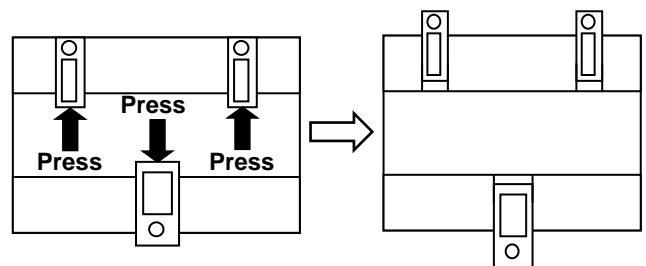
Connect the communication cables to IntesisBox, see details on the user's manual.

Power IntesisBox and the rest of devices connected to it.

**NOTE:** The device cannot be installed in air-handling space.

### Wall Mount

1. Separate the fixing clips in the bottom of the box, pushing them to the outside until hear the "click" which indicates that now the clips are in position for wall mount, see in the figure below.
2. Use the holes of the to fix the box in the wall using screws. Use the template below for the wall wholes.

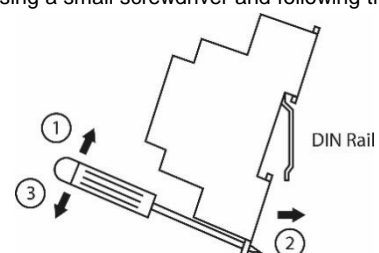


Clips in their original position  
(for DIN rail mount)

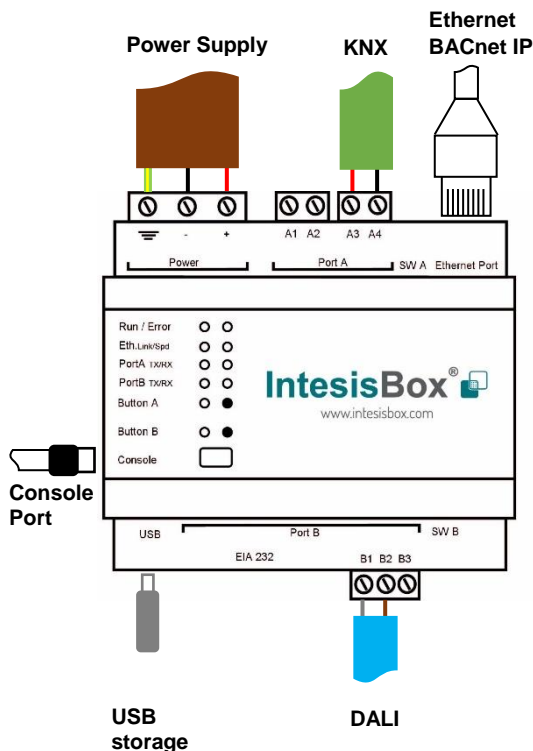
Clips in position for wall mount

### DIN Rail Mount

With the clips of the box in their original position, insert first the box in the upper edge of the DIN rail and later insert the box in the down part of the rail, using a small screwdriver and following the steps in the figure below.



# 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.

## PortA / KNX

Connect the KNX TP1 bus to connectors A3 (+) and A4 (-) of gateway's PortA. Respect the polarity.

## PortB / DALI

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

## Console Port

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

## USB

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

# ELECTRICAL & MECHANICAL FEATURES

|   |  |
|---|--|
| <b>Enclosure</b>  | Plastic, type PC (UL 94 V-0)<br>Net dimensions (d×w×h): 90x88x56 mm<br>Recommended space for installation (d×w×h): 130x100x100mm<br>Color: Light Grey. RAL 7035  |
| <b>Mounting</b>   | Wall.<br>DIN rail EN60715 TH35.  |
| <b>Terminal Wiring (for power supply and low-voltage signals)</b> | Per terminal: solid wires or stranded wires (twisted or with ferrule)<br>1 core: 0.5mm <sup>2</sup> ... 2.5mm <sup>2</sup><br>2 cores: 0.5mm <sup>2</sup> ... 1.5mm <sup>2</sup><br>3 cores: not permitted<br>If cables are more than 3.05 meters long, Class 2 cable is required. |
| <b>Power</b>  | 1 x Plug-in screw terminal block (3 poles)<br>Positive, Negative, Earth<br>24VDC   |
| <b>Ethernet</b>   | 1 x Ethernet 10/100 Mbps RJ45<br>2 x Ethernet LED: port link and activity  |
| <b>Port A</b>   | 1 x KNX TP-1 Plug-in screw terminal block orange (2 poles)<br>2500VDC isolation from other ports<br>KNX power consumption: 5mA<br>Voltage rating: 29VDC<br>1 x Plug-in screw terminal block green (2 poles)<br>Reserved for future use   |
| <b>Switch A (SWA)</b>   | 1 x DIP-Switch for PORT A configuration:<br>Reserved for future use  |
| <b>PORT B</b>   | 1 x Serial EIA232 (SUB-D9 male connector)<br>Reserved for future use<br>1 x Serial EIA485 Plug-in screw terminal block (3 poles)<br>B1, B2<br>1500VDC isolation from other ports<br>DALI power consumption: 240mA<br>Voltage rating: 16VDC<br>(except PORT B: EIA232)              |
| <b>Switch B (SWB)</b>   | 1 x DIP-Switch for serial EIA485 configuration:<br>Reserved for future use   |

|                              |   |
|------------------------------|---|
| <b>Battery</b>               | Size: Coin 20mm x 3.2mm<br>Capacity: 3V / 225mAh<br>Type: Manganese Dioxide Lithium   |
| <b>Console Port</b>          | Mini Type-B USB 2.0 compliant<br>1500VDC isolation  |
| <b>USB port</b>              | Type-A USB 2.0 compliant<br>Only for USB flash storage device<br>(USB pen drive)<br>Power consumption limited to 150mA<br>(HDD connection not allowed)                      |
| <b>Push Button</b>           | Button A: Check the user manual<br>Button B: Check the user manual  |
| <b>Operation Temperature</b> | 0°C to +60°C  |
| <b>Operational Humidity</b>  | 5 to 95%, no condensation   |
| <b>Protection</b>            | IP20 (IEC60529)   |
| <b>LED Indicators</b>        | 10 x Onboard LED indicators<br>2 x Run (Power)/Error<br>2 x Ethernet Link/Speed<br>2 x Port A TX/RX<br>2 x Port B TX/RX<br>1 x Button A indicator<br>1 x Button B indicator |

