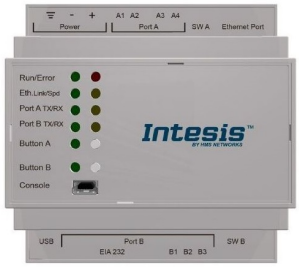

Intesis DALI to Modbus Server gateway Installation Guide

Intesis DALI to Modbus Server gateway

Intesis™
BY HMS NETWORKS

INMBSDAL0640200
DALI to Modbus Server gateway
Order Code: INMBSDAL0640200

Installation Sheet rev.1.1
HMS Industrial Networks S.L.U ©

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. _____

SAFETY INSTRUCTIONS

WARNING

Follow carefully these safety and installation instructions. Improper work may lead to serious harm to your health and also may damage seriously the Intesis gateway and/or any other equipment connected to it.

The Intesis gateway must be installed by an 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.

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

The Intesis gateway must only be installed in a restricted access location.
In case of wall mount, fix firmly the Intesis device on a not vibrating surface following the instructions next.

In the case of the DIN rail, the mount fixes the Intesis device properly to the DIN rail following the instructions below.

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

Disconnect always a power of any wires before manipulating and connecting them to the Intesis gateway.

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 the Intesis device.

Supply always a correct voltage to power to the Intesis gateway, 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 indoor 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://intesis.com/docs/manuals/v6-safety

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CONFIGURATION

Use the Configuration Tool to configure the gateway.
See instructions to download and install the latest version at: **https://intesis.com/docs/software/intesis-maps-installer**
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 the user's manual for more details.

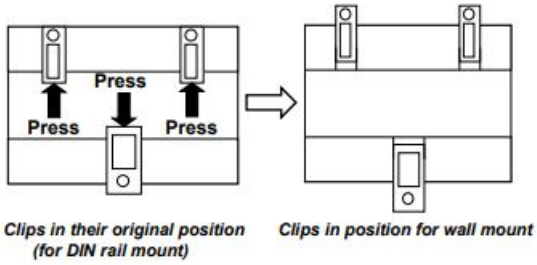
INSTALLATION

Follow instructions next to properly install the gateway.
Disconnect from mains the power supply before connecting it to the Intesis device.
Disconnect the power of any bus or communication cable before connecting it to the Intesis gateway.
Mount the Intesis device on the wall or DIN rail following the instruction given below, respecting the safety instructions given above.
Connect an NEC Class 2 or Limited Power Source (LPS) and SELV rated power supply to the Intesis gateway,

respect the polarity of DC power or Line and Neutral if AC power. Apply always a voltage within the range admitted by the Intesis device and of enough power (see technical characteristics).
Circuit-breakers must be used before the power supply. Rating 250V6A.
Connect the communication cables to the Intesis device, see details on the user's manual.
Power the Intesis gateway and the rest of the devices connected to it.

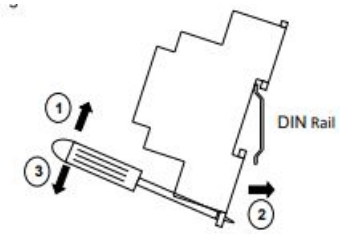
Wall Mount

1. Separate the fixing clips in the bottom of the box, pushing them to the outside until hearing 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 clips to fix the box in the wall using screws. Use the template below for the wall wholes.



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.



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 / Modbus TCP / 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 / DALI

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

PortB / Modbus RTU

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

polarity. Remember the characteristics of the standard EIA485 bus: maximum distance of 1200 meters, maximum 32 devices connected to the bus, and at each end of the bus it must be a termination resistor of 120. The gateway has an internal bus biasing circuit that incorporates the termination resistor. If you install the gateway in one of the ends of the bus, then do not install an additional termination resistor in that end.
Connect the serial cable EIA232 coming from the external serial device to the EIA232 connector of the gateway's PortB. This is a DB9 male (DTE) connector in which only the lines TX, RX, and GND are used. Details of the pinout can be seen in the user's manual. Respect the maximum distance of 15 meters.

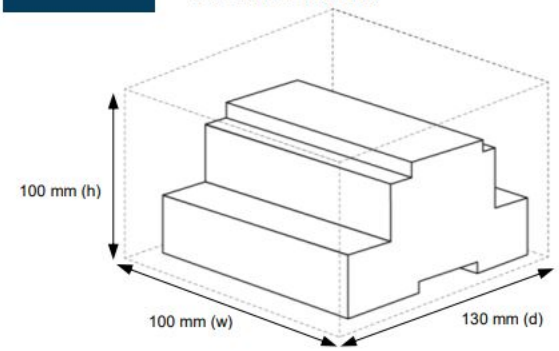
Console Port
Connect a mini-type B USB cable from your computer to the gateway to allow communication between the Configuration Software and the gateway. Remember that Ethernet connection is also allowed. Check the user manual for more information.

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

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 low-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
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 PORT A configuration: Reserved for future use
PORT B	1 x Serial EIA232 (SUB-D9 male connector) Modbus RTU 1500VDC isolation from other ports (except PORT B: EIA485) 1 x Serial EIA485 (Plug-in screw terminal block 3 poles) A, B, SGND (Reference ground or shield) 1500VDC isolation from other ports (except PORT B: EIA485)
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 On board LED indicators 2 x Error (red) / Power LED 2 x Ethernet Link / Speed 2 x Port A TX/RX 2 x Port B TX/RX 1 x Button A indicator 1 x Button B indicator



This marking on the product, accessories, packaging, or literature (manual) indicates that the product contains electronic parts and they must be properly disposed of by following the instructions at
https://intesis.com/weee-regulation

Rev.1.0

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This information is subject to change without notice

URL https://www.intesis.com

Documents / Resources

	Intesis DALI to Modbus Server gateway [pdf] Installation Guide DALI to Modbus Server gateway, INMBSDAL0640200

References

- Waste Electrical and Electronic Equipment | Intesis
- intesis.com/docs/manuals/v6-safety
- Waste Electrical and Electronic Equipment | Intesis
- Intesis | Gateway solutions for Building Automation

Manuals+,