

## INBACEIP\*\*\*0000

### EtherNet/IP to BACnet IP & MS/TP Server gateway

Order Code: INBACEIP\*\*\*0000

\*\* stands for the Intesis gateway capacity and varies depending on the specific gateway acquired

### Installation Sheet rev.1.0

HMS Industrial Networks S.L.U ©

## 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 Intesis gateway and/or any other equipment connected to it too.

The Intesis gateway 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.

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.

To mount in DIN rail, fix the Intesis device 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 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 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 for 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>

## 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.

### 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 the Intesis device.

Disconnect power of any bus or communication cable before connecting it to the Intesis device.

Mount the Intesis device in a vertical position on the DIN rail following the instruction given below, respecting the safety instructions given above.

**IMPORTANT:** Connect a NEC Class 2 or Limited Power Source (LPS) and SELV rated power supply to the Intesis gateway, respect the polarity if DC power or Line and Neutral if AC power. **This power supply must not be shared with other devices.** Apply always a voltage within the range admitted by the Intesis gateway and of enough power (see technical characteristics).

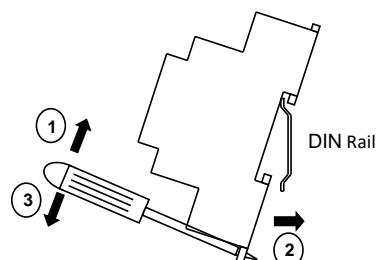
Circuit-breaker must be used before the power supply. Rating 250V-6A.

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

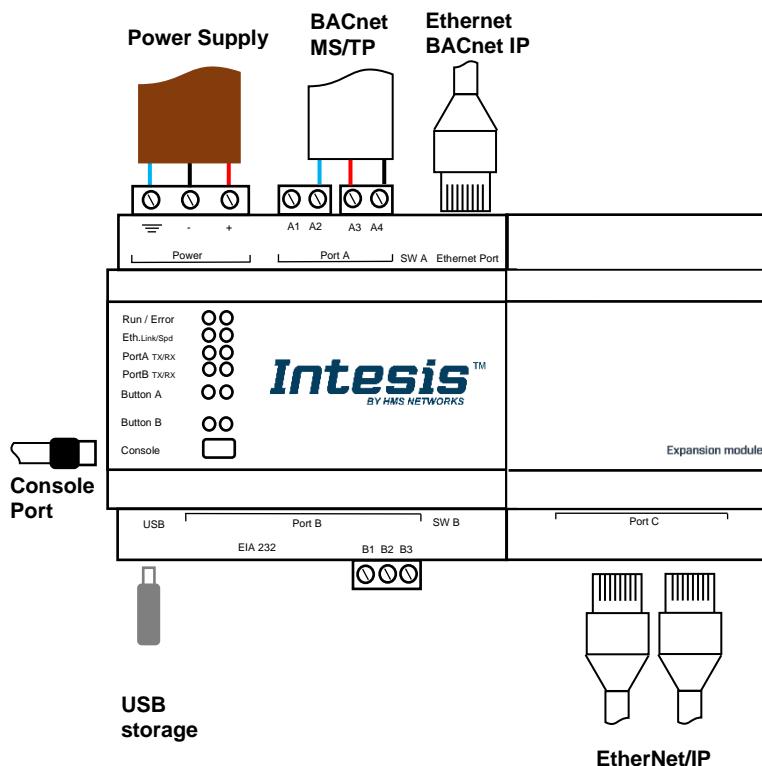
Power the gateway and the rest of devices connected to it.

### 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. Functional Earth shall be connected to the installation Earth.

## Ethernet / BACnet IP (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.

## Port A / BACnet MS/TP

Connect the EIA485 bus to connectors A3 (+), A4 (-) and A1 or A2 (SNGD) of gateway's PortA. Respect the polarity. Remember the characteristics of the standard EIA485 bus: maximum distance of 1200 meters, maximum 32 devices connected to the bus, and in each end of the bus it must be a termination resistor of  $120\ \Omega$ . 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.

**PortB:** Reserved for future use.

## Port C / EtherNet/IP

Connect the cables coming from the network to the EtherNet/IP connectors

## 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. To be used only during the configuration stage.

## USB

Only used by debugging services. It can connect a USB storage device (not a HDD) if required. Check the user manual for more information.

# ELECTRICAL & MECHANICAL FEATURES

Enclosure	Plastic, type ABS (UL 94 V-0) Net dimensions (dxwxh): 90x160x58 mm Recommended space for installation (dxwxh): 130x160x100mm Color: Light Grey. RAL 7035	Battery	Size: Coin 20mm x 3.2mm Capacity: 3V / 225mAh Type: Manganese Dioxide Lithium
Mounting	DIN rail EN60715 TH35.	Console Port	Mini Type-B USB 2.0 compliant 1500VDC isolation
Terminal Wiring (for power supply and low-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5mm <sup>2</sup> ... 2.5mm <sup>2</sup> 2 cores: 0.5mm <sup>2</sup> ... 1.5mm <sup>2</sup> 3 cores: not permitted	USB port	Type-A USB 2.0 compliant Only for USB flash storage device (USB pen drive) Power consumption limited to 150mA (HDD connection not allowed)
Power	1 x Plug-in screw terminal block (3 poles) Positive, Negative, Earth 24VDC +/-10% Max.: 580mA	Push Button	Button A: Check the user manual Button B: Check the user manual
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity	Operation Temperature	0°C to +60°C
Port A	1 x Serial EIA485 (Plug-in screw terminal block 2 poles) A, B 1 x Plug-in screw terminal block green (2 poles) SGND (Reference ground or shield) 1500VDC isolation from other ports	Operational Humidity	5 to 95%, no condensation
Switch A (SWA)	1 x DIP-Switch for PORT A configuration: Position 1: ON: 120 $\Omega$ termination active Off: 120 $\Omega$ termination inactive Position 2-3: ON: Polarization active Off: Polarization inactive	Protection	IP20 (IEC60529)
PORT B	1 x EIA232 (SUB-D9 male connector) Reserved for future use 1 x EIA485 port (Plug-in screw terminal block 3 poles) Reserved for future use	LED Indicators	8 x On board LED indicators 1 x Error LED 1 x Power LED 2 x Port A TX/RX 2 x Port B TX/RX 1 x Button A indicator 1 x Button B indicator
Switch B (SWB)	1 x DIP-Switch for serial EIA485 configuration: Reserved for future use		
PORT C	2 x Ethernet 10/100 Mbps RJ45 4 x Ethernet LED: 2 x port link and 2 x activity		



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>

