

Installation Guide for the IN702MEB***0000 Gateway

Intesis Network Gateway with M-Bus, Modbus and Pulse Meters to Serial and IP.

Order code: IN702MEB***0000

The order code may vary depending on the product seller and the buyer's location.

*** stands for the gateway capacity and varies depending on the specific gateway purchased.

Version 1.0.0

Owner's record

Find the serial number on the silver label on the right side of the gateway. We recommend you write it in the space below for sales or technical assistance:

SN:

Safety Information



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

MANDATORY GROUND CONNECTION

YOU MUST connect the gateway to the installation ground terminal. Always use the gateway's dedicated connector

NEVER use the positive or negative gateway's connectors to establish this connection. Not following this indication can cause ground loops and damage the gateway and/or any other equipment connected to it.

If the power supply includes a ground connection, that terminal must be connected to ground.

Only technical personnel, following these instructions and the country legislation for installing electric equipment, can install and manipulate this gateway.

Install this gateway indoors, in a restricted access location, avoiding exposure to direct solar radiation, water, high relative humidity, or dust.

Mount the gateway, preferably, on a DIN rail inside a grounded metal cabinet following the instructions below.

In the case of wall mounting, firmly fix the gateway on a non-vibrating surface following the instructions below.

Disconnect power wires before manipulating and connecting them to the gateway.

All wires for communication and power supply must only be connected to networks without routing to the outside plant. All communication ports are considered for indoor use and must only be connected to SELV circuits.

Keep power and ground wires separate from communication wires. Never bundle them together.

Use SELV-rated NEC class 2 or limited power source (LPS) power supply.

Use a circuit-breaker before the power supply. Rating 250 V, 6 A.

Supply the correct voltage to power the gateway. See the Technical Specifications table at the end of this document.

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

This gateway is designed for installation inside an enclosure. When working inside an enclosure (ex. to make adjustments, set switches, etc.), observe the common antistatic precautions before manipulating the gateway. Take precautions when installing it outside an enclosure to avoid electrostatic discharges.

These safety instructions in other languages can be found [here](#).

Configuration

Connect the gateway to a computer using a USB Type-C cable (not included).

Configure the gateway using Intesis MAPS. To download the latest version of the configuration tool, [click here](#).

For further information on the configuration, refer to the Intesis MAPS guide.

Mounting

Mount the gateway over a wall or over a DIN rail.



Before mounting, please ensure that the chosen installation place preserves the gateway from direct solar radiation, water, high relative humidity, or dust.



DIN rail mounting inside a grounded metallic cabinet is recommended.



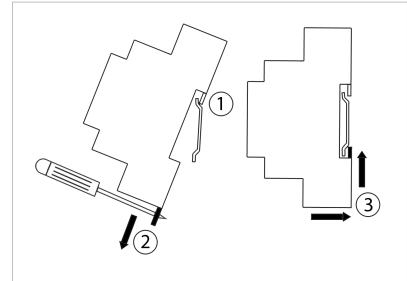
Leave enough clear space to wire the gateway easily and for the subsequent manipulation of elements, such as connectors, DIP switches, etc.

DIN RAIL MOUNTING

1. Fit the gateway's top-side clips in the upper edge of the DIN rail.
2. Press the low side of the gateway gently to lock it in the DIN rail.
3. Make sure the gateway is firmly fixed.



For some DIN rails, to complete step 2, you may need a small screwdriver or similar to pull the bottom clip down.



WALL MOUNTING



For reasons of security, the maximum height for wall mounting is two meters (6.5 feet).

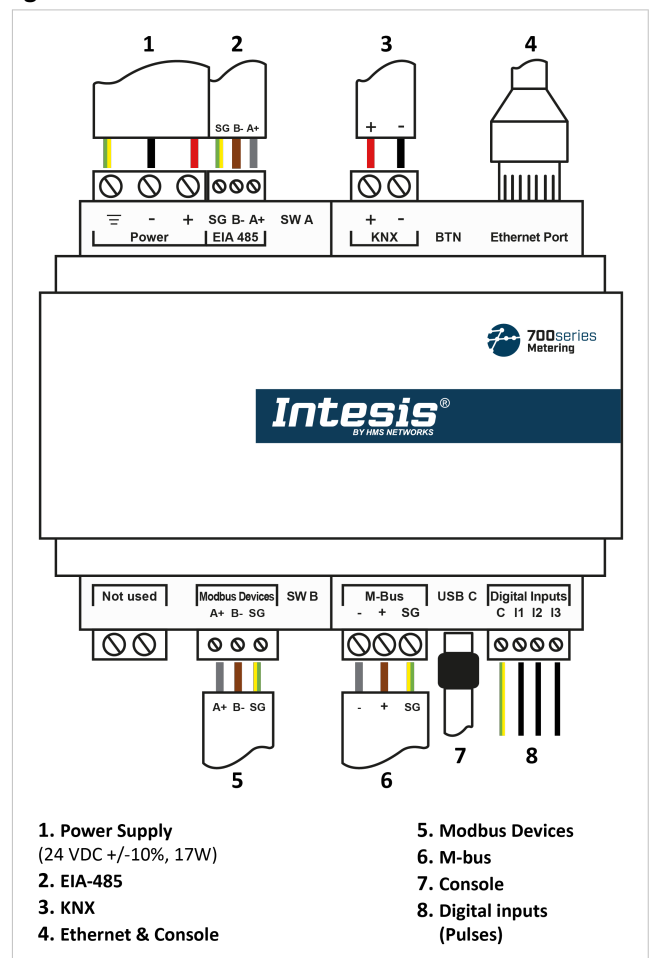
1. Press the top-side mobile clips in the rear panel until you hear a *click*.
2. Use the clip holes to fix the gateway on the wall using screws.



Use M3 screws, 25 mm (1") length.

3. Make sure the gateway is firmly fixed.

Wiring



Power supply: Use a SELV-rated NEC class 2 or Limited Power Source (LPS) power supply. Connect the gateway's ground terminal (⏏) to the installation grounding.

Power rating: 24 VDC (±10%), 17 W

Communication ports:

PORT	USAGE	WIRING			
EIA-485 ¹	Connection to the BMS (client): BACnet MS/TP or Modbus RTU	SG: Signal ground	B-	A+	
KNX	KNX bus	+		-	
Ethernet	As a TCP/IP port: BACnet/IP and Modbus TCP As a console port: Connection to a PC for configuration purposes	Ethernet cable (CAT5 or higher) When using the building LAN, contact the network administrator and make sure traffic is allowed. When starting up the gateway for the first time, DHCP will be enabled for 30 seconds. After that time, the default IP 192.168.100.246 will be set.			
Not used	Not used				
Modbus Devices (EIA-485) ¹	Connection of Modbus RTU server devices, such as meters, PV, EVC, and others	A+	B-	SG: Signal ground	
M-Bus	M-Bus meters	-	+	SG: Signal ground	
USB	Connection to a PC for configuration purposes	USB Type-C			
Digital Inputs	Digital pulse meters (dry contact)	C: Common	I1: Input 1	I2: Input 2	I3: Input 3



¹ **Standard EIA-485 bus requirements:** maximum distance of 1200 meters (4000 ft); up to 32 devices connected; a 120 Ω resistor at each end of the bus is needed (configure the bus biasing and termination resistor for the **EIA-485** port using the DIP switch **SW A** and for the **Modbus Devices** port using the DIP switch **SW B**. See the **Technical Specifications** table). To know more, refer to the document [Polarity Issues in RS485 Networks](#).

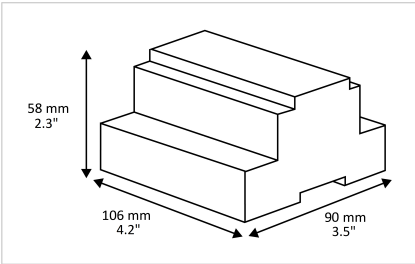


Scan here for further configuration details

Dimensions



Leave enough clear space to wire the gateway easily and for the subsequent manipulation of elements, such as connectors, DIP switches, etc.



Disposal and Recycling



This product contains electronic components and must be properly disposed of according to local laws and regulations. For further information, refer to: <https://www.hms-networks.com/sustainability>

For further information on the installation, connection, and configuration of this gateway, refer to the User Manual.

Technical Specifications

Housing	Plastic, type PC (UL 94 V-0). Color: Light Grey. RAL 7035	
	Net dimensions (HxWxD): Millimeters: 90 x 106 x 58 mm / Inches: 3.5 x 4.2 x 2.3"	
Net weight	205 g (7.2 oz)	
Mounting	Wall: M3 25 mm (1") length screws. Secure mounting: below 2 meters (6 feet) DIN rail (recommended mounting) EN60715 TH35	
Wires (for power supply and low-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) Wire cross-section/gauge: One core: 0.2 .. 2.5 mm ² (24 .. 14 AWG) Two cores: 0.2 .. 1.5 mm ² (24 .. 16 AWG) Three cores: Not permitted	
	For distances longer than 3.05 meters (10 feet), use class 2 cables	
Power	1 x Green pluggable terminal block 24 VDC (±10%), 17 W  : Connection to ground -: Negative +: Positive	
EIA-485 port	1 x Green pluggable terminal block SG: Reference ground or shield B-: Negative A+: Positive	
KNX port	1 x Orange pluggable terminal block +: Positive -: Negative	
Ethernet port	1 x Ethernet 10/100 Mbps RJ45	
Not used port	1 x Green pluggable terminal block (two poles). Not used	
Modbus Devices port EIA-485	1 x Green pluggable terminal block A+: Positive B-: Negative SG: Reference ground or shield	
M-Bus port	1 x Green pluggable terminal block -: Negative +: Positive SG: Reference ground or shield	
Binary inputs	1 x Green pluggable terminal block I1, I2, I3: Inputs C: Common	
Console port (USB)	USB Type-C compliant	
LEDs	2 x Run (Power/Error)	2 x Ethernet Link/Speed
	2 x Port EIA-485 TX/RX	2 x Port A TX/RX (not used)
	2 x Port KNX TX/TR	2 x Port B TX/RX
	1 x Button indicator	2 x Port C TX/RX
DIP switches	2 x DIP switch blocks for EIA-485 serial port configuration	
	SW A SW B	
	Position 1: On: 120 Ω termination active Off: 120 Ω termination inactive (default)	Position 1: On: 120 Ω termination active Off: 120 Ω termination inactive (default)
	Position 2 and 3: On: Polarization active (default) Off: Polarization inactive	Position 2 and 3: On: Polarization active (default) Off: Polarization inactive
Push button	1 x Push button Factory reset I-Am message (for BACnet only) Normal mode/programming mode (for KNX only)	
Operational temperature	Celsius: -10 .. 60°C Fahrenheit: 14 .. 140°F	
Operational humidity	5 to 95%. No condensation	
Protection	IP20 (IEC60529)	
Isolation voltage between comm. ports	1000 VDC	