

## Safety Information



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

- 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.
- 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.
- 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 any system from power before handling or connecting it to the gateway.
- Respect the expected polarity of power and communication cables when connecting them to the gateway.
- Take the necessary antistatic precautions before manipulating the gateway to avoid electrostatic discharges.
- Keep the communication cables as far as possible from mains and ground wires. Do not bundle them together.
- Safety instructions in other languages can be found [here](#).

## Installation Instructions

1. Disconnect all systems from power.
2. Set the DIP switches according to your requirements.
3. Mount the gateway. DIN rail mounting inside a grounded metal cabinet is recommended.
4. Connect the indoor unit's XY/D1D2 bus to the gateway's **XY/D1D2** port.
  - For V4 and V6 models, use the XY terminals.
  - For V8 models, use the D1D2 terminals.
  - To know more about the compatibility of the gateway with V8 models, refer to the User Manual.
5. Connect the Modbus RTU bus to the gateway's **EIA-485** port.
6. Connect the power supply to the gateway's **Power** port.
7. Reconnect all systems to power.

## Power Supply Requirements

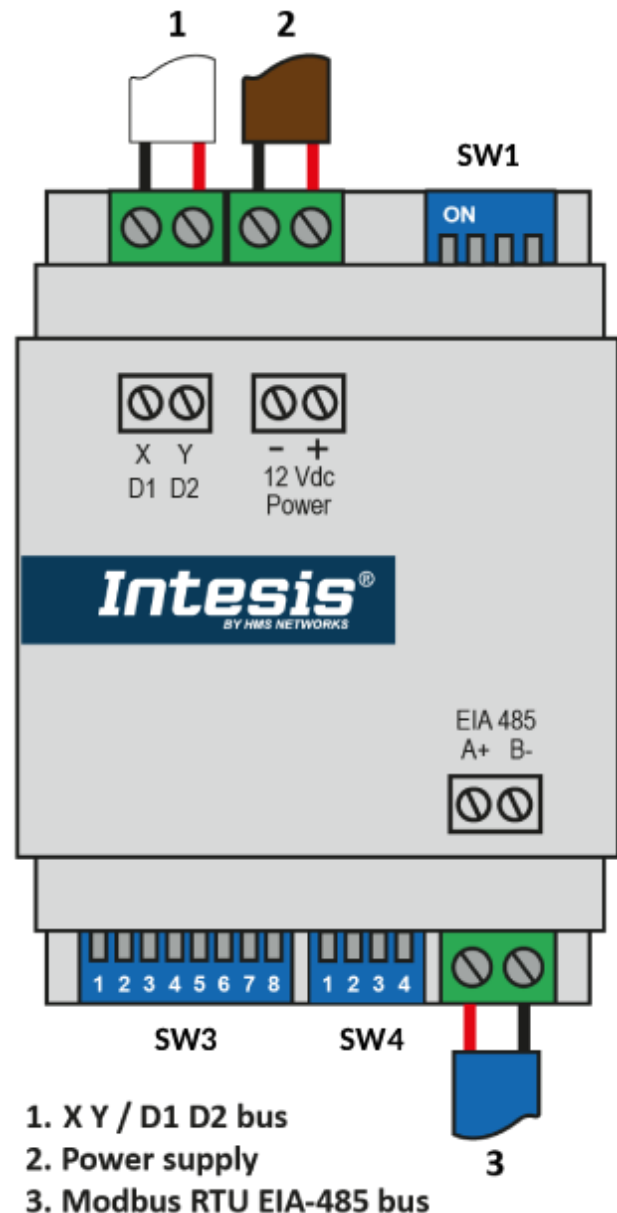
- Required power supply:
  - **Voltage: 12 VDC/AC**
  - **Current: ≥200 mA**
- Use a SELV-rated NEC Class 2 or Limited Power Source (LPS) power supply.
- Respect the polarity.
- Maximum cable length: 3 m/10 ft

## EIA-485 Bus Requirements

- Maximum distance of 1200 meters (4000 ft).
- Up to 32 devices can be connected.
- A 120 Ω resistor is required at each end of the bus. (See the DIP switches section).

## Standalone solution. Using a remote controller is optional

The gateway can operate as a standalone solution or coexist with a remote controller connected to the X1X2 terminals, whether it is configured as a header (main) or a follower (sub).



## Configuration Through DIP Switches

**IMPORTANT:** Set the DIP switches before powering the gateway. The settings will be applied during the gateway's startup.

### SW1 – Gateway configuration

| SW1 |    |    |     | Description                                 |
|-----|----|----|-----|---------------------------------------------|
| P1  | P2 | P3 | P4  |                                             |
| OFF | X  | X  | X   | AUTO mode not allowed (Default setting)     |
| ON  | X  | X  | X   | AUTO mode allowed                           |
| X   | ON | X  | X   | DRY mode not allowed (Default setting)      |
| X   | ON | X  | X   | DRY mode allowed                            |
| X   | X  | ON | X   | Fan AUTO mode not allowed (Default setting) |
| X   | X  | ON | X   | Fan AUTO mode allowed                       |
| X   | X  | X  | OFF | Number of fan speeds: 2 (Default setting)   |
| X   | X  | X  | ON  | Number of fan speeds: 3                     |

### SW3 – Modbus address

| SW3 |     |     |     |     |     | Modbus address |
|-----|-----|-----|-----|-----|-----|----------------|
| P1  | P2  | P3  | P4  | P5  | P6  |                |
| OFF | OFF | OFF | OFF | OFF | OFF | 0              |
| ON  | OFF | OFF | OFF | OFF | OFF | 1              |
| OFF | ON  | OFF | OFF | OFF | OFF | 2              |
| ... |     |     |     |     |     | ...            |
| ON  | OFF | ON  | ON  | ON  | ON  | 61             |
| OFF | ON  | ON  | ON  | ON  | ON  | 62             |
| ON  | ON  | ON  | ON  | ON  | ON  | 63             |

#### Setting the Modbus address

To determine the position of each switch, convert the decimal value of the address to binary. A value of 0 indicates the switch is set to OFF, while a value of 1 indicates it is set to ON. Keep in mind that P1 represents the least significant bit (LSB).

Example to set the address 34:

1. Convert the value to binary: 100010.
2. Read the binary value from right (MSB) to left (LSB).
3. Set each switch accordingly: P1 = OFF, P2 = ON, P3 = OFF, P4 = OFF, P5 = OFF, P6 = ON

### SW3 and SW4 – Baud rate

| SW3 |     | SW4 |     | Description                |
|-----|-----|-----|-----|----------------------------|
| P7  | P8  | P3  | P4  |                            |
| OFF | OFF | OFF | OFF | 2400 bps                   |
| ON  | OFF | OFF | OFF | 4800 bps                   |
| OFF | ON  | OFF | OFF | 9600 bps (Default setting) |
| ON  | ON  | OFF | OFF | 19200 bps                  |
| OFF | OFF | ON  | OFF | 38400 bps                  |
| ON  | OFF | ON  | OFF | 57600 bps                  |
| OFF | ON  | ON  | OFF | 76800 bps                  |
| ON  | ON  | ON  | OFF | 115200 bps                 |

### SW4 – Temperature units and termination resistor

| SW4 |     |     |    | Description                                           |
|-----|-----|-----|----|-------------------------------------------------------|
| P1  | P2  | P3  | P4 |                                                       |
| ON  | -   | -   | -  | Temperature in degrees x10. Example: 19.2°C=192       |
| OFF | -   | -   | -  | Temperature in degrees x1 (Default setting)           |
| -   | ON  | -   | -  | Temperature in Fahrenheit                             |
| -   | OFF | -   | -  | Temperature in Celsius (Default setting)              |
| -   | -   | ON  | -  | 120 Ω termination resistor enabled                    |
| -   | -   | OFF | -  | 120 Ω termination resistor disabled (Default setting) |

#### Enabling the termination resistor

Enable the gateway's 120 Ω termination resistor only when it is mounted at one end of the EIA-485 bus and no other termination resistor is present at that end.



This marking on the product, accessories, packaging or literature (manual) indicates that the product contains electronic parts and they must be properly disposed. To know more, visit: [www.hms-networks.com/sustainability](http://www.hms-networks.com/sustainability)