

# Installation Sheet for IN485DAI001R000

Version 1.0

## 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 (if needed), must only be connected to networks with indoor wiring. All communication ports are considered for indoor use and must only be connected to SELV circuits.

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

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

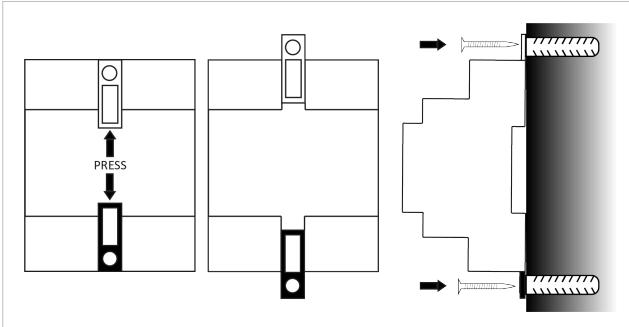
Supply the correct voltage to power the gateway. See the Technical Specifications table at the end of this document.

Respect the expected polarity of power (if needed) and communication cables when connecting them to the gateway.

## Installation Instructions

### Wall mounting

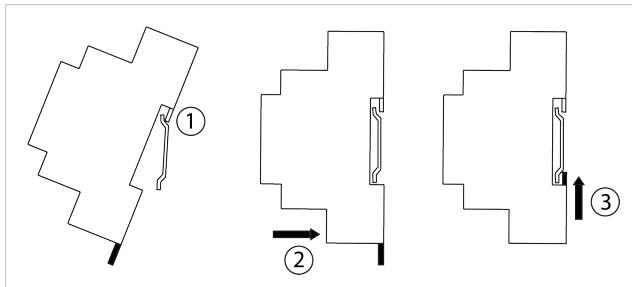
1. Press the rear panel clips until you hear a *click*.
2. Use the clip holes to screw the gateway to the wall.
3. Make sure the gateway is firmly fixed.



### DIN rail mounting

Keep the top side clip in its original position.

1. Insert the gateway in the upper edge of the DIN rail.
2. Fit the low side of the gateway in the DIN rail.
3. Push the bottom clip back to its original position, locking the gateway to the rail.
4. Make sure the gateway is firmly fixed.



DIN rail mounting inside a grounded metallic cabinet is recommended.

## Connection Instructions

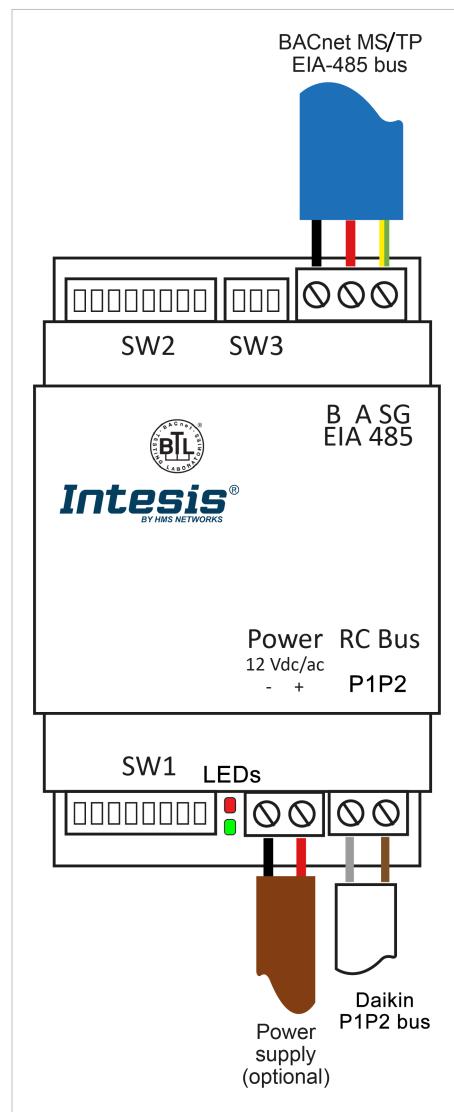


Figure 1. Wiring diagram (wire colors are indicative only)

1. Disconnect the AC system from the power.
2. Mount the gateway in the desired place.
3. Connect the P1P2 bus to the gateway's RC bus connector. This bus has no specific polarity.
4. Connect the BACnet MS/TP bus to the EIA-485 port of the gateway.



Observe polarity: B-, A+, and SG for ground connection.



Keep communication cables away from power and ground wires.



**Connection to an external power supply:** This gateway is powered by the AB bus itself, and there is no need to connect an external power supply. Nonetheless, the bus could not supply the needed power\* depending on the number and type of remote controllers installed. If that's the case, connect a 12V DC/AC SELV-rated NEC class 2 or Limited Power Source (LPS) power supply in the gateway's Power connector.

\*Some signs indicating there is not enough power in the bus may include, for example, a malfunction of the remote controllers' displays or performance.

## DIP Switches

The gateway includes three built-in DIP switches: SW1 (8 switches) at the bottom side; SW2 (8 switches) and SW3 (3 switches) at the top side.

Table 1. SW1 (P1): Gateway configuration; (P2): AC unit configuration; (P6 to P8): BACnet MS/TP baudrate

Binary value	Switches								Description							
	b0 .. b7	1	2	3	4	5	6	7	8							
0XXXXXXX	↓	X	X	X	X	X	X	X	Follower in bus (default)							
1XXXXXXX	↑	X	X	X	X	X	X	X	Header in bus							
X0XXXXXX	X	↓	X	X	X	X	X	X	Indoor unit temperature reading (default)							
X1XXXXXX	X	↑	X	X	X	X	X	X	Remote controller temperature reading							
XXXXXX000	X	X	X	X	X	↓	↓	↓	Autobaudrate (default value)							
XXXXXX100	X	X	X	X	X	↑	↓	↓	9600 bps							
XXXXXX010	X	X	X	X	X	↓	↑	↓	19200 bps							
XXXXXX110	X	X	X	X	X	↑	↑	↓	38400 bps							
XXXXXX001	X	X	X	X	X	↓	↓	↑	57600 bps							
XXXXXX101	X	X	X	X	X	↑	↓	↑	76800 bps							
XXXXXX011	X	X	X	X	X	↓	↑	↑	115200 bps							
XXXXXX111	X	X	X	X	X	↑	↑	↑	Autobaudrate							

Table 2. SW2 (P1 to P7): BACnet MS/TP MAC address; (P8): Temperature unit (°C/°F)

Binary value	Switches								MAC address	Description
	b0 .. b7	1	2	3	4	5	6	7	8	
0000000X	↓	↓	↓	↓	↓	↓	↓	X	0	-
1000000X	↑	↓	↓	↓	↓	↓	↓	X	1	-
0100000X	↓	↑	↓	↓	↓	↓	↓	X	2	-
1100000X	↑	↑	↓	↓	↓	↓	↓	X	3	-
...	...								...	-
1011111X	↑	↓	↑	↑	↑	↑	↑	X	125	-
0111111X	↓	↑	↑	↑	↑	↑	↑	X	126	-
1111111X	↑	↑	↑	↑	↑	↑	↑	X	127	-
XXXXXX0	X	X	X	X	X	X	X	↓	-	Temperature in Celsius (default)
XXXXXX1	X	X	X	X	X	X	X	↑	-	Temperature in Fahrenheit

Table 3. SW3 (P1 to P3): BACnet polarization and termination resistor

Binary value	Switches			Description					
	b0 .. b2	1	2	3					
0XX	↓	X	X	EIA-485 bus without termination resistor. The gateway is not at one end of the EIA-485 bus (default value)					
1XX	↑	X	X	120 Ω termination resistor active. The gateway is at one end of the EIA-485 bus					
X00	X	↓	↓	No bus polarization (default value)					
X11	X	↑	↑	Bus polarization active					



The DIP switches configuration will only take effect after rebooting the gateway.

## LEDs Information

Two LEDs are placed between SW1 and the Power connector at the gateway's bottom.

LED	Status	Description
BACnet		
L1 Green	ON	BACnet MS/TP link performed
	Flickering	Activity on the BACnet MS/TP bus
	OFF	BACnet MS/TP link not performed
AC unit		
L2 Red	ON	AC communication error
	Blinking	AC unit error
	Flashing	AC communication OK



### LED PATTERNS

- **ON:** 100% on
- **Flickering:** irregular cycle (90% on - 10% off approx)
- **Blinking:** 50% on - 50% off
- **Flashing:** 10% on - 90% off
- **OFF:** 100% off

## Technical Specifications

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (DxWxH): 93 x 53 x 58 mm / 3.7 x 2.1 x 2.3"
Weight	85 g (3 oz)
Terminal wiring for low-voltage signals	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5 to 2.5 mm <sup>2</sup> (24 to 11 AWG) 2 cores: 0.5 to 1.5mm <sup>2</sup> (24 to 15 AWG) 3 cores: not permitted
Mounting	Wall or DIN rail
BACnet MS/TP port	1 x EIA-485 pluggable terminal block (3 poles: B, A, and SG) with 120 Ω resistor termination and polarisation configurable by DIP switch
AC unit port	1 x RC bus pluggable terminal block (2 poles: A, B)
LED indicators	2 x Communication status
DIP switches	SW1: Gateway, AC unit, and baudrate configuration SW2: MAC address and temperature unit SW3: Bus polarization and termination
Operational and storage temperature	Celsius: Op: 0 to +70°C; St: -20 to 85°C Fahrenheit: 32 to 158°F; St: -4 to 185°F
Operational and storage humidity	5% to 95%, non-condensing
Isolation Voltage	1500 VDC
Isolation resistance	1000 MΩ

## 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.intesis.com/weee-regulation>

For further information on the installation, connection, and configuration of this gateway, refer to the [User Manual](#).