

IN770AIR

Intesis multi-brand HVAC Gateway with KNX, Serial, and IP support

Order Code: IN770AIR***O000

*** stands for the Intesis gateway capacity

Product Datasheet

HMS Industrial Networks S.L.U. ©



Thanks to its late configuration feature, this HVAC gateway can be configured with Intesis MAPS to integrate Bosch, Daikin, Hisense, Hitachi, Midea, Mitsubishi Electric, Panasonic, Samsung, or York HVAC systems (one at a time), into BACnet (IP or MS/TP), Modbus (TCP & RTU), KNX TP, or WMP networks.

It connects to the outdoor unit bus and supports the integration of up to 64 indoor units (or up to 100 Mitsubishi Electric groups).

Order Codes

ID	ORDER CODE	PRODUCT NAME	DESCRIPTION
IN770AIR	IN770AIRXXSO000	IN770-AIR - Multibrand XXSMALL	HVAC Multibrand to multiprotocol Gateway - Up to 4 indoor units / or 15 Mitsubishi Electric groups
	IN770AIR00SO000	IN770-AIR - Multibrand SMALL	HVAC Multibrand to multiprotocol Gateway - Up to 16 indoor units / or 50 Mitsubishi Electric groups
	IN770AIR00MO000	IN770-AIR - Multibrand Medium	HVAC Multibrand to multiprotocol Gateway - Up to 64 indoor units / or 100 Mitsubishi Electric groups

Product Applications

You can configure this gateway to allow the following applications:



INTESIS MAPS TEMPLATE	APPLICATION
IN-BAC-BOS	Intesis Bosch to BACnet server gateway
IN-BAC-DAI	Intesis Daikin to BACnet server gateway
IN-BAC-HI	Intesis Hitachi to BACnet server gateway
IN-BAC-HS	Intesis Hisense to BACnet server gateway
IN-BAC-MID	Intesis Midea to BACnet server gateway
IN-BAC-ME	Intesis Mitsubishi Electric to BACnet server gateway
IN-BAC-PA	Intesis Panasonic to BACnet server gateway
IN-BAC-SM	Intesis Samsung to BACnet server gateway
IN-BAC-YK	Intesis York to BACnet server gateway



INTESIS MAPS TEMPLATE	APPLICATION
IN-KNX-BOS	Intesis Bosch to KNX gateway
IN-KNX-DAI	Intesis Daikin to KNX gateway
IN-KNX-HI	Intesis Hitachi to KNX gateway
IN-KNX-HS	Intesis Hisense to KNX gateway
IN-KNX-MID	Intesis Midea to KNX gateway
IN-KNX-ME	Intesis Mitsubishi Electric to KNX gateway
IN-KNX-PA	Intesis Panasonic to KNX gateway
IN-KNX-SM	Intesis Samsung to KNX gateway
IN-KNX-YK	Intesis York to KNX gateway

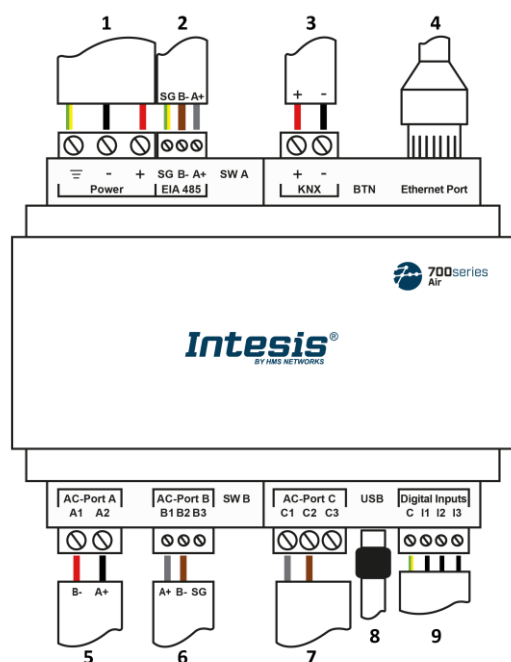


INTESIS MAPS TEMPLATE	APPLICATION
IN-MBS-BOS	Intesis Bosch to ModbusTCP/RTU gateway
IN-MBS-DAI	Intesis Daikin to ModbusTCP/RTU gateway
IN-MBS-HI	Intesis Hitachi to ModbusTCP/RTU gateway
IN-MBS-HS	Intesis Hisense to ModbusTCP/RTU gateway
IN-MBS-MID	Intesis Midea to ModbusTCP/RTU gateway
IN-MBS-ME	Intesis Mitsubishi Electric to ModbusTCP/RTU gateway
IN-MBS-PA	Intesis Panasonic to ModbusTCP/RTU gateway
IN-MBS-SM	Intesis Samsung to ModbusTCP/RTU gateway
IN-MBS-YK	Intesis York to ModbusTCP/RTU gateway



INTESIS MAPS TEMPLATE	APPLICATION
IN-WMP-BOS	Intesis Bosch to Home Automation gateway
IN-WMP-DAI	Intesis Daikin to Home Automation gateway
IN-WMP-HI	Intesis Hitachi to Home Automation gateway
IN-WMP-HS	Intesis Hisense to Home Automation gateway
IN-WMP-MID	Intesis Midea to Home Automation gateway
IN-WMP-ME	Intesis Mitsubishi Electric to Home Automation gateway
IN-WMP-PA	Intesis Panasonic to Home Automation gateway
IN-WMP-SM	Intesis Samsung to Home Automation gateway
IN-WMP-YK	Intesis York to Home Automation gateway

Wiring diagram



1. Power Supply (12-36 VDC / 24 VAC)
2. Port EIA485
3. Port KNX
4. Ethernet/Mitsubishi Electric
5. Panasonic/Hitachi/Hisense/Daikin
6. Samsung /Midea/Bosch
7. Not used
8. Console
9. Binary inputs (dry contact) optional

PORT	USAGE	WIRING			
EIA-485 ¹	BACnet MS/TP and Modbus RTU	SG: Signal ground	B-	A+	
KNX	KNX bus	+		-	
Ethernet	As a TCP/IP port: BACnet/IP, Modbus TCP, and Home Automation For Mitsubishi Electric: Connection to the Centralized Controller² 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.			
AC-Port A No polarity to observe	Panasonic P-Link / S-Link	A1: U1		A2: U2	
	Hitachi H-Link	A1: H-Link		A2: H-Link	
	Hisense H-Link	A1: H-Link		A2: H-Link	
	Daikin DIII-NET	A1: F1		A2: F2	
AC-Port B Observe polarity	Samsung bus ³	B1: R1	B2: R2	B3: Not used	
	Midea bus ⁴	B1: X	B2: Y		
	Bosch bus ⁴	B1: X	B2: Y		
AC Port-C	Not used				
USB	Connection to a PC for configuration purposes	USB Mini-B type			
Digital Inputs	Dry contact for input devices	C: Common	I1: Input 1	I2: Input 2	I3: Input 3



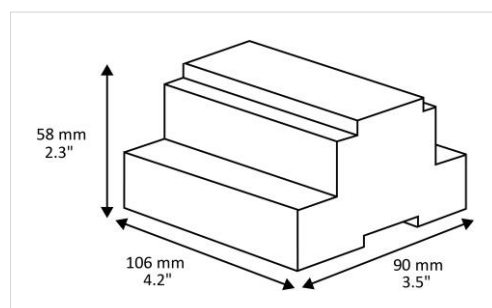
¹ **Standard EIA-485 bus requirements:** maximum distance of 1200 meters (0.75 miles); up to 32 devices connected; a 120 Ω resistor at each end of the bus is needed (configure the bus biasing and termination resistor for Port EIA-485 with the DIP switch SWA. See the Technical Specifications table).

² **List of Mitsubishi Electric compatible centralized controllers:** G-50, G-50A, GB-50A, GB-50ADA, AB-150, AE-200, AE-50, AG-150A, EW-50, EB-50GU.

³ **Samsung bus incompatibility warning:** The gateway cannot be connected when a centralized controller is present in the bus.

⁴ **Midea and Bosch bus incompatibility warning:** The gateway cannot be connected when a central controller module (CCM) is present in the bus.

Dimensions



Included Components

Intesis Gateway.
 Installation Manual.
 USB Configuration cable.
 (Power supply not included).
 Warranty: 36 months.

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"	
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 (3 poles) 12 .. 36 VDC +/-10%, Max.: 250 mA 24 VAC +/-10% 50-60 Hz, Max.: 127 mA Recommended: 24 VDC, Max.: 127 mA	
Ethernet	1 x Ethernet 10/100 Mbps RJ45	
Port EIA 485	1 x Green pluggable terminal block (3 poles) SGND (Reference ground or shield) 1500 VDC isolation from other ports	
Port KNX	1 x Orange pluggable terminal block (2 poles): +, -	
AC Ports	AC-Port A (serial, 2 poles): AC bus connection for Hisense TB2 H-Link, Hitachi TB2 H-Link, Panasonic U1/U2 P-Link / S-Link, Daikin DIII-NET (F1F2) AC-Port B (serial, 3 poles): AC bus connection for Samsung R1/R2, Midea XYE, Bosch XYE AC-Port C: (serial, 3 poles): Not used	
LEDs	2 x Run (Power/Error) 2 x Port EIA-485 TX/RX 2 x Port KNX TX/TR 1 x Button indicator	2 x Ethernet Link/Speed 2 x AC-Port A TX/RX 2 x AC-Port B TX/RX 2 x AC-Port C TX/RX
Binary inputs	1 x Green pluggable terminal block (4 poles) I1, I2, I3, and Common 1500 VDC isolation from other ports	
Console port	USB Mini-B type 2.0 compliant 1500 VDC isolation	
DIP switches	2 x DIP switch blocks for EIA-485 serial port configuration SW A Position 1: On: 120 Ω termination active Off: 120 Ω termination inactive (default) Position 2 and 3: On: Polarization active Off: Polarization inactive (default) SW B Position 1: On: 120 Ω termination active Off: 120 Ω termination inactive (default) Position 2 and 3: On: Polarization active Off: Polarization inactive (default)	
Push button	1 x Push button Factory reset I-Am message (for BACnet only) Normal mode/programming mode switch (for KNX only)	
Operational temperature	Celsius: 0 .. 60°C Fahrenheit: 32 .. 140°F	
Operational humidity	5 to 95%. No condensation	
Protection	IP20 (IEC60529)	

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](https://www.hms-networks.com/sustainability)

For further information on installing, connecting, and configuring this gateway, refer to the user manual that best suits your project.