

# IN776MHI00\*O000

## Mitsubishi Heavy Industries VRF with KNX, Serial and IP support

Order Code: IN776MHI00\*O000

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

### Installation Sheet version 1.1

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 also may damage seriously the Intesis gateway and/or any other equipment connected to it.

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.

In case of wall mount, fix firmly the Intesis device on a not vibrating surface following the instructions next.

In case of DIN rail mount 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 gateway.

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:** The device is to be connected only to networks without routing to the outside plant, all communication ports are considered for indoor only and can be connected SELV circuits 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://www.intesis.com/products/intesis-maps>

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 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 gateway.

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

Mount the Intesis gateway on the wall or DIN rail following the instruction given below, respecting the safety instructions given above.

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. Apply always a voltage within the range admitted by the Intesis device and of enough power (see technical characteristics).

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

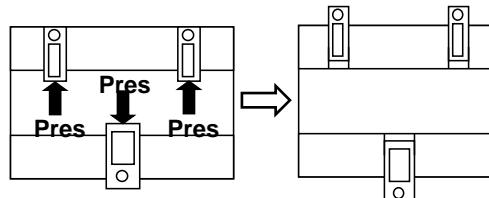
Connect the communication cables to the Intesis gateway, see details on the user's manual.

Power the Intesis device and the rest of devices connected to it.

**NOTE:** The device cannot be installed in air-handling space.

### Wall Mount

1. Separate the fixing clips in the bottom of the box, pushing them to the outside until hear the "click" which indicates that now the clips are in position for wall mount, see in the figure below.
2. Use the holes of the to fix the box in the wall using screws. Use the template below for the wall wholes.

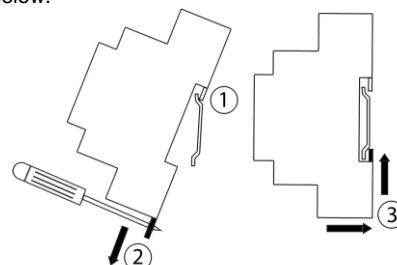


Clips in their original position  
(for DIN rail mount)

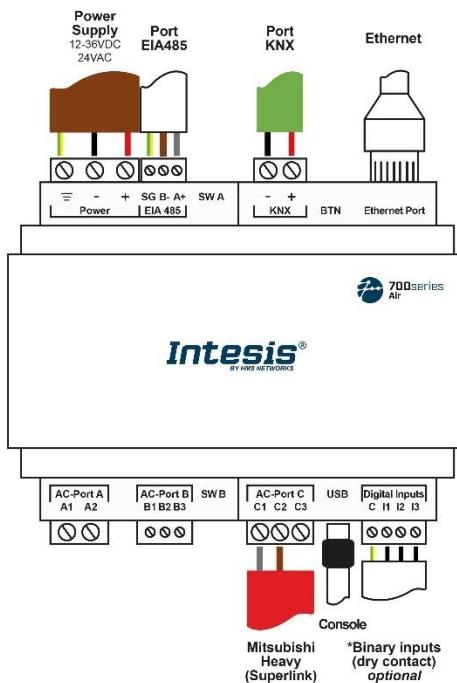
Clips in position for wall mount

### 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.

### If using DC 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.

### If using AC power supply:

Make sure the voltage applied is of the value admitted (24 Vac). Do not connect any of the terminals of the AC power supply to earth, and make sure the same power supply is not supplying any other device.

## Ethernet / Console (UDP & TCP) and the configured protocols

Use an Ethernet CAT5 cable. If using the building LAN, contact the network administrator and make sure traffic is allowed (check the gateway user manual for more information). Out of the box and after powering up the gateway, DHCP will be enabled for 30s, after that the default IP 192.168.100.246 will be set.

BMS Protocol	Port EIA485	Port KNX	Ethernet
BACnet	BACnet MSTP (Not used)	BACnet IP & Console	
Modbus	Modbus RTU (Not used)	Modbus TCP & Console	
KNX	(Not used)	KNX	Console
Home Automation	(Not used)	(Not used)	Home Automation & Console

AC Manufacturer	Port A	Port B	Port C
Mitsubishi Heavy	(Not used)	(Not used)	Mitsubishi Heavy (Superlink)

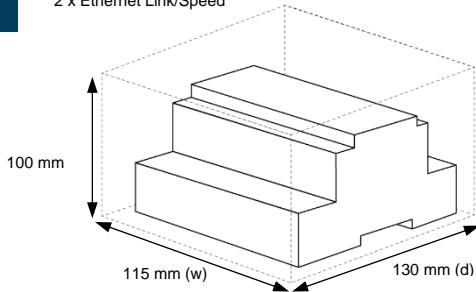
Pin Out	EIA485	Port A	Port B	Port C	Scan here for configuration details
B-	B-	A1	B1	C1	
A+	A+	A2	B2	C2	
SNGD	SG		SG		

**Note for Port EIA485:** standard EIA485 bus: maximum distance of 1200 meters, maximum 32 devices connected, and in each end of the bus a 120  $\Omega$  resistor. Bus biasing and termination resistor for EIA485 can be enabled for Port EIA485 in the DIP switch SW1 – see table below.

### 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.

# ELECTRICAL & MECHANICAL FEATURES

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 90x106x58 mm / 3.5x4.2x2.3" Recommended space for installation (dxwxh): 130x115x100mm / 5.1x4.5x3.9" Color: Light Grey. RAL 7035	Console Port	Mini Type-B USB 2.0 compliant 1500 VDC isolation
Mounting	Wall: M3 screw and 25 mm (1") length, below 2 meters (6 feet) DIN rail EN60715 TH35.		
Terminal Wiring (for power supply and low-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5 .. 2.5 mm <sup>2</sup> (24 to 11 AWG) 2 cores: 0.5 .. 1.5 mm <sup>2</sup> (24 to 15 AWG) 3 cores: not permitted If cables are more than 3.05 meters (10 feet) long, Class 2 cable is required.	Binary Inputs	1 x Bin.Inputs (Plug-in screw terminal block 4 poles) I1, I2, I3, and Common 1500 VDC isolation from other ports
Power	1 x Plug-in screw terminal block (3 poles) 12 to 36 VDC +/-10%, Max.: 250 mA. 24 VAC +/-10% 50-60 Hz, Max.: 127 mA Recommended: 24 VDC	Push Button	Check the user manual
Ethernet	1 x Ethernet 10/100 Mbps RJ45	Operation Temperature	0°C to +60°C
Port EIA485	1 x Plug-in screw terminal block green (2 poles) SGND (Reference ground or shield) 1500 VDC isolation from other ports	Operational Humidity	5 to 95%, no condensation
Port KNX	1 x Serial EIA485 Plug-in screw terminal block (2 poles) A, B	Protection	IP20 (IEC60529)
Switch 1 / Switch 2	2 x DIP-Switch for serial Ports EIA485 configuration: Position 1: ON: 120 $\Omega$ termination active Off: 120 $\Omega$ termination inactive Position 2-3: ON: Polarization active Off: Polarization inactive	LED Indicators	14 x LED indicators 2 x Run (Power)/Error 2 x Port EIA485 TX/RX 2 x Port KNX TX/RX 1 x Button indicator 2 x Ethernet Link/Speed
AC PORTS	AC Port A: Serial 2 poles (Reserved for future use) AC Port B: Serial 3 poles (Reserved for future use) AC Port C: Serial 2 poles		



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>