

IBOX-KNX-BAC BACnet to KNX gateway

Installation Sheet rev.1.0

Order Codes:

- IBKNXBAC1000000 (100 points)
- IBKNXBAC2500000 (250 points)
- IBKNXBAC6000000 (600 points)
- IBKNXBAC1K20000 (1200 points)
- IBKNXBAC3K00000 (3000 points)

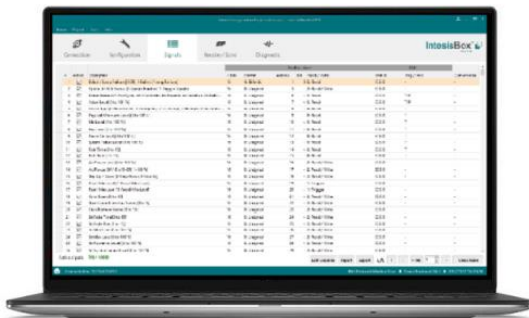
HOW IT WORKS

The IntesisBox **IBOX-KNX-BAC** Gateway has been specially designed to work as a translator between BACnet IP or BACnet MSTP devices and a KNX installation.

IntesisBox acts as a client in the BACnet side, allowing KNX devices to read and write on all configured BACnet Objects from external devices, according to each configuration project.

KNX bus is connected to the specific KNX TP-1 port of the gateway. On the BACnet side, the gateway simulates a BACnet IP client or BACnet master MSTP device.

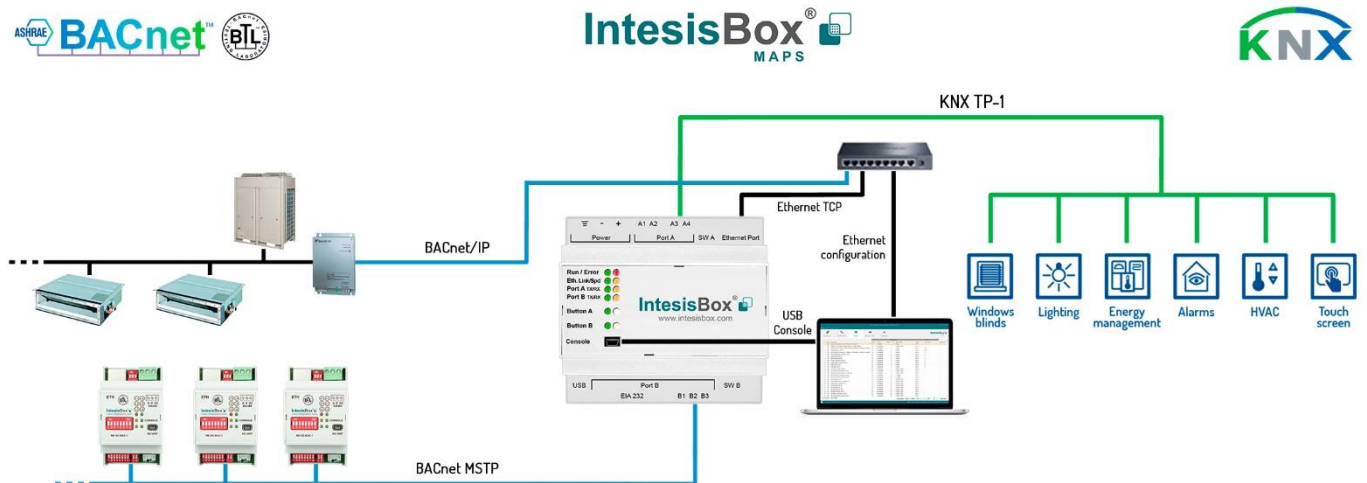
Configuration project is done through IntesisBox MAPS.



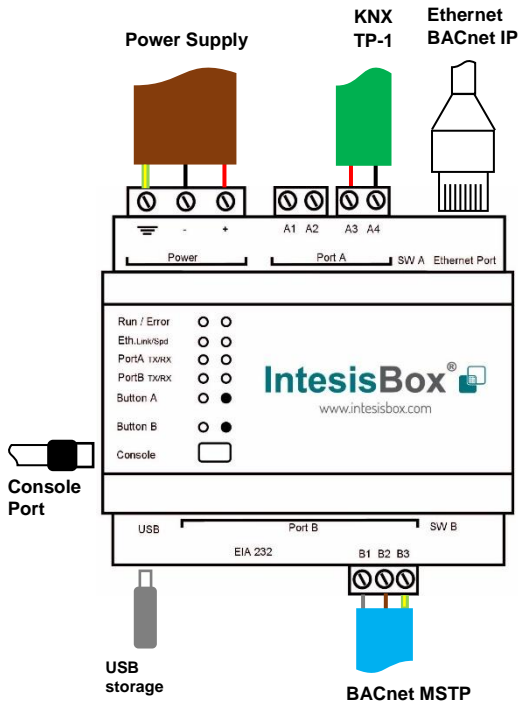
FEATURES

- Handles conversion between KNX TP-1 and BACnet (IP or MSTP)
- BACnet BTL certified
- Datalogging through external USB port
- Configuration through IP or USB (Console) port
- Plastic housing that mounts on 35-mm DIN-rail
- Front cover LED indicators to provide easy to check communication status on both the Ethernet and serial ports
- Includes IntesisBox MAPS with automatic updates for both IntesisBox MAPS and Gateway's firmware
- BACnet explorer functionality, to detect available BACnet Devices and Objects to integrate (available from IntesisBox MAPS)

INTEGRATION EXAMPLE



CONNECTIONS



PROTOCOLS



BACnet is the Data Communication Protocol for Building Automation and Control Networks. Developed under the auspices of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

BACnet is an American national standard, a European standard, a national standard in more than 30 countries, and an ISO global standard. The protocol is supported and maintained by ASHRAE Standing Standard Project Committee 135.

For further information, please visit www.bacnet.org



KNX is the world's only open Standard for the control in both commercial and residential buildings.

This standard is based upon more than 20 years of experience in the market. Bus devices can either be sensors or actuators needed for the control of building management equipment such as: lighting, blinds/shutters, security systems, energy management, heating, ventilation and air-conditioning systems, signaling and monitoring systems, interfaces to service and building control systems, remote control, metering, audio/video control, white goods, etc.

For further information, please visit www.knx.org

COMMUNICATION

Connection	KNX	BACnet	
		MSTP	IP
Connection	TP-1	EIA485 (3 wire isolated)	10BASE-T 100BASE-TX
Date rate	9.6 kbps	9.6, 19.2, 38.4, 57.6, 76.8, 115.2 kbps	10 Mbps 100 Mbps
Data Types & Functions supported	DPT_1.x (1 bit) DPT_5.x (1 byte unsigned) DPT_6.x (1 byte signed) DPT_7.x (2 byte unsigned) DPT_8.x (2 byte signed) DPT_9.x (2 byte float) DPT_12.x (4 byte unsigned) DPT_13.x (4 byte signed) DPT_14.x (4 byte float) DPT_20.x (1 byte unsigned)	0-AO (Analog Output) 1-AI (Analog Input) 2-AV (Analog Value) 3-BO (Binary Output) 4-BI (Binary Input) 5-BV (Binary Value) 12-LOOP 13-MI (Multistate Input) 14-MO (Multistate Output) 15-MV (Multistate Value) 23-ACUM (Accumulator)	

ELECTRICAL & MECHANICAL FEATURES

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 90x88x56 mm Recommended space for installation (dxwxh): 130x100x100mm Color: Light Grey. RAL 7035
Mounting	Wall. 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: 0.5mm ² ... 2.5mm ² 2 cores: 0.5mm ² ... 1.5mm ² 3 cores: not permitted If cables are more than 3.05 meters long, Class 2 cable is required.
Power	1 x Plug-in screw terminal block (3 poles) 9 to 36VDC +/-10%, Max.: 140mA. 24VAC +/-10% 50-60Hz, Max.: 127mA Recommended: 24VDC
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity
Port A	1 x KNX TP-1 Plug-in screw terminal block orange (2 poles) 2500VDC isolation from other ports KNX power consumption: 5mA Voltage rating: 29VDC 1 x Plug-in screw terminal block green (2 poles) Reserved for future use 1500VDC isolation from other ports
Switch A (SWA)	1 x DIP-Switch for PORT A configuration: Reserved for future use
PORT B	1 x Serial EIA232 (SUB-D9 male connector) Reserved for future use 1 x Serial EIA485 Plug-in screw terminal block (3 poles) A, B, SG (Reference ground or shield) 1500VDC isolation from other ports (except PORT B: EIA232)
Switch B (SWB)	1 x DIP-Switch for serial EIA485 configuration: Position 1: ON: 120 Ω termination active Off: 120 Ω termination inactive (default) Position 2-3: ON: Polarization active (default) Off: Polarization inactive

Battery	Size: Coin 20mm x 3.2mm Capacity: 3V / 225mAh Type: Manganese Dioxide Lithium
Console Port	Mini Type-B USB 2.0 compliant 1500VDC isolation
USB port	Type-A USB 2.0 compliant Only for USB flash storage device (USB pen drive) Power consumption limited to 150mA (HDD connection not allowed)
Push Button	Button A: KNX programming button (not used) Button B: Not used
Operation Temperature	0°C to +60°C
Operational Humidity	5 to 95%, no condensation
Protection	IP20 (IEC60529)
LED Indicators	10 x Onboard LED indicators 2 x Run (Power)/Error 2 x Ethernet Link/Speed 2 x Port A TX/RX 2 x Port B TX/RX 1 x Button A indicator 1 x Button B indicator

