Protocol Converter/Gateway

Panasonic Rs485 to BACnet Ethernet/IP & MODBUS TCP

PV-BMx1

【 **Description** 】

PV-BMx 1 has been specially designed to connect to the Panasonic CZ-CFUNC2 module and act as a Protocol converter (gateway) device to allow third party control systems to communicate (Control & Monitor) via BACnet (B-AS) or MODBUS/TCP protocols. The PV-BMx 1 can Read/Write to the Panasonic VRF system giving the user more options to choose from. Airtek "add on" suite of touch screens and Web interface module will enhance the Panasonic VRF system to meet the expectations of modern control system.

【 Features 】

- BACnet Application Specific Controller (B-ASC).
- Uses BACnet Ethernet or BACnet/IP, MODBUS TCP.
- MSnet port is used to connect Airtek DST color graphic touch screens.
- One PV-BMx1 to one CZ-CFUNC 2 only The RS-485 port is Optically Isolated to 1000 VDC.
- USB Type-C interface, connected to a PC, allows you to configure the controller's internal network parameters using terminal software.
- Standard BACnet Objects (BV & AV) a total of 2500 for PV-BM11 and 5 ,000 for PV-BM21.
- MODBUS TCP Server /Client protocol translates the CZ-CFUNC2 point's to industry standard Modbus protocol. (Register/Coils).
- Built-in 10/100M Ethernet interfaces*3, can choose BACnet Ethernet or BACnet/IP communication layer communication.
- Last point values are stored in FRAM (EEPROM) memory during power outage.
- Communication Fault monitoring to the CZ-CFUNC2 is provided.
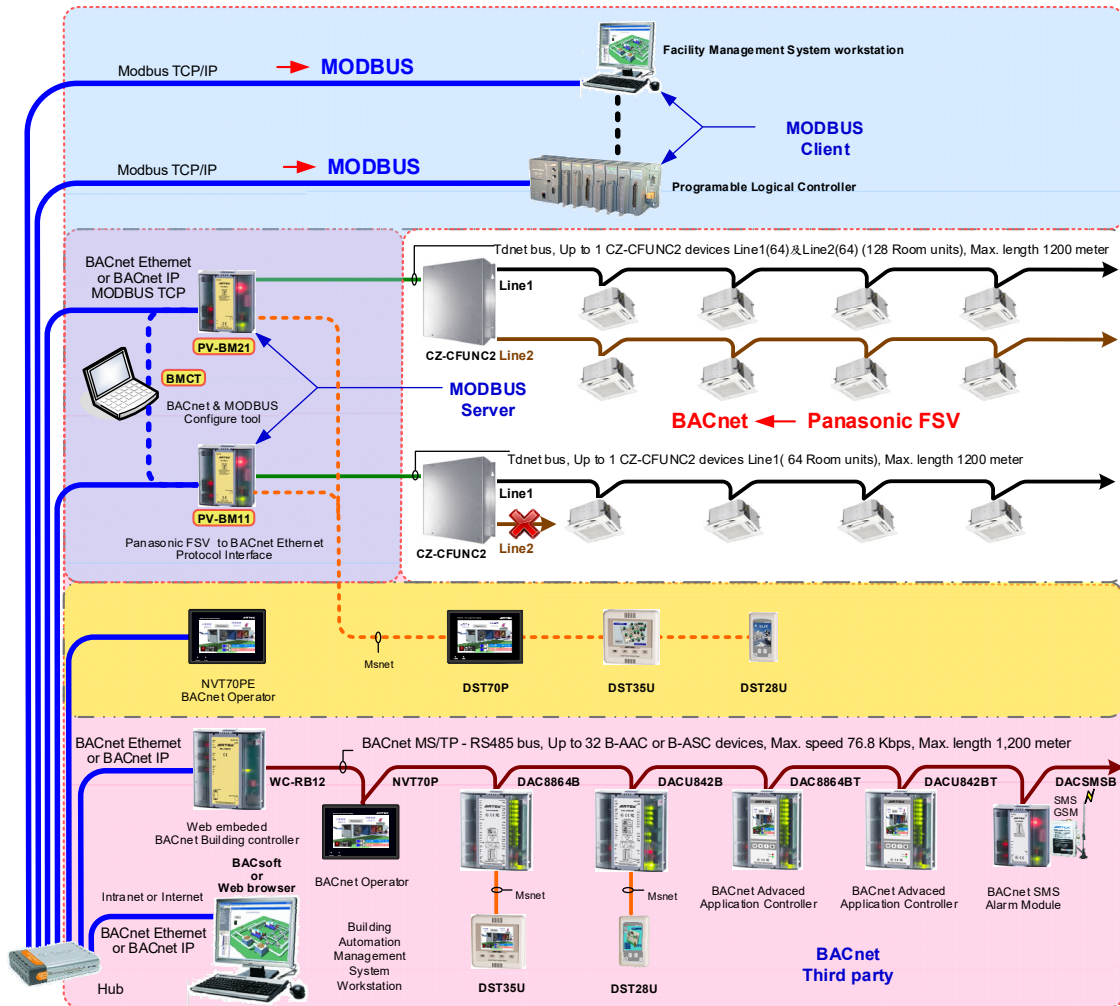
【 Specification 】

Model	Indoor Room unit	BACnet	MODBUS TCP	CZ-CFUNC2		BACnet Objects	MODBUS TCP Objects
PV-BM11-M	64	BACnet Ethernet or BACnet /IP	Server	RS-485	Line1	912	912
PV-BM21-L	128				Line1、Line2	1808	1808

Power Supply ：24VAC/DC, 5VA.

CPU & Memory ：32 (CPU), 128K RAM、32K FRAM. 1024K Flash Memory.

Config Interface ：USB Type-C interface, connected to a PC, allows you to configure the controller's internal network parameters using terminal software.

Ethernet Port ：10/100Mbps Ethernet communication interface*3 with Hub function for simultaneous BACnet (Ethernet or /IP) or MODBUS TCP communication layer. BACnet (Ethernet or /IP) or MODBUS TCP communication layer at the same time.

TDnet Port ：RS-485 Network communication 19,200 BPS. 1 x CZ-CFUNC2 per PV-BMx1/ Maximum of 128 indoor units.

MSnet Port ：MODBUS RTU RS-485 selectable 9,600/19,200/38,400 BPS, Max distance 1200m. Port can be set for Airtek Screens or MODBUS Master/Slave RTU.

Environment ：0～50℃, 20～90%RH.

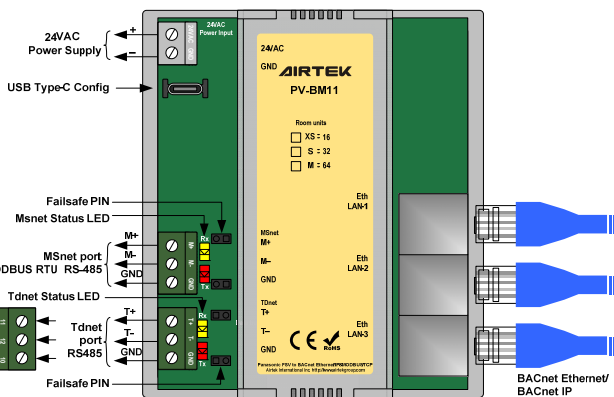Approvals ：Panasonic Lab Tested.

Certification ：CE, RoHs.

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【Installation】

● Recommend using a transformer power supply for each device.

● Allow other TCP Client to Read/Write，TCP/IP Port default to 502 selectable.

● RS485 communications are limited by the number of communication points. Limit 1 x PV-BMx1 to 1 x CZ-CFUNC2, Use PV-BM21 for up to 128 indoor units.

● Airtek BACsoft Software is required to bind the BACnet/Modbus points to the CZ-CFUNC2 and set the MSnet port.

【Network】

【Wiring】

【Dimension】Unit：mm