



# APC-BM Series Protocol Converter Technical Specifications

## Description

APC-BM series protocol converters are developed to create a bridge between Modbus based devices and BACnet based BMS systems. APC-BM series includes four models: APC-BM-500, APC-BM-1000, APC-BM-2000 and APC-BM-2000+.

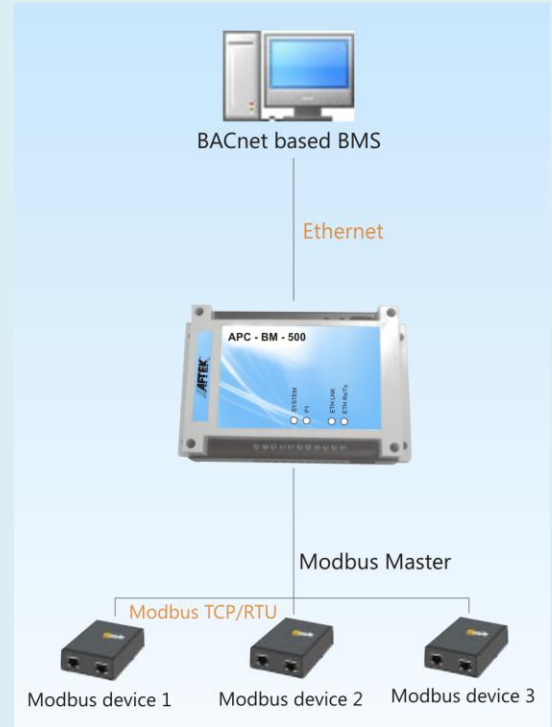
Modbus over serial (Modbus RTU) and Modbus over Ethernet (Modbus TCP) are supported. Depending upon requirement for number of data points and number of devices to be connected one of these models can be selected. **APC-BM-500, APC-BM-1000 and APC-BM-2000** support one communication port, while APC-BM-2000+ supports four communication ports and can be connected to Modbus slaves with different communication properties. One communication port supports up to 31 Modbus RTU slaves.

## Key Features

- Read write any modbus(RTU/TCP) value via BACnet /IP
- High speed and performance
- Bidirectional communication
- IP based authentication
- Easy to use configuration utility

## Hardware Specifications

Operating Voltage Range	90 - 270V AC
Interface Connector	RS-485: Barrier connector Ethernet: RJ45 AC cord for power supply
Indication	RS-485 activity, Ethernet activity, CPU heath status
Power Consumption	3W
Dimensions	215mm (W) x 120mm (L) x 50mm (H)
Mounting	Screw able



## Interfaces

### BACnet/IP & Modbus TCP

Connection type	Internet Protocol (IP)
Ethernet speeds supported	10 Base-T, 100 Base-T

Note: 3 RS-485 ports provide support for setting desired communication parameters. Fourth port has fixed values for data bits, stop bits and parity.

### Modbus RTU

Ports	APC-BM-500: 1 port APC-BM-1000: 1 port APC-BM-2000: 1 port APC-BM-2000+: 4 ports
Connection type	RS-485 (two wire, half duplex)
Baud rate	9600, 19200, 38400, 57600, 115200
Data bits	7, 8
Stop bits	1, 2
Parity	Odd, Even, None
Multi-drop Capability	Yes

## BACnet Details

### Conformance Class

<b>Class Support</b>
Class 4

### Functional Groups

<b>Functional Groups</b>
Event initiation
Event response

### Standard Application Services

Service Type	Execute/Initiate
Read property	Execute
Read property multiple	Execute
Write property	Execute
Write property multiple	Execute
Who has	Execute
I have	Initiate
Who is	Execute
I am	Initiate

### Standard Object Types

<b>BACnet Object Type</b>
Analog input object
Analog output object
Analog value object
Binary input object
Binary output object
Binary value object
Device object
Multistate input object
Multistate output object
Multistate value object

### Data Link Layer Option

<b>Link Layer Support</b>
BACnet on IP
<b>Character Sets</b>
ANSI

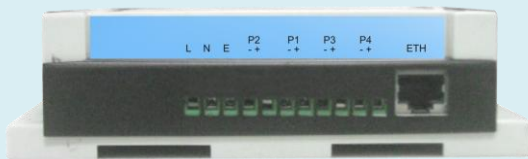
## Modbus Details

### Function Codes

Function Codes
Function codes
Read coil status
Read input status
Read holding registers
Read input registers
Preset single register
Preset multiple register
Preset single coils

### Number of Objects

APC-BM Model	Number of Objects
APC-BM-500	500
APC-BM-1000	1000
APC-BM-2000	2000
APC-BM-2000+	2000



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