

OpenBAS BUILDING AUTOMATION SYSTEM


Description

Mircom's OpenBAS-PM-ME11 Power Meter is a high voltage, three-phase power meter and energy analyzer. It has 1 USB service port, 1 field bus interface and an optically isolated RS-485 (up to 1 kV) with multiple protocol support.

The ME11 connects to either 120/220/380/440/600 V three-phase systems directly or through a 24 VAC secondary transformer.

The ME11 is designed to provide real time, accurate electricity metering that enables control over energy costs.

The ME11 is designed to gather and store data on Power (kW/KWh), Voltage (V), Current (A) and to calculate virtually all relevant parameters on three-phase or single-phase installations. Some instantaneous output readings include: Volts, Amperes, kVA, kW, PF, %THD and peak values of each phase and all phases together.

The ME11 has flexibility, a small sized footprint, and easy DIN rail mounting, making it an ideal tool for gathering detailed consumption information in commercial, industrial, governmental, and retail environments.

Features

- Modular design and expandability for increasing capacity of inputs and outputs through expansion modules, networked controllers, and remote bus-driven controllers.
- OpenBAS covers any small, medium, or large-sized projects, either stand alone or networked applications.
- Industry standard field bus protocols to integrate into any existing BAS system such as: BACnet, Modbus, Optomux, N2-Open, and ASCII.
- Connects to the OpenBAS-NWK-ETH3 controller for integration into IP networks and usage of the most advanced features and protocols such as distributed computing, USB and Cloud storage, HTML5, JavaScript, XML, Ajax, SMS, and GSM.
- Programmable remotely with the addition of Mircom's OpenBAS-NWK-ETH3 Ethernet Gateway or locally through the USB and field bus ports.
- Fully configurable time-of-use pricing calendar.
- Uses standard current transformers, either closed or split core, with secondary currents of: 5 A (with the addition of external burden/ballast resistors), 1 A, 500 mA, 250 mA, 100 mA.
- 4 Analog Inputs designed for three-phase voltage measurement
- 4 Analog Inputs designed for current sensing of up to 5A (secondary)
- Built-in data storage of up to 12 months.
- Ideal for power substations, emergency generators, step up or step down transformers, and power panels. Supports one, two or three-phase systems in three or four wire configurations.
- DIN rail mountable.
- Includes RTCC battery backup.

Typical Applications are:

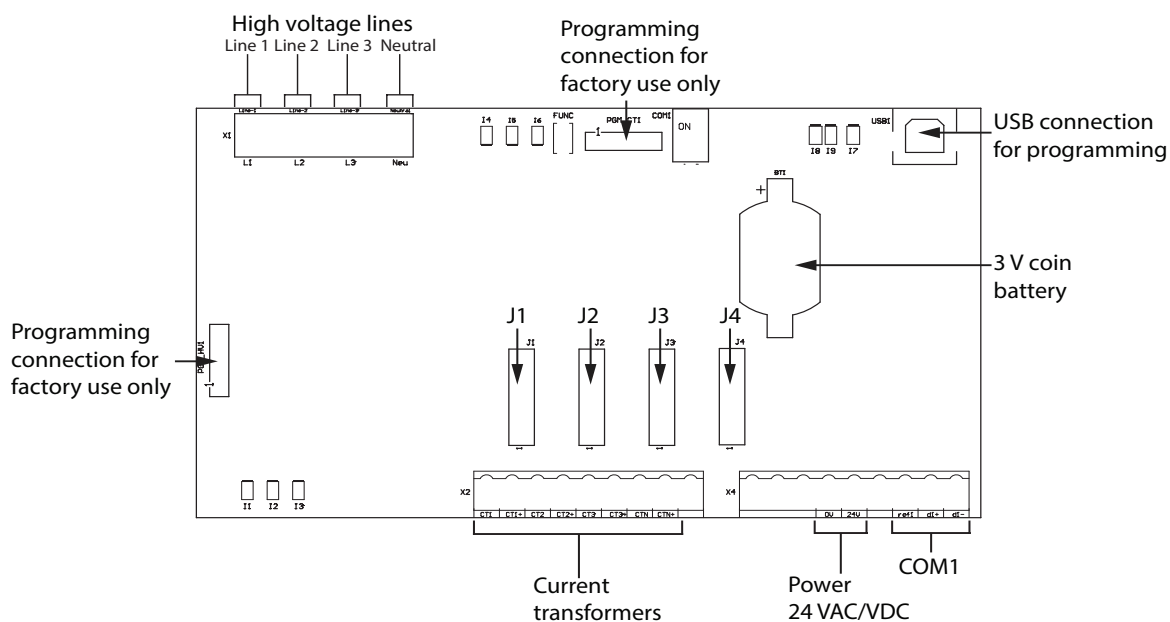
- Tenant sub-metering
- Energy quality analysis
- Data Center monitoring
- Commercial, Retail and Industrial Power Reporting

Measured Values

Instantaneous Values
Voltage L-N
Average Voltage L-N
Voltage L-L
Average Voltage L-L
Current
Average Current
Kilo Watts
Kilo VA
Kilo VAR
Frequency Hz
Power Factor
Crest Factor
Phase Unbalance Voltage/Current %
% THD Current / Voltage per line

Current / Last / Monthly / Accumulated Energy Period
KWh in BASE / INTERMEDIATE / PEAK (and Totals)
KVAh in BASE / INTERMEDIATE / PEAK (and Totals)
Maximum demand in BASE / INTERMEDIATE / PEAK
DM HOUR:MIN in BASE / INTERMEDIATE / PEAK
DM DAY/MONTH in BASE / INTERMEDIATE / PEAK

Wiring Diagram



Technical Information

Standards	UL 61010-1, 3rd Edition, May 11, 2012, Revised July 15 2015 CAN/CSA-C22.2 No. 61010-1-12, 3rd Edition, Revision dated July 2015 IEC 61010-1:2010 (Third Edition) IEC/EN 61010-1:2010 (Third Edition)
Input:	24 Vac 50/60Hz, or 24 Vdc, 250mA max. Overvoltage Category II Mains supply voltage fluctuations not to exceed ± 10 percent of the nominal voltage
Power Supply Protection:	Resettable fuse 0.30 A
Battery:	Type: CR2032 3 V - 3.3 V, maximum abnormal charging current: 10 mA Mircom part number: BT-007
High Voltage Terminals:	• 600 V max. • Single phase, 2 phase, or 3 phase
Current Transformer Terminals:	• Measurement Category CAT III • 1 A max. or 5 A with the addition of external burden resistors
2 Manual Override Inputs:	24 VAC/VDC
Communication Ports:	1 RS-485 port supporting the following protocols: • BACnet/MSTP • Modbus/RTU-Slave • N2-Open • Optomux • ASCII 1 USB 2.0 port for programming supporting the following protocols: • BACnet/MSTP • Modbus/RTU-Slave • N2-Open • Optomux • ASCII Note: The RS-485 port and the USB port cannot be used at the same time
Physical Characteristics:	Weight: 0.18 kg (0.40 lb) Enclosure dimensions: 160 mm x 90 mm x 58 mm (6 9/32" x 3 35/64" x 2 17/64")
Ambient Conditions:	Minimum temperature rating of the cable to be connected to the field wiring terminals: 75 °C (167°F) Operating Temperature: 0° to 40°C (32° to 104°F) Maximum Relative Humidity: 80 percent for temperatures up to 31°C decreasing linearly to 50 percent relative humidity at 40°C Indoor Use Only
Mounting:	The OpenBAS-PM-ME11 may not be installed in a panel where it exceeds 75% of the wiring space of any cross-sectional area within the panel Mount the enclosure on a DIN rail in a UL-compliant metal box
Altitude:	Altitude is evaluated for up to 2000 m
Cleaning:	This product does not require cleaning and should not be cleaned
Pollution Degree:	2

Ordering Information

Model	Description
OpenBAS-PM-ME11	3-Phase Power Meter, Standalone or Networkable
BT-007	Replacement Battery for ETH3, ME11

NOT TO BE USED FOR INSTALLATION PURPOSES.



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