

SBM100 SBM300

KWH & Demand Meters

Submetering & Cost Allocation

SBM
SERIES

Features

- Revenue-Accurate Readings of Bidirectional Energy, Power & Demand
- Meets ANSI C-12 Accuracy Requirements
- DSP Sampling Technique
- Surface Mounted for Easy Installation
- Uses Standard 5 Amp CTs
- Nonvolatile Memory Storage — No Battery Needed
- Modbus/RS485 Communication
- KYZ Energy Pulse Output
- NEMA 4 Outdoor Rated Enclosure

SBM 300
Multifunction
with Energy & Demand



Applications

- Submetering Energy Usage
- Commercial Facilities
- Apartment Buildings
- Industrial Facilities
- Direct Interfacing with Existing Energy Management Systems

Description

The SBM100 and SBM 300 are designed to meet demanding Submetering Applications. Housed in a rugged, NEMA 4 outdoor rated enclosure, these units provide accurate measurements of electrical energy usage for any Submetering and Cost Allocation Application. These units also simplify Data Acquisition by providing industry standard Modbus Protocol via RS485 or KYZ Energy Pulses back to any standard monitoring software application.



SBM 100
Energy & Demand



Designed and
Manufactured

 **Electro Industries/GaugeTech**
The Leader in Web Accessed Power Monitoring

Outdoor Enclosure
Modbus Serial



3 - Phase Energy Submeter with Demand SBM 100

- Measures kWh, kW & Demand
- 6½ Digit Watt-Hour Counter
- Bidirectional Energy Measurements
- RS-485/ Modbus Protocol Output
- KYZ Pulse Output & Control Output Options
- NEMA 4 Outdoor Rated Enclosure

3 - Phase Multifunction Advanced Energy Submeter SBM 300

- Measures Voltage, Current, Watts, VARs, VA, PF, Frequency
- Bidirectional Measurement of kWh & Demand
- 5½ Digit Watt-Hour Counter
- RS485 — Modbus Protocol Outputs Option
- KYZ Pulse Output & Control Output Option
- NEMA 4 Outdoor Rated Enclosure



DSP Based Digital Sampling — Provides Accuracy with Harmonics

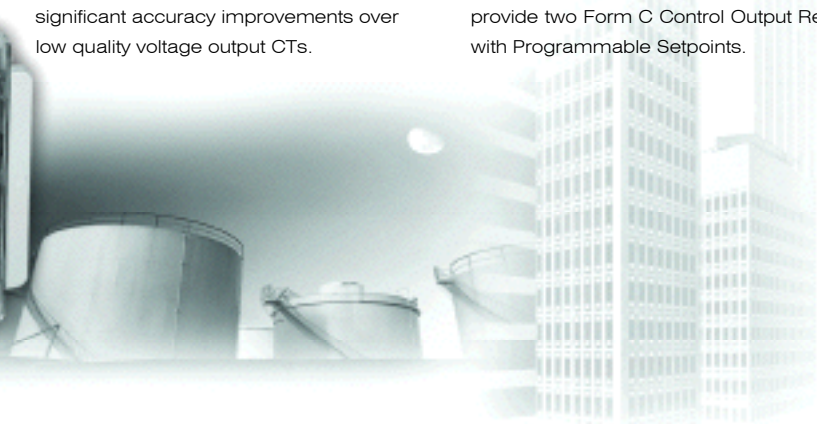
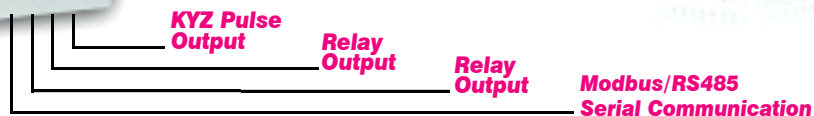
The unit samples and calculates energy and all other parameters using a Digital Sampling Architecture sampling at 64 samples per cycle. Using this advanced structure allows the unit to be more accurate in the presence of Harmonics.

Voltage & Current Input Design Improves Accuracy

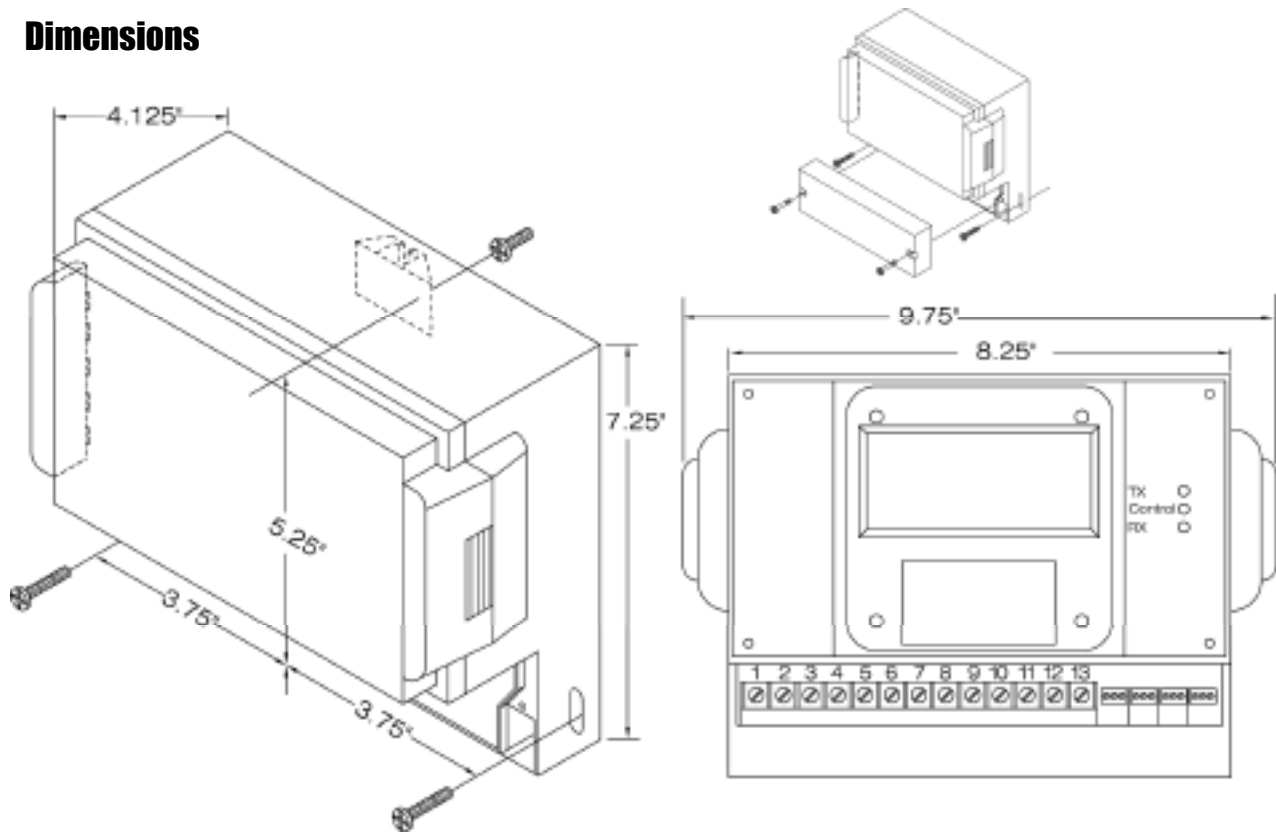
The units will provide measurements up to 600 Volts Line to Line Direct Voltage. Additionally, unlike many submeters, the units directly interface with 5 amp secondary current transformers (CTs), eliminating the need to use custom CTs. Moreover, using a Current Loop Input provides significant accuracy improvements over low quality voltage output CTs.

Digital Communication & Outputs

These units communicate using standard Modbus RS485 communication. This allows up to 32 units to be daisy chained to a computer, SCADA or existing energy management system. A KYZ Pulse is available to provide a Programmable Energy Accumulation Pulse. The units provide two Form C Control Output Relays with Programmable Setpoints.

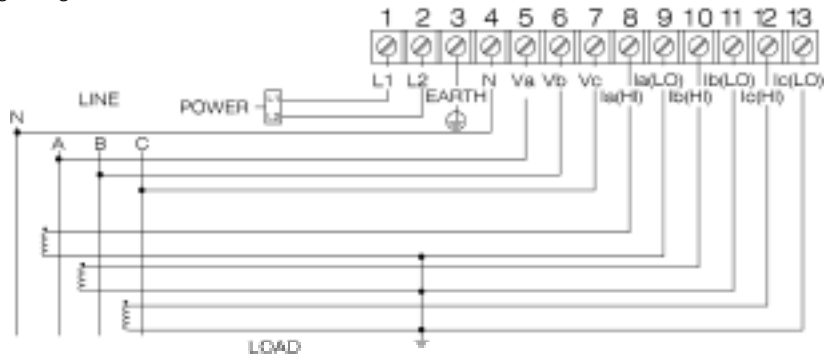


Dimensions

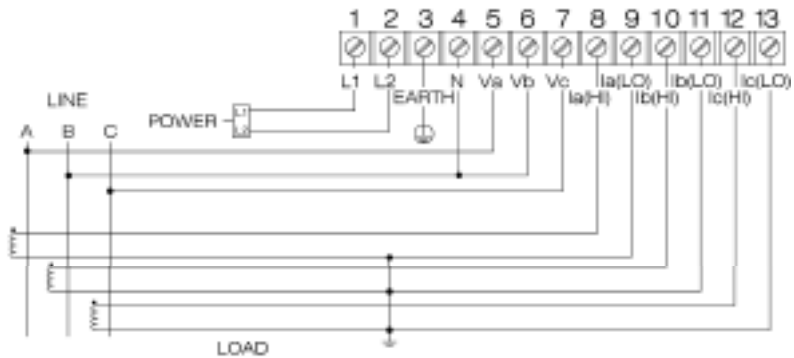


Wiring

Note: Download manual from www.electroind.com to get additional wiring configurations.



3 Phase, 4 Wire System WYE with Direct Voltage & CTs



3 Phase, 3 Wire System Delta with Direct Voltage & CTs

Specifications

VOLTAGE INPUT RANGE

- 300V Line to Neutral, 600 Volts Line to Line
- Operates in Wye or Delta Configurations

INPUT CURRENT RANGE

- 5 Amp Nominal, 10 Amp Max

BURDEN

- Voltage: 0.1VA Maximum
- Current: 0.1VA Maximum

COMMUNICATION

- RS485- Modbus Protocol, EI Protocol
- 1 Start Bit, 8 Data Bits, 1 Stop Bit
- 1200 to 9600 Baud

SENSING METHOD

- Digital Sampling – 64 Samples per Cycle

FREQUENCY RANGE

- 45-65 Hz

CONTROL POWER

- 115V AC 6VA +/- 20%

ENVIRONMENTAL

- (-20 to +70)° C

I/O ISOLATION

- 2500 Volts AC at 60Hz

UPDATE TIME

- 1 Second

ACCURACY

- Voltage and Current: 0.03% (SBM300 Only)
- Power and Energy: 0.6% (SBM100) 0.4%(SBM300)
- Meets ANSI C-12.1 Revenue Accuracy

Ordering Information

Model	Wiring	Communication	Digital Output	CT Kit
Option Numbers: Specify a unit by writing its option numbers below:				
	-	-	-	-
Example: SBM 100	- 3E	- RS485	- NL	- CT200K
SBM 100	3E 3 Element Wye System	RS485 RS485 Digital Communication (Modbus)	NL 2 Control Outputs, 1 KYZ Pulse	CT200K CT400K CT800K CT2000K
SBM 300	2E 2 Element Delta System			

Current Transformer Kits

CT200K	CT400K	CT800K	CT2000K
.94" Window, 200 Amps, 3 CTs	1.25" Window, 400 Amps, 3 CTs	2.06" Window, 800 Amps, 3 CTs	3" Window, 2000 Amps, 3 CTs
	FREQUENCY 50 - 400 Hz	INSULATION LEVEL 600 Volts, 10 kV BIL	FLEXIBLE LEADS UL 1015 105°C, CSA Approved, #16 AWG, 24" Long.

Accessories

Unicom 2500	Unicom 2500- F	Split Core CTs
RS485 to RS232 Converter	RS485 to RS232 or Fiber Converter	Contact EIG for Specific Size



Electro Industries/GaugeTech

1800 Shames Drive • Westbury, NY 11590

1-877-EIMETER (1-877-346-3837) • E-Mail: sales@electroind.com

Tel: 516-334-0870 • Web Site: www.electroind.com • Fax: 516-338-4741

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