

CLASS 5000 Smart Meter

Advanced kWh/Demand Meters with Communication

E-Mon D-Mon

Energy Monitoring Products & Systems

Features

- Advanced 4-line display showing:
 - kWh
 - kW demand (with peak date & time)
 - Power factor per phase
 - Real-time load in kW
 - Amps per Phase
 - Volts per phase
- On-board set-up option for:
 - IP address
 - Meter date/time
 - ID codes for EZ7, Modbus and BACnet
- 0-2 volt output split-core current sensors allow for enhanced safety and accurate remote mounting of sensors up to 500 feet from meter without power interruption. (Optional solid-core sensors available.)
- Onboard installation diagnostics and verification system.
- Two external meter inputs (water, gas, BTU, etc.) (Channels 5 & 6, available via E-Mon Energy only)
- Phase loss alarm. (N.O. Contact)
- Built-in RS-485 communication capability supports the following connection configurations (or combinations not to exceed 52 devices per channel):
 - Up to 52 Class 3200, 3400 and 5000 meters and/or IDR interval data recorders
 - Cabling can be either daisy-chain or star configuration, 3-cond., 18-22 AWG, up to 4,000 cable ft total per channel.
- Communications
 - Built-in RS-485 and Ethernet
 - Telephone Modem (optional)
- Protocols
 - EZ7
 - Modbus RTU
 - Modbus TCP/IP
 - BACnet MS/TP*
 - BACnet IP*
 - LonWorks FT-10 (Twisted Pair)*
- Records kWh and kVARh delivered, kWh and kVARh received in first four channels. Data stored in 15-min. for up to 72 days or 5-minute intervals for up to 24 days. Maintains data in a first-in, first-out format.
- Compatible with E-Mon Energy software via EZ7 protocol for automatic meter reading, energy billing and profiling.
- Meter is designed for use on both 3-phase, 3-wire (delta) and 3-phase, 4-wire (wye) circuits.
- Outdoor NEMA 4X polycarbonate enclosure (standard) with padlocking hasp & mounting flanges for indoor/outdoor installation (stand alone) with one 1 1/16" KO on bottom of enclosure.
- Optional industrial grade JIC steel enclosure with padlocking hasp and mounting flanges for indoor installation. Knockouts: 1 1/16" (3/4" cond.) bottom, 7/8" (1/2" cond.) top
- UL/CUL Listed. Certified by independent test lab to ANSI C12.20 national accuracy standards. (+/- 0.2% from 1% to 100% of rated load)
- MV-90 Compatible (with EZ7 only.)



Dimensions: 6" H x 6" W x 4 1/4" D

Model Numbers

120/208-240V, 3-Phase

E50-208100-R*KIT (100 amp)
 E50-208200-R*KIT (200 amp)
 E50-208400-R*KIT (400 amp)
 E50-208800-R*KIT (800 amp)
 E50-2081600R*KIT (1600 amp)
 E50-2083200R*KIT (3200 amp)

277/480V, 3-Phase

E50-480100-R*KIT (100 amp)
 E50-480200-R*KIT (200 amp)
 E50-480400-R*KIT (400 amp)
 E50-480800-R*KIT (800 amp)
 E50-4801600R*KIT (1600 amp)
 E50-4803200R*KIT (3200 amp)

347/600V, 3-Phase

E50-600100-R*KIT (100 amp)
 E50-600200-R*KIT (200 amp)
 E50-600400-R*KIT (400 amp)
 E50-600800-R*KIT (800 amp)
 E50-6001600R*KIT (1600 amp)
 E50-6003200R*KIT (3200 amp)

Enclosure Options

Meters supplied standard in NEMA 4X outdoor enclosures. Not available in MMU Configuration. To order a JIC Steel enclosure replace "R" in model number with "J" (E50-208100-J01KIT)

Communication Protocol & Option Packages

Specify protocol package when ordering all meters. Replace * in model number with protocol package specification below.

RS-485 Port	Ethernet Port	Specify
EZ7	EZ7 Ethernet	01
Modbus RTU	EZ7 Ethernet	02
BACnet MS/TP	EZ7 Ethernet	03
EZ7	Modbus TCP/IP	04
EZ7	BACnet IP	05
Modbus RTU	Modbus TCP/IP	06
Lonworks FT-10	EZ7 Ethernet	07
Lonworks FT-10	Modbus TCP/IP	08
EZ7 w/Telephone Modem	EZ7 Ethernet	09
EZ7 w/Telephone Modem	Modbus TCP/IP	10
EZ7 w/Telephone Modem	BACnet IP	11

NOTE: All meter kits include one set of three (3) split-core current sensors.

*NOTE: Interval data not stored in BACnet or LonWorks units.

CLASS 5000 Smart Meter ENGINEERING SPECIFICATIONS

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Class 5000 Smart Meter Specifications

Meter shall be fully electronic with 4 line LCD display showing kwh.

Meter shall utilize 0-2 volt AC output current sensors to allow paralleling and/or mounting up to 500 feet from the meter. Sensors shall be of split-core configuration to allow installation without disconnecting cabling, etc. Sensors shall be available from 100 amp to 3200 amp. Sensors shall be optionally available in solid-core configuration (100 & 200 amp.)

Meter shall provide current sensor installation diagnostics indicator, phase error indicator and phase angle diagnostics on display.

Meter shall be field programmable for meter date/time, IP address and ID code for communication options.

Meter shall be enclosed in a NEMA 4X polycarbonate enclosure (standard) with padlocking hasp & mounting flanges for indoor/outdoor installation (stand alone) with one 1 1/16" KO on bottom of enclosure. Optional heavy duty JIC steel enclosure available for indoor installation.

Meter shall be UL/CUL Listed to latest applicable standards for safety.

Meter shall meet or exceed ANSI C12.20 accuracy standards.

Meter shall provide non-volatile memory to maintain reading during power outages.

Meter shall store interval data for kW and kVAR for up to 72 days in first-in first-out format. (Standard EZ-7 firmware).

Meter shall operate as slave device when used with Modbus or LONworks options. Meter works as a master device on BACnet MS/TP.

Meter shall provide optional 5th & 6th channel for logging inputs from third-party metering devices (gas, water, BTU, etc.) Both channels provide interval data logging that can be read via E-Mon Energy software and Modbus.

Meter shall be capable of daisy-chain or star connection using RS-485 communications in combinations of Class 3200s, 3400s, 5000s, IDR-8s, IDR-16s not to exceed 52 devices. Cabling shall be through RJ-11 modular jack (4-conductor) or terminal block (3-conductor), 18-26 AWG, up to 4,000 cable feet total.

Meter shall be available with the following communication protocol & option packages:

RS-485 Port	Ethernet Port	Specify
EZ7	EZ7 Ethernet	01
Modbus RTU	EZ7 Ethernet	02
BACnet MS/TP	EZ7 Ethernet	03
EZ7	Modbus TCP/IP	04
EZ7	BACnet IP	05
Modbus RTU	Modbus TCP/IP	06
Lonworks FT-10	EZ7 Ethernet	07
Lonworks FT-10	Modbus TCP/IP	08
EZ7 w/Telephone Modem	EZ7 Ethernet	09
EZ7 w/Telephone Modem	Modbus TCP/IP	10
EZ7 w/Telephone Modem	BACnet IP	11

Meter shall be MV-90 compatible (With EZ7 Only)

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