Honeywell E-Mon

Honeywell E-Mon Class 5000 Smart Meter

ADVANCED KWH/DEMAND METERS WITH COMMUNICATION

SPECIFICATION DATA



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

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. Pulse count registers not visible on the LCD display may be read via E-Mon Energy, BACnet, or Modbus front end.**
- **Two pulse outputs**
- **Phase loss alarm. (N.O. Contact)**
- **Built-in RS-485 EZ 7 communication capability supports the following connection configurations (or combinations not to exceed 52 devices per channel):**
  - Up to 52 Din-Mon D2 & D5, Class 3200, 3400 and 5000 meters and/or IDR interval data recorders
  - Cabling is daisy chain configuration, 3-cond., 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*
- NOTE: Interval data not available via BACnet.

- **Records kWh and kVARh delivered, kWh and kVARh received in first four channels. Data stored in 15-minute intervals 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. Optional single-phase, 3-wire configuration available.**
- **Outdoor NEMA 4X polycarbonate enclosure (standard) with padlocking hasp & mounting flanges for indoor/outdoor installation (stand alone) with one 1-1/16" (3/4") 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. Meets or exceeds ANSI C12.20 national accuracy standards. (+/- 0.2% from 1% to 100% of rated load)**
- **CE Mark approved.**
- **Meter meets or exceeds MID accuracy standards.**

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- **BACnet protocol is BTL certified. LonWorks protocol is LonMark certified.**
- **MV-90 compatible (with EZ7 only.)**

MODEL NUMBERS

Table 1. 120/208-240V, 127/220V, 3-Phase

Model	Amperage
E50-208100-R01KIT	100 amp
E50-208200-R01KIT	200 amp
E50-208400-R01KIT	400 amp
E50-208800-R01KIT	800 amp
E50-2081600R01KIT	1600 amp
E50-2083200R01KIT	3200 amp

Table 2. 220/380V, 230/400V, 240/415V, 3-Phase.

Model	Amperage
E50-400100-R01KIT	100 amp
E50-400200-R01KIT	200 amp
E50-400400-R01KIT	400 amp
E50-400800-R01KIT	800 amp
E50-4001600R01KIT	1600 amp
E50-4003200R01KIT	3200 amp

Table 3. 277/480V, 3-Phase.

Model	Amperage
E50-480100-R01KIT	100 amp
E50-480200-R01KIT	200 amp
E50-480400-R01KIT	400 amp
E50-480800-R01KIT	800 amp
E50-4801600R01KIT	1600 amp
E50-4803200R01KIT	3200 amp

Table 4. 347/600V, 3-Phase 4 - Wire.

Model	Amperage
E50-600100-R01KIT	100 amp
E50-600200-R01KIT	200 amp
E50-600400-R01KIT	400 amp
E50-600800-R01KIT	800 amp
E50-6001600R01KIT	1600 amp
E50-6003200R01KIT	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

The models above represent the 01 protocol package. To specify a different protocol package replace “01” in model number with the 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

Options

Three-phase meter kits are supplied with (3) split-core current sensors.

To order a single-phase, 3-wire meter kit add “-SP” before “KIT” in the model number. Ex. E50-208100-R01-SPKIT

Single-phase meters will be supplied with (2) split-core current sensors.

CLASS 5000 SMART METER SPECIFICATIONS

- Meter shall be fully electronic with 4 line LCD display showing:
  - kWh
  - kW demand (with peak date and time)
  - Power factor per phase
  - Real-time load in kW
  - Amps per phase
  - Volts per phase
- Meter shall utilize 0-2 volt AC output current sensors to allow paralleling and/or mounting up to 500 feet from 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 be CE Mark approved.
- Meter shall meet or exceed MID 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. Interval data not available via BACnet.
- Meter shall be optionally available in single-phase, 3-wire configuration.
- Meter shall operate as client device when used with Modbus. Meter works as a server 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 Honeywell E-Mon Energy software and Modbus.
- Meter shall provide two (2) pulse inputs and two (2) pulse outputs.
- Meter shall be capable of daisy-chain connection using RS-485 EZ7 communications in combinations of Din-Mon D2 & D5, Class 3200s, 3400s, 5000s, IDR-8s, IDR-16s not to exceed 52 devices. Cabling shall be through terminal block (3-conductor), 22 AWG, up to 4,000 cable feet total.
- Meter shall be MV-90 compatible (With EZ7 Only)
- 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

- BACnet protocol shall be BTL certified.

Home and Building Technologies
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