

Honeywell E-Mon

Multiple Load Monitoring Instructions

SPECIFICATION DATA

Multiple Load Monitoring Frequently Asked Questions

Applies to Honeywell E-Mon Class 1000, 2000, 3200, 3400, 5000 & Din-Mon with 0-2 Volt A/C Output Sensors Only

Question:

I have five single pole breakers in one sub-panel I would like to monitor with one meter; can I totalize the readings of all five circuits without having to parallel current sensors?

Answer:

Yes. Simply run all the breaker wires through one set of current sensors. Make sure all A phase circuits are through the A phase sensor, and the same for B phase and C phase. The meter should be sized by the highest current being monitored by one sensor. No multiplier is required when reading the meter display.

Question:

I have two sub-panels that I would like to monitor with one meter. Different transformers in the building feed these sub-panels; can I parallel sensors & monitor both panels with one meter?

Answer:

No. These panels cannot be monitored by one meter because they are from different power sources. When you parallel current sensors, all loads being monitored must be from the same voltage source and the same transformer.

Question:

The load I need to monitor has parallel feeds. How do I install the sensors for this application?

Answer:

There are two ways you can monitor parallel feeds. The easiest (and preferred) way to monitor parallel feeds is to clamp the sensors around all feed wires for that phase, contact Honeywell E-Mon with the conductor size and number per phase for proper sizing of the meter.

The second way to monitor parallel feeds is to clamp the sensor around one of the feed wires. When you read the meter, the number of feed wires must multiply the final reading for each phase. Example there is six 350 MCM conductors in parallel for each phase. Clamp current sensors around one of the conductors of each phase. When you read the meter take the reading from the display and multiply by six (6) for the parallel conductors, to get the actual kWh consumption and Demand kW. Multiply the EMS/BAS pulse output (if used) also.



Rules for Paralleling of Current Sensors

Honeywell E-Mon® meters provide extreme flexibility by allowing up to three sets of current sensors to be installed in parallel. This allows totalizing of multiple loads and reading with a single meter (cumulative reading for two or three loads.)

Following these rules will insure that the parallel installation provides accurate information.

1. All loads monitored must be of the same voltage and from the same transformer.
 - a. You cannot monitor 120/208 and 277/480 volts with the same meter.
2. When paralleling three phase loads with single-phase loads install current sensors in complete sets of three.
 - b. Connect the third sensor to the meter but do not clamp around any conductor.
3. No more than three sets of current sensors may be installed in parallel.
4. All parallel current sensors must be of the same rating as the meter. The rating will be determined by the current rating of the meter. A 200-amp meter, for example, would use extra sets of 200 amp current sensors for paralleling.
5. The reading on the meter display is affected by the paralleling of the current sensors. When using parallel sets of current sensors, the meter LCD display and EMS/BAS pulse output (if used) must be multiplied by the number of sets of current sensors to provide the correct reading.
 - a. Note: One set is three sensors for a three-phase meter.
 - b. Example: Meter with 2 sets of current sensors.....multiply by 2.
 - c. Example: Meter with 3 sets of current sensors.....multiply by 3.

How to Size the Meter and Current Sensors when Paralleling

1. Choose the meter type required for the application (Class 3400 Smart Meter etc.).
2. Specify the voltage of the loads being monitored. (NOTE: ALL loads being monitored by one meter must be from the same voltage source.)
3. Size the meter by the highest amperage load going through one set of sensors. This will designate the amperage of the meter, as well as all current sensors installed with this meter.

Example application: meter with BACnet IP to monitor and totalize three (3) three phase breakers; amperages: 800 Amp, 600 Amp and 400 Amp Highest load being monitored by ONE set of current sensors is 800 Amps Select meter model E34-480800-R03KIT with (2) E10017 extra sets of 800 Amp current sensors, a multiplier of three is required when read the meter display and EMS/BMS values.

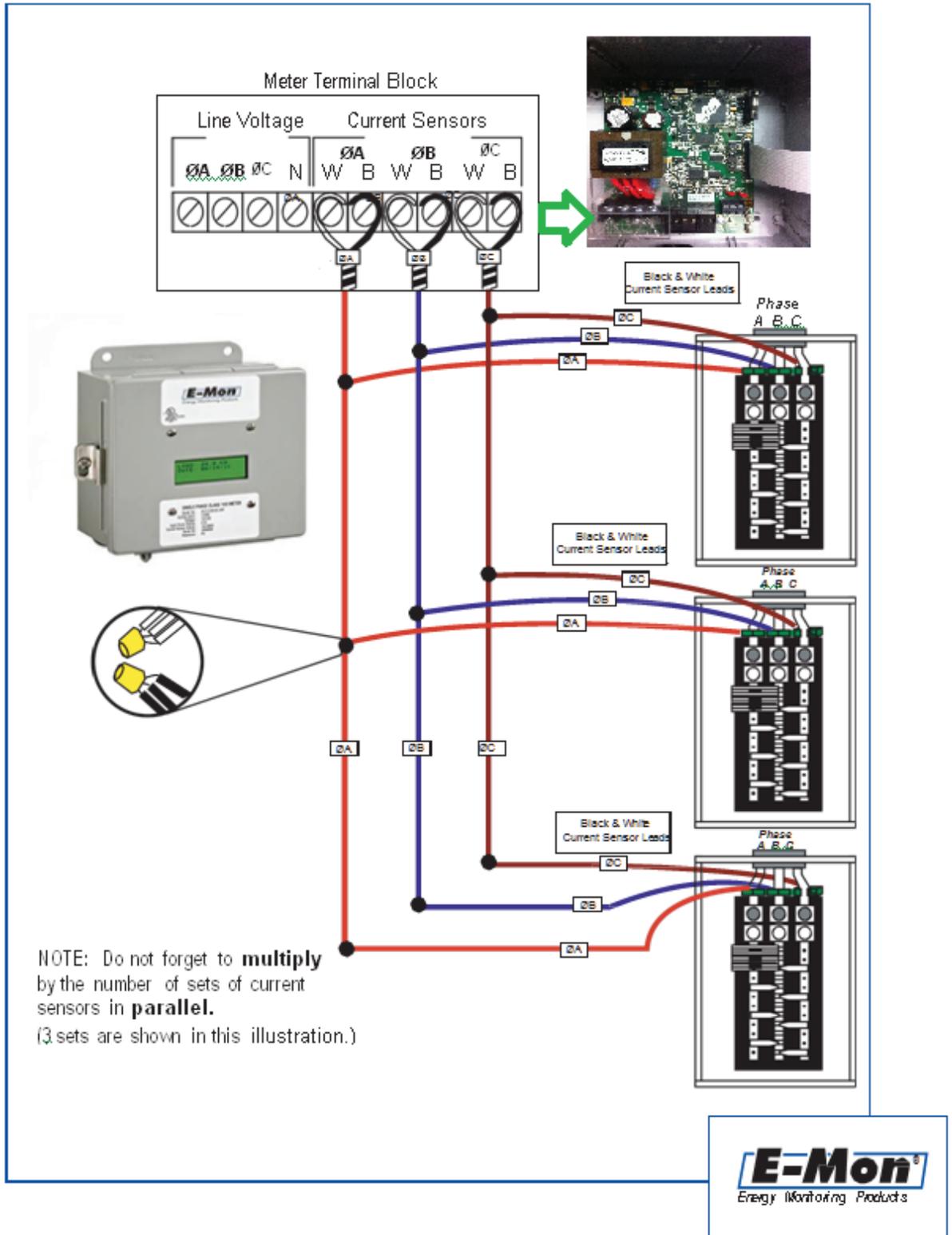


Fig. 1.

Home and Building Technologies

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