

8/9/2017

Meter Sizing Application Notes

200, 225 and 250 Amp

In 225 to 250-amp applications E-Mon suggest our 200-amp meter models. In most cases the circuit should not be loaded to more than 80% of its rated ampacity.

80% of 225 amps = 180 amps

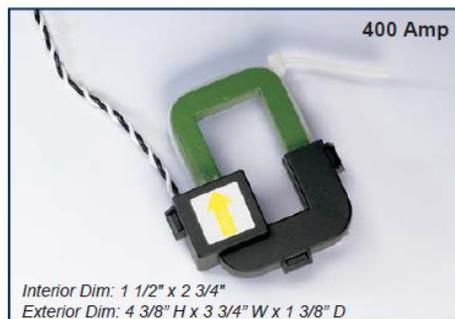
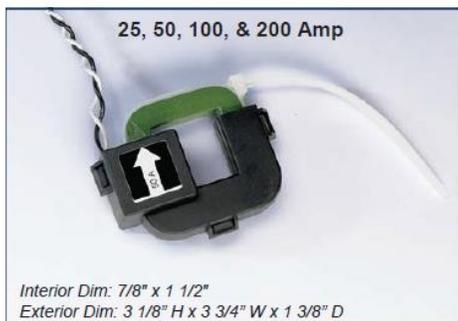
80% of 250 amps = 200 amps

There are some situations where a 400-amp meter and sensors may be advantageous. For example, parallel cables where multiple cables feed each lug of the circuit breaker or disconnect. In this case the larger opening of the current sensor may be required to accommodate the parallel conductors.

Parallel Feeder Cables



Another application where 400 amp sensors may be needed is with larger cable diameters such as aluminum conductors. If you are unsure, forward the sensor opening dimensions to the installer so they may choose the proper size.



4,000 Amp Application

You may offer E-Mon 3,200-amp meters to monitor loads up to 4,000 amps. Typically, a 4,000-amp service is not loaded to more than 80% capacity.

$$80\% \text{ of } 4,000 \text{ amps} = 3,200 \text{ amps}$$

Overload Meter Amps

E-Mon current sensors may be overloaded by 100% for a full minute without damage to the meter. The sensors may be over loaded continuously by 15% over the rated capacity. Keep in mind any load above 100% the rated capacity there will be roll off from accuracy. The meter will still read; however, the kW load waves will clip which result in data loss.

$$3,200\text{-amp meter, } 15\% \text{ over current} = 3680 \text{ amps}$$

Other Application Solutions

If you have a service that is 4,000 amps, and it is using parallel conductors per phase, you could use 2 sets of 3,200 amp sensors in parallel. For example, you would have 2 sensors per phase, with half the conductors for each phase going through each of the sensors. A multiplier of two would be required when

Shown below E-Mon 3,200-amp current sensor with internal dimension approx. 6" x 8".



Special Application Meters

E32-12025HVREZKIT, E34-12025HVR01KIT, E50-12025HVR01KIT, and etcetera.

E-Mon Special Application meters can monitor virtually any amperage with 5 amp CT's and any voltage over 600VAC by installing Potential Transformers (PT's) with 120 Volt three phase secondaries. (CT's and PT's to be supplied by others.) Please see the special application meters for more information.