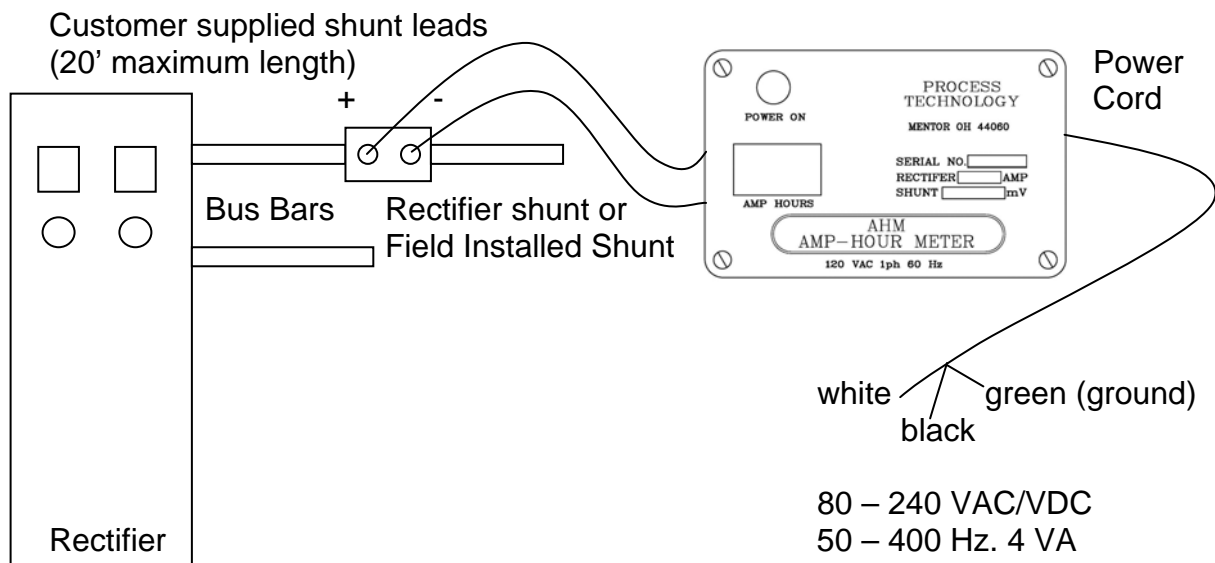


AHM – Amp Hour Meter

The Process Technology Amp Hour Meter (AHM) is a solid state measuring device that calculates DC rectifier ampere hours by measuring the rectifier's millivolt shunt voltage and comparing this value against an internal time standard yielding a display in amp-hours. The solid state circuitry will not load the shunt or affect existing meter readings. This eliminates the need for calibrated or compensated shunt leads for the AHM, allowing copper wiring as noted to be used for hookup (#18 AWG or larger; 20 foot length max).

Installation

- 1) Locate the rectifier shunt (usually on one of the output bus bars) and compare the shunt values (AMPS and mV (millivolts), usually stamped on edge of shunt) with those on the face of the AHM.
- 2) If these values do **not** agree, do **not** install. Either return the AHM to the factory for replacement, or purchase a shunt with the AHM values and install it in series with the existing shunt.
- 3) Note the shunt polarity (+ or -) and the AHM polarity, and connect the positive (+) side of the shunt to the positive side of the AHM and the negative (-) side of the shunt to the negative side of the AHM.
- 4) Connect the AHM power cord to a power source providing 80 – 240 VAC/VDC, 50 – 400 Hz.



Installation Diagram

Operation

- 1) The "Power On" light will be illuminated when the AHM is energized.
- 2) Counts will register whenever the DC power (AMPS) is used.
- 3) The values of these counts (readings) are a result of factory calibration based on the specified rectifier or supplied shunt values. Field or factory re-calibration is available; consult factory for details.

Log Entries

It is suggested that you make a formal log book in which beginning and ending values can be recorded along with dates and operators' initials, e.g.:

<u>Date</u>	<u>Display Value</u>	<u>Initials</u>	<u>Amp Hours</u>
1-1-2000	000054	ces	0
1-2-2000	000340	dev	286 (=340-54)
1-3-2000	000780	ces	440 (=780-340)

Troubleshooting

AHM stops counting:

The AHM is equipped with board mounted fuses to protect circuit components from damage in the event of output component(s) failure. Do **not** replace fuses until cause of failure has been verified.

If "Power On" light is not illuminated, repair power condition or replace circuit board as necessary.

Examine shunt leads for continuity and connection conditions; replace if necessary.

Using an oscilloscope, measure DC voltage to digital counter; it should be about 11-13 VDC. If not, return for repair.

AHM count does not agree with another device:

The basic accuracy of the AHM is better than 0.25% at >50% of full scale value. Even though this is an excellent level of accuracy, cumulative error will naturally distort the record. For example, after 2400 counts the error could be +/- 6 counts (2400 x 0.25%). If at the time of the next log entry another 2400 counts have elapsed (4800 total), the total error could be +/- 12 counts.

AHM needs re-calibration:

Consult factory for factory calibration charges and/or equipment needed for field calibration.