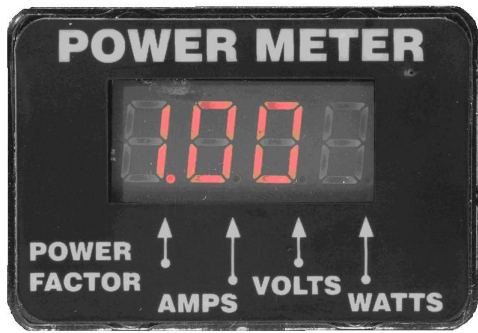




PM-1 Power Meter CM-1 Current Meter



SPECIFICATIONS

DESCRIPTION

The PM-1 power meter is a low-power, high accuracy meter capable of measuring true RMS Current, Voltage, Power, and Power Factor. These values are individually shown on an easy to read, 4-digit LED Display, which continuously scrolls through the four different measured values. The CM-1 current meter measures current only. The PM-1 / CM-1 meter uses a current transformer to measure the true RMS Current in an AC circuit. Simply pass the Line Input conductor of the circuit to be measured through the current transformer and connect the same circuit to the meter power.

The PM-1 / CM-1 meter is a component designed to be built into the enclosure of an end product. The meter is intended to be panel mounted and comes standard with a plastic lens, overlay and mounting screws to provide a clean, professional look after installation.

FEATURES

- True RMS ammeter (0-32A)
- Auto-sensing voltage (85-250V)
- Low power consumption (2W)
- Factory calibrated
- PM-1: auto-scrolling, PF, Amps, Volts, Watts
- CM-1: Amps only meter
- Easy to Read 4 digit display, 0.37" (9.4mm) digits

KIT INCLUDES

- Board with current transformer (CT)
- Lens
- Securing screws
- PM-1 and CM-1 meter face overlays
- Jumper

Electrical	MIN	TYP	MAX
Operating Voltage	85VAC	120-230VAC	250VAC
Input frequency	47Hz	50-60Hz	99Hz
Power usage	-	2W	-
CT Readings	MIN	TYP	MAX
Current	0	-	32A
Voltage	85VAC	-	250VAC
Power	0	-	8000W
Power Factor	0.00	-	1.00
Environmental	MIN	TYP	MAX
Operating Temperature	-10°C	25°C	65°C
Storage Temperature	-40°C	25°C	75°C
Humidity (non-condensing)	0%	-	95%
Physical Dimensions			
PCBA			
Width	2.1" (5.35cm)		
Length	1.425" (3.65cm)		
Depth	1.25" (3.20cm)		
Weight*	1.3oz (37g)		
*includes CT with 4.5" leads			
CT			
Inner Diameter	0.35" (0.89cm)		
Outer Diameter	0.875" (2.25cm)		
Display			
Width	1.175" (3.00cm)		
Length	0.55" (1.40cm)		
Digit Height	0.37" (0.95cm)		
Digit Color	Red		
Accuracy*			
Current	+/- 2%		
Voltage (PM-1 only)	+/- 2%		
Power (PM-1 only)	+/- 4%		
Power Factor (PM-1 only)	+/- 4%		
* @50&60Hz, Full Scale up to 32A			
Sampling			
Sampling Rate	14kHz		
Display update @ 60Hz	3.0s		
Display update @ 50Hz	3.6s		
Approvals			
UL File Number	E258702		
UL Standard	UL 61010-1, 2 nd Ed.		
IEC Standard	IEC 61010-1, 2 nd Ed.		
CB Test Certificate	Available upon request		
CE	Compliant		
RoHS	Compliant		

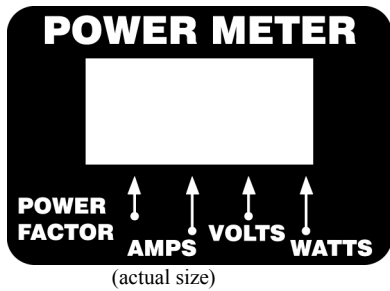
WARRANTY

Geist warrants that PM-1 meters will be free of manufacturer defects for 1 year from the date of purchase.



POWER METER OPTION

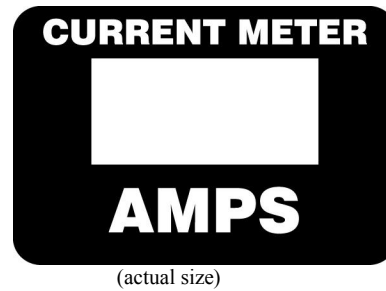
PM-1



Auto-scrolling meter displays Power Factor, Amps, Volts and Watts. Decimal point position indicates value.

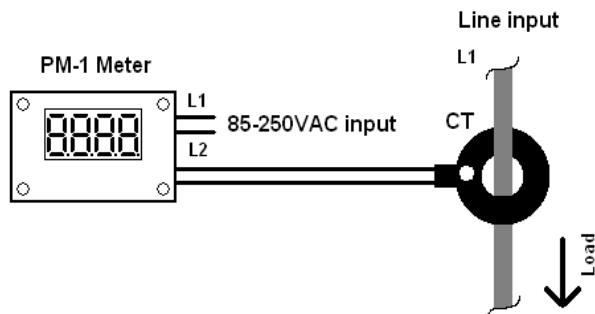
CURRENT METER OPTION

CM-1



Continuously display Amps only.

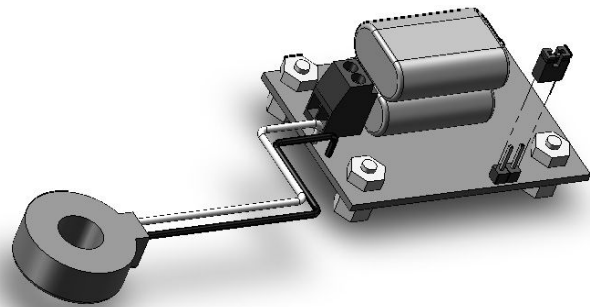
WIRING DIAGRAM



Note: PM-1 meter and current transformer are polarity sensitive, dot marking indicates polarity. Reverse if monitoring L2. Incorrect polarity will cause the meter to display zero Power Factor and zero Watts.

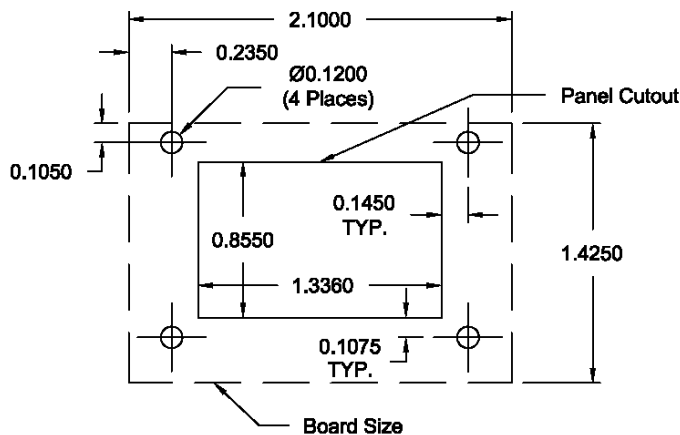
JUMPER SELECT

Jumper Select PM-1/CM-1 meters allow you to convert from a PM-1 to a CM-1 by simply placing a jumper on JMP1 before power up.

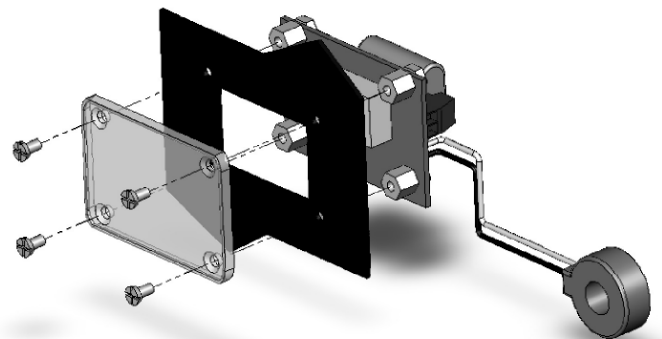


RECOMMENDED PANEL CUTOUT

All dimensions in inches



ASSEMBLY



Technical Notes

- 1. Installation:** All components on the PM-1 / CM-1 are considered in the primary circuit and should not be exposed.
- 2. Wire Gauge:** Use 14-28 Gauge AWG stranded wire, tighten to 3.6 pound-inches (0.4Nm)
- 3. Calibration:** PM-1 / CM-1 meters are factory calibrated and require no additional calibration. The PM-1 / CM-1 meters are not designed to be calibrated in the field.
- 4. Fusing:** PM-1 / CM-1 contain a non-resettable, non-user serviceable fuse. No additional fusing is required.
- 5. Polarity:** The PM-1 is polarity sensitive, Power Factor and Watts will display zero if wired incorrectly. CM-1 meter is not polarity sensitive.
- 6. Jumper:** Placing a jumper on JMP1 before power up converts the meter to Current Only (CM-1).