

Addendum

Software Version 1.13 Changes

LCD Changes

PM390 meters with software versions 1.13 and greater are built including an improved Liquid Crystal Display. This offers higher contrast digits with a more even backlight.

Subtle changes in the legends provide a slightly different arrangement of instantaneous pages. The new pages are shown below.

Analogue Outputs

Software versions 1.13 and greater provide a wider analogue output scale range of 10% to 200% of nominal. This replaces the 50% to 200% range described in section 6.12 of the manual.

Other Changes

All other features of the PM390 remain unchanged from software version V1.11.



Phase Amps.

Individual rms. phase currents input via CT1 (top), CT2 (mid) and CT3 (btm). Values shown indicate currents on the primary side of any external current transformers.



Phase Volts (L-N)

Individual rms. phase voltages input at L1 (top), L2 (mid) and L3 (btm). Values shown indicate those on the primary side of any external voltage transformers.



Phase Volts (L-L).

Individual rms line voltages input at L1-L2 (top), L2-L3 (mid) and L3-L1 (btm). Values shown indicate those on the primary side of any external voltage transformers.



Phase Watts

Individual rms watts measured from current and voltage waveforms on phase 1 (top), phase 2 (mid) and phase 3 (btm). A negative value indicates export power



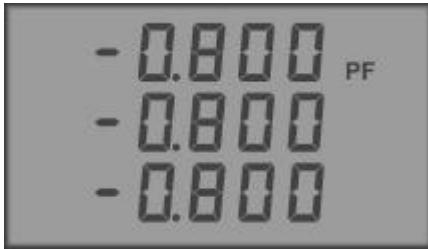
Phase VA

Individual Volt Amperes derived from rms currents and voltages measured on phase 1 (top), phase 2 (mid) and phase 3 (btm). A negative value indicates export power.



Phase var

Individual var values derived from VA and Watts measured on phase 1 (top), phase 2 (mid) and phase 3 (btm). A negative value indicates a capacitive load.



Phase Power Factor.

Individual phase PF values derived from VA and Watts measured on phase 1 (top), phase 2 (mid) and phase 3 (btm). A negative value indicates a capacitive load.



Peak Phase Volts.

The maximum rms phase voltage recorded on each phase since **RESET** was last pressed while on this page. These values are derived from the rms values defined above.



Peak Phase Amps.

The maximum rms current recorded on each phase since **RESET** was last pressed while on this page. These values are derived from the rms values defined above.



System PF, Hz and Watts

3-Phase PF derived from system kVA and kW. A Negative sign indicates a capacitive load.

Frequency measured from the V1 input.
System kW (kW1+kW2+kW3). Negative kW indicates export system power.



System PF, Hz and VA

3-Phase PF derived from system kVA and kW. A negative sign indicates a capacitive load.

Frequency measured from the V1 input. System VA (VA1+VA2+VA3). Negative kVA indicates export system power.



System PF, Hz and var

3-Phase PF derived from system kVA and kW. A negative sign indicates a capacitive load.

Frequency measured from the V1 input. System var. Negative var indicates a capacitive load.



Average Volts and Amps.

The middle line shows the mathematical average of the 3 phase voltages derived from displayed values defined above. The bottom line shows that of the 3 phase currents.



3-Ph Rolling Ave kW & Peak Demand

The middle line shows the average of a series of kW readings taken over the MD period. The top line shows the maximum value of this average reached since last reset.



3-Ph Rolling Ave kVA & Peak Demand

The middle line shows the average of a series of kVA readings taken over the MD period. The top line shows the maximum value of this average reached since last reset.