Using the SEL-735 to Display Multiple Metering Values

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INTRODUCTION

Panel meters provide annunciation of critical electrical parameters. Some meters only show a single measurement quantity, such as the demand current or the voltage minimum/maximum, while more advanced meters can display multiple electric values.

PROBLEM

Using multiple panel meters in order to view different sets of electrical values can result in initial high cost and crowded panel space. Many single-purpose meters also do not provide data trending and power quality disturbance recording.

SEL SOLUTION

The SEL-735 Power Quality and Revenue Meter, as shown in Figure 1, can replace multiple single-purpose meters to monitor, record, and display many different electrical parameters. The easy-to-read, three-line liquid crystal display (LCD) can show up to three values at once. The user can program the LCD screen to show up to 16 display points in normal display mode and up to 16 in alternate display mode. The user can also program the rotating display feature to rotate through display quantities at intervals of 1 to 60 seconds. Each line of the LCD screen can display up to 64 characters.

Figure 1  One SEL-735 Replaces Multiple Single-Purpose Meters
**PRINCIPLE OF OPERATION**

Figure 2 shows an example of what the three-line LCD display looks like when the SEL-735 is in normal display mode. The minimum and maximum values show the date and time of an event. These values scroll from right to left when this display is shown. The display update setting (default is 6 seconds) controls how fast the display points rotate through the LCD screen. The user can also scroll through the display values by pressing the **{UP ARROW}** or **{DOWN ARROW}** pushbuttons on the front of the meter.

![Figure 2 SEL-735 Three-Line LCD Display in Normal Display Mode](image)

Press the **{DISPLAY}** pushbutton, shown in Figure 3, to switch from the normal display mode to the alternate display mode. A red light-emitting diode (LED) illuminates to indicate that the alternate display mode is active. Press the **{DISPLAY}** pushbutton again to return to the normal display mode.

![Figure 3 SEL-735 Alternate Display Pushbutton](image)
Figure 4 shows the quantities that the SEL-735 displays when the alternate display is active.

![Figure 4 SEL-735 Three-Line LCD Display in Alternate Display Mode](image)

A bonus feature of the SEL-735 is a **PQ ALARM** LED that indicates when the meter detects a power quality (PQ) event. This LED remains lit, as shown in Figure 5, until the user presses the **PQ ALARM RESET** pushbutton.

![Figure 5 SEL-735 PQ Alarm Pushbutton](image)