Clamp Meters

TEGAM, Inc. has introduced their Model 400 and Model 410 AC/DC Clamp Meters, which are designed to perform accurate current measurements of up to 1000 amps without physical or electrical connection between the meter and a live circuit. The Model 410 adds the ability to measure True RMS power, apparent power, and power factor for applications requiring a more in-depth assessment of complex AC loads. The addition of AC and DC voltage, resistance, continuity, and frequency modes places Tegam's Model 400 Series among the easiest to use, most versatile hand held meters available for industrial, automotive, electrical heating and other high-current applications.

The Model 400 and Model 410 utilize clamp-on current sensing, which permits current measurements to be performed by simply positioning the meter's pickup jaws around a current-carrying conductor. Electrical contact is not used, and the instrument works with insulated cables as well. Current settings include 40 amp and 1000 amp ranges. Conventional test leads are used for measurement of AC and DC voltage, resistance, continuity, and frequency. Power measurement (Model 410, only) includes True RMS power, apparent power, and power factor.

The Model 400 and Model 410 have been designed for safe, convenient one-hand operation. Controls consist of one rotary dial and four pushbuttons for easy selection of all functions, ranges, and operating parameters. The side of the meter includes a spring-loaded trigger for opening the sensing jaws. These features permit a user to position the meter and make a current reading while keeping an arms length away form live circuits. In addition, the jaws open to 2 inches 957 MM), enabling the 400 Series meters to accommodate larger diameter conductors than most competing units. Both models meet IEC-1010 Category III 600V Safety Standards, and carry the CE mark.

The Model 400 Series features a back-lit, 3 -digit (4000 count) liquid crystal display (LCD) with secondary 40-segment bar graph. The digital display provides 2 readings per second, while the bar graph updates 20 times per second to provide fast indication of signal trends or small changes in signal level. Annunciators indicate the selected measurement function. Measurement ranges (full scale) include many features such as DC Volts of 0.4 to 600 V in 5 ranges, AC Volts of 4 to 600 V in 4 ranges, AC and DC current of 40 and 1000 A, resistance of 400 Ω to 40 M Ω in 6 ranges, continuity with buzzer sounds for circuit resistance of &lt 40 Ω, frequency of 100 Hz to 1 MHz, true power (Model 410 only) of 600 W, apparent power (Model 410 only) of 600 VA and power factor (Model 410 only) of 0.3 to 1.0.

Other features of the Model 410 include a built-in optionally-isolated RS-232 serial interface and software to enable the meter to be connected to a PC. The Model 400 and Model 410 include Auto/Manual ranging, a Minimum/maximum mode to retain minimum and maximum measurement values, and a Relative mode that shows measurements referenced to a non-zero reference value. Operating power is supplied by two 1.5 V AAA batteries. The display includes a low battery indicator; an auto power off feature turns the unit off after 30 minutes idle time.

The Model 400 Series measures only 9.65 in. H x 3.39 in. W x 1.77 in. D (245 mm x 86 mm x 45 mm), and weighs 15.23 ounces (432 g), making these meters ideal for

portable field and bench DMM applications.

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