

24-400 XG

Microprocessor Controlled Battery Charger-Analyzer



- ❑ **Three Charge Modes (0 to 2A):**
 - Constant Current (single and dual rate)
 - Constant Voltage (float)
 - Peak
- ❑ **Three Discharge Modes (0 to 10A):**
 - Analysis (Capacity Test)
 - Deep Cycle
 - Constant Resistance
- ❑ **Interfacing to the BTAS16 Computerized Battery Test System for monitoring, programming and control**
- ❑ **Fully Protected**

The 24-400XG is a precision instrument designed to charge and analyze (discharge) Nickel-Cadmium, Sealed Lead-Acid and other types of rechargeable batteries (up to 10A-Hr).

With its multiple modes of operation of Constant Current, Constant Voltage and Peak Charge and Analysis and Deep Cycle discharge modes, the 24-400XG can satisfy the requirements of most small rechargeable battery systems.

Two large digital meters permit the simultaneous monitoring of voltage and current, while eight indicator lights inform of the status of the operation.

An integral, four digit LED digital timer provides time interval programming in

HOURS-MINUTES and optionally in MINUTES-SECONDS. A rechargeable battery provides backup for short power interruptions.

Internal control and programming of Battery Test Functions is achieved through a keypad and an LCD readout. Multiple Battery Test Profiles can be stored in a non volatile memory to facilitate programming for often tested batteries

The 24-400XG can be interfaced to the BTAS16 Battery Test System and achieve remote monitoring, programming of test parameters and control of the operation.

The functions of the 24-400XG are:

In the Constant Current Charge mode, the current is programmed via the keypad and it is independent of the battery voltage, from 0 volts (short circuit) up to 40V. The charge current is also independent of the line voltage, within the specified line voltage limits.

In the Constant Voltage Charge mode, the current starts constant (as per the CC mode) and remains constant until the battery voltage is within a fraction of the selected value (0.5V approximately). At this point, the current is automatically reduced and regulated to maintain the programmed battery voltage.

In the Charge and Peak Stop Charge mode, the current starts constant (as per the CC mode) and it is terminated automatically when the battery reaches the programmed peak voltage.

In the Analysis Discharge mode, the current starts constant and it is terminated automatically when the battery drops below the programmed voltage.

In the Full Discharge mode, the current starts constant but gradually drops to zero as the battery voltage reaches the 3V to 2V level.

A temperature controlled fan turns on only as required thus providing for a quiet operation.

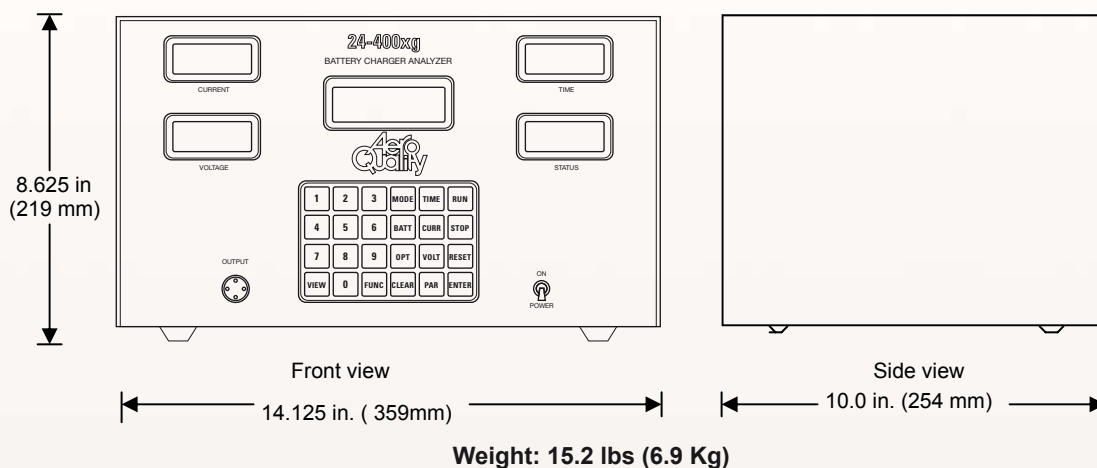


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Overall Dimensions



Specifications

Input Power

- 115/230 VAC Single phase
- 50 or 60Hz (no adjustment required)
- Plug type: IEC
- AC line current - 2.5A

Charge

- Maximum current output: 2.000 amps
- Minimum increment: 0.002 amp
- Accuracy ± 0.005 amp
- Modes: Constant Current, dual (main & topping plus peak transfer) or single rate. Constant Voltage. Peak Voltage
- Max resistance load setting up to 99 ohms (320 watts max.)
- Over/Under Current protection
- Over-voltage protection : user variable
- Reverse polarity protection > -0.250 volts.
- Fusing: 3A (slow blow)

Discharge

- Maximum current: 10 amps
- Minimum increment: 0.01 amps
- Accuracy ± 0.2 amp
- Modes: Capacity Test, Full Discharge, Constant Resistance
- Overheat protection: fault at heat sink temp. >102°F (90°C)
- Power dissipation protection
- Over/Under Current protection
- Reverse polarity protection > -0.250 volts.
- Fusing: 12A (quick blow)

Digital Panel Meters

- Voltmeter: Accuracy $\pm 0.25\%$ in 200V scale, $\pm 0.01V$ in 20V scale
- Ammeter: Accuracy $\pm 0.5\%$, $\pm 0.002A$ in charge and $\pm 0.010A$ in discharge

Clock/Timer

- Time base: Microprocessor controlled
- Modes: Normal (HH:MM), Fast (MM:SS)
- Power failure protection: rechargeable battery back-up to resume operations in the event of a power failure.

Status Indicator

- State
- Operating Mode
- Warning (Capacity Failure, Over temperature)
- Fault (Over/Under Current, Over voltage, Reverse Polarity)

Other

- Battery Over temperature protection at 104°F (40°C), via temperature cable or plate
- BTAS I/O port
- Voltage sensing at battery