

Power Pro

The Quality Leader in Economical Industrial Battery Chargers



- The quality leader in economical industrial battery chargers
- Ferroresonant transformer provides line and load regulation for maximum battery protection
- Automatic equalize
- Back-up timers for additional battery protection
- AC fail recovery
- Quality-built for years of trouble-free service
- 10-foot color-coded DC output cables
- 10 year transformer and diode warranty
- Power Pro models are available in 100%, 80% or 60% output ratings

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Universal control

The Power Pro control can be used to service 6, 12, 18, 24 or optional cell sizes. Select the Cell Size that matches the charger easily through cell selector switches located on the PC board.

User selectable 80% voltage point

The Power Pro control may be set for an average 80% voltage point of 2.37 volts/cell or 2.45 volts/cell. In cold storage applications, ensure a complete charge by using the dip switch on the PC board to select the 2.45 volts/cell 80% point.

Designed to take charge

The Power Pro control is fully automatic, featuring four bright LEDs for easy identification of the charging status, and two manual push-buttons, "Equalize" and "Stop," to allow further management of the operation.

Automatic start/stop

When the battery is connected to the charger, the Power Pro control will provide a five-second delay to check for proper connection before it automatically begins the charging operation. When charging is complete, the Power Pro control will automatically terminate the operation and the "Charge Complete" LED will illuminate.

Automatic Equalize

The Power Pro control automatically provides an equalize charge of three hours beyond a normal charge complete on every 5th cycle.

Pressing the "Equalize" key at any time during an equalize charge cycle will deselect the equalize function for that cycle. When the automatic equalize function is selected, the manual push-button is disabled to prevent unnecessary equalize charges.

Battery/charger mismatch protection

The Power Pro control has the ability to discriminate and reject batteries that do not match the charger, thus providing additional protection for the battery. If the battery voltage is over or under sized, the charger will not start.

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72-hour refresh charge

If the battery and charger are left connected for 72 hours after the initial charge has been completed, the Power Pro control provides a refresh charge to ensure a fully charged battery when needed.

PT/DV/DT charge termination

The Power Pro control utilizes a patented charge termination technique, DV/DT or rate of change of battery voltage with respect to time, with proportional time (PT) to determine when to terminate a charge cycle. The length of time it takes the battery to reach the 80% charged point determines the sampling rate. This termination method ensures a precise charge every time, never under or over charging, even on lightly discharged batteries. This technique used in conjunction with the tapered curve of ferroresonant chargers, ensures that the rate of change for both battery voltage and current always provides an efficient and accurate termination of charge.

Unaffected by AC power failures

If AC power is interrupted during a charge cycle, the Power Pro control is designed so that when AC power is restored the charge cycle is resumed at the point where it was stopped.

Back-up timer protection

The Power Pro control is equipped with two back-up timers for additional battery protection. These back-up timers terminate the charge if (1) the battery is not 80% charged in 10 hours or (2) the charge is not completed within 5 hours after reaching 80% charged. These timers protect the battery from excessive overcharging – and possible permanent damage.

Ferroresonant power conversion circuitry

The quality-designed and manufactured ferroresonant transformer is the heart of the efficient charger. The power conversion circuitry is designed to maximize battery life with its constantly tapering charge, automatically regulated by the "on charge" battery voltage. The output current of the charger is determined by the state of discharge of the battery. The battery is precisely charged, based on its depth of discharge.

"Battery-friendly" charge rate

The Power Pro provides a "battery-friendly" charge rate featuring a 100% finish rate that is typically available only on higher-rated chargers. This finish rate ensures that the battery is precisely charged for maximum life.

Regulation

The Power Pro's ferroresonant transformer is line and load regulated to hold the finish rate of the charge within $\pm 1\%$, even with line voltage variations as high as $\pm 10\%$. This protects and properly charges the battery, even when severe input voltage variations exist.

Low operating cost

The Power Pro is inherently efficient due to its ferroresonant circuitry, the most common method of charging lead-acid batteries. In addition, the standard automatic start/stop, and pt/dv/dt charge control properly manages the charge time from start to finish.

Safety features

The Power Pro is protected against short circuit, incorrect battery connection, voltage transients and other unsafe failure modes. An electronic timer on the control shuts off the charger if the battery does not become 80% charged in 10 hours. These safeguards protect the charger and battery, assuring longer life for both.

Warranty

Power Pro battery chargers are warranted to the original purchaser for 10 years on the power transformer and silicon diodes, and one year on other components.

Quality-built for years of trouble free service

The Power Pro is subject to intensive quality control and test procedures to ensure many years of trouble-free service.