Motor
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GENERAL INFORMATION

This industrial battery charger is equipped with the ET80 Auto Start/Stop Electronic Control. When connected to a discharged wet lead acid battery and connected to the proper AC voltage, (note charger data label) the charger will deliver maximum rated DC output current to the battery. In some chargers, a power on LED will illuminate. As battery voltage rises, output charge current decreases in proportion to increasing battery voltage. The battery voltage is constantly monitored by the ET80 control during the charge cycle. When the DC voltage reaches the point where the battery is 80% charged, an electronic timer is initiated and the charge is terminated in approximately three hours. The battery is completely charged each time. The ET80 Automatic Control is designed to extend battery life and reduce operation costs.

◆ The charger can be used standing on the floor, or on a platform - or can be suspended by hanging. The openings in the charger case must not be obstructed. Locate charger so that air at room temperature can freely circulate through the charger. Do not allow charger to come in contact with water, battery acid, or other chemicals.

◆ The MAC Charger has excellent regulating characteristics. The DC output charging current may vary approximately 10% with a change in AC line voltage of 5%. This charger is ideal for installations having extreme variations in line voltage.

◆ Once a week, after charging, check the height of the electrolyte in each battery cell and add approved water if necessary. Heavy usage may require the addition of more water.

OPERATING INSTRUCTIONS

To use the charger proceed as follows:

1. Consult charger data label to ensure it is the correct model for batteries being charged, i.e., 12V, 24V, 36V, 48V, etc..
2. Consult charger data label to verify AC input power requirements.
3. Connect charger to battery.
4. Connect charger to AC power source.
5. The LED shows the charger is on and charging. The electronic control monitors battery condition and automatically determines when to terminate the charge after the battery is returned to full capacity.
6. This charger can be permanently connected to the battery. The charger must be disconnected from the AC power source and then reconnected to start the charging process.

WARNING: Explosive hydrogen gas is formed during the charging process. To avoid accumulation of gas, batteries must be charged in a well-ventilated area. Avoid open flame or electrical spark.

WARNING: An ungrounded or improperly grounded AC power source can cause severe electrical shock to the user.
CAUTION: Improper AC power can damage the charger.

CAUTION: Impurities in tap water will damage battery plates. Use only filtered or distilled water.

HINTS FOR SERVICE PROCEDURE

1. Check AC power supply (plug, cord, wall breaker, etc.)
2. Measure and record AC voltage being provided to charger.
3. Check for physical damage.
4. If no DC output, check for blown breakers/fuses. If fuses are blown or breakers tripped, the problem could be reversed DC connection or a defective diode. Check to ensure the chargers' DC leads are installed correctly in the connector, which will be mated with the battery connector. (Black lead to negative (-) contact and red or white to positive (+) contact) Always check total number of devices connected to AC service to ensure the total current draw will not open wall fuses/breakers.
5. Check charger components and battery to ensure connections are tight.
6. After the problem has been solved and system is operational, check and record the following to ensure proper operation.
   a. Battery specific gravity (before and after charge).
   b. Battery voltage (before, during, and after charge cycle).
   c. Charger DC current (at start and end of charge).

If charger is still inoperative after checking above, call MAC Technical Service at **1-800-357-4566**. Please have charger Spec. and Serial number, from charger data label, for reference.

SAMPLE WIRING DIAGRAM