

# BATTERIES AND BATTERY CHARGING APPLICATION DATA SHEET

DS\_CHARGE VER 1.0

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## ***Use of the battery charger***

Battery chargers manufactured by Metron Eledyne are intended for use only in Metron Eledyne control systems. Use of an attachment / connector not recommended or sold by Metron Eledyne may result in a risk of fire, electric shock, or injury to persons.

## ***Removing the battery charger***

If the battery charger should require removing, then to reduce the risk of damage to the electrical connections, pull by the connector rather than by the cable.

## ***Do not disassemble the battery charger***

1. Do not in any circumstances disassemble the battery charger, there are no user serviceable parts inside. Incorrect reassembly may result in risk of electric shock or fire.
2. WARNING NOTICE

The performance of the battery chargers is entirely automatic. No operator variables are provided, the chargers are factory preset and **NO ADJUSTMENTS MUST BE ATTEMPTED ON SITE** or damage to the batteries may result. Maintenance of batteries should be carried out in accordance with the instructions issued by the battery manufacturer.

## ***WARNING - RISK OF EXPLOSIVE GASES.***

1. WORKING IN THE VICINITY OF A LEAD-ACID / ni CAD BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION.
2. To reduce the risk of battery explosion read this data sheet completely, and the battery manufacturers data. Equipment used in the vicinity of the batteries should also be carefully selected to reduce the risk of a battery explosion.

## ***Personal Precautions***

1. Someone should be within range of your voice or close enough to come to your aid when you work near a lead acid / niCAD battery.
2. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.

3. Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
4. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
5. NEVER smoke or allow a spark or flame in the vicinity of battery or engine.
6. Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short circuit battery or other electrical part that may cause explosion.
7. Remove personal metal items such as rings, bracelets, necklaces and watches when working with an engine battery. Such engine batteries can produce a short circuit current high enough to weld a ring or the like to metal, causing a severe burn.
8. NEVER charge a frozen battery.

### ***Preparing to charge***

1. Clean and grease battery terminals prior to assembly. Be careful to keep corrosion from coming in contact with eyes.
2. For a wet charged battery add distilled water in each cell if necessary until battery acid level reaches level specified by battery manufacturer. For a battery without cell caps, carefully follow manufacturers recharging instructions. Never charge a battery with a low electrolyte level.
3. For a dry charged battery select and install a grade of acid recommended by the battery supplier. Consult manufacturers instructions with regard maximum permissible time between filling the acid and applying the battery charge.
4. Study all battery manufacturers specific precautions such as removing or not removing cell caps during initial charging and verify that the maximum rate of charge is not exceeded.
5. Note that no Metron Eledyne battery charger is capable of applying the initial 'deep / commissioning' charge required for NICAD batteries.

### ***Battery Maintenance***

1. The batteries should be maintained in accordance with the specific battery manufacturers data book.
2. Ensure that the battery terminals are kept clean and greased at regular intervals.
3. Ensure that electrolyte levels are within the battery manufacturers limits on a regular basis.

### ***Design and Installation Guidelines***

1. Battery to Controller cable lengths should be kept as short as possible and routed in special exclusive trunking / conduit where possible.
2. Be sure to use a minimum of 10mm<sup>2</sup> sized cables between the controller and battery set.