TCS-1

Battery Trickle Charger

(preliminary)

- **500mA adjustable maximum output current**
- **9V to 31V adjustable float voltage**
- **Automatic Constant Current/ Constant Voltage operation**
- **Short Circuit Protected**
- **Reverse Polarity Protected**
- **Power and output indicators**
- **Universal power input**

CHARACTERISTICS:

The TCS-1 Trickle Charger is a low current, constant current/constant voltage charger, that can be used to trickle charge Nickel-Cadmium and Lead-Acid batteries. Its primary use is to maintain the batteries at full charge while the batteries are in storage (to compensate for the battery self-discharge). The TCS-1 Trickle Charger can also be used as a full charger for batteries of up to 5.0A-hr (@ C/10).

When the battery voltage is below the programmed float voltage, the TCS-1 Trickle Charger is in constant current. In this mode, it will output the preset current into a single cell (or short circuit) up to 22 Nickel-Cadmium cells (0V to 31V).

When the battery voltage reaches the programmed float voltage, the TCS-1 Trickle Charger is in constant voltage. In this mode, it will adjust the current automatically to maintain the preset battery voltage. The charge circuit will deliver the maximum programmed current until the voltage is within 0.5V of the preset value. At this point, the current will automatically diminish and will settle at the rate needed to maintain the battery at the float voltage. *Note: The intensity of the LED provides a relative indication of the control of the current.*

The typical trickle charge current is 3mA/A-Hr for a float voltage of 1.4V/Cell (Nickel-Cadmium). i.e.: a 20 cell, 40A-hr battery will require about 120mA to maintain 28V. However, the actual amount of current taken by the battery will be a function of the condition of the battery, and will be controlled automatically by the voltage regulator in the TCS-1 Trickle Charger.

The automatic operation of the TCS-1 Trickle Charger makes it immediately usable with no need for adjustments, except under very specific conditions, such as for batteries with other than 20 cells Nickel-Cadmium or 24V Lead-Acid (change of float voltage), or for batteries of 10A-hr or less (lower maximum current).

SPECIFICATIONS

1. INPUT:
   - Universal 36V External Supply, 115VAC-230VAC, 50-60Hz

2. OUTPUT:
   - 32V Max (nominal), 500mA Max (nominal)

3. MODES:
   - CONSTANT CURRENT: Adjustable from 0 to 500mA
   - CONSTANT VOLTAGE: 9V to 31V

4. INDICATORS:
   - Power Input
   - Output Current (relative)

5. PROTECTION:
   - Short Circuit
   - Reverse Polarity

6. AMBIENT:
   - +5°C to +35°C (check with factory for extended temperature operation).

7: WARRANTY:
   - One year parts and labor.

8: PART NUMBER:
   - 9899001001

Price and Specifications subject to change without notice **BTCS1*(22MAR09)***

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