



## DESCRIPTION

The **AmpLife** Charge Control Module is the easiest, safest way to keep your batteries fully charged and in peak operating condition while maximizing useful life. By utilizing the **AmpLife** programming, the IOTA SDC chargers automatically deliver a four-stage charge cycle to your battery. Whether you need frequently cycled batteries charged quickly and efficiently, or are maintaining stored batteries in top condition, **AmpLife** charge control provides the assurance that your batteries will perform when you need them to.

## CHARGING STAGE DESCRIPTIONS

The **AmpLife** Smart Charge Controller allows the SDC Series Battery Charger to operate as an automatic “smart charger,” delivering the charge the battery needs at the time it needs it. The **AmpLife** uses four different charging modes to keep your battery in peak condition:

### BULK STAGE

The Bulk Stage of the **AmpLife** allows the batteries to be charged from the full rated output of the charger (for example: a 12V charger will charge at a maximum of 14.8V\*). This increased charging period reduces the overall charge time of the battery.

### ABSORPTION STAGE

After the Bulk Stage, the **AmpLife** then moves to the Absorption Stage (14.2V for a 12V battery\*). This mode will continue for up to 480 minutes (8 hours) to ensure that the battery receives a complete charge.

### FLOAT STAGE

During the Float Stage, the **AmpLife** reduces the SDC charge voltage. This reduced voltage maintains the full charge while minimizing ‘gassing’ of the battery. The **AmpLife’s** Float Stage prevents boiling and bulging of the battery caused when the battery is exposed to higher charging voltages for too long.

### EQUALIZATION STAGE

If the batteries remain in a “float stage” for a seven-day period, the **AmpLife** will switch the SDC charger into a pre-programmed Equalization Stage. This protects the battery by dissolving any sulfate layer on the battery’s internal plates and avoids stratification that can occur when a battery has not been used for extended periods.

## PRODUCT OVERVIEW

Bulk Stage	Increased charge reduces charge times
Absorption Stage	Ensures a full and complete charge
Float Stage	Maintains the charge while avoiding battery ‘gassing’
Equalization Stage	Periodic charging to prevent sulfating while not in use

## APPLICATION

Clean and safe charge control for maximum battery operation and extended life.

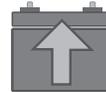
## FEATURES



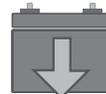
Provides automatic charge control for IOTA SDC Series Battery Chargers.



Reduces charge times.



Helps to prevent gassing, boiling, and bulging of batteries as a result of overcharging



Protects batteries from stratification and from sulfating of battery plates as a result of undercharging.



Backed by IOTA with a full Three-Year Warranty

## ADDITIONAL FEATURES INCLUDE...

- Flashing LED to indicate current charging state.
- For use with any SDC Series Battery Charger.



P.O. BOX 11846 TUCSON, AZ 85734  
 (520) 294-3292 • FAX (520) 741-2837  
[www.iotaengineering.com](http://www.iotaengineering.com)

# AMPLIFE

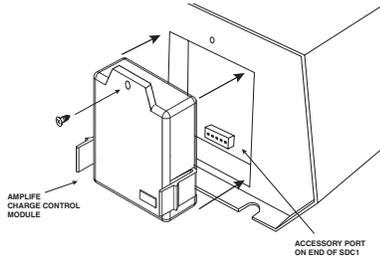
FOUR STAGE SMART CHARGE CONTROLLER

## MODELS

- AL1 AmpLife Charge Controller

## INSTALLATION

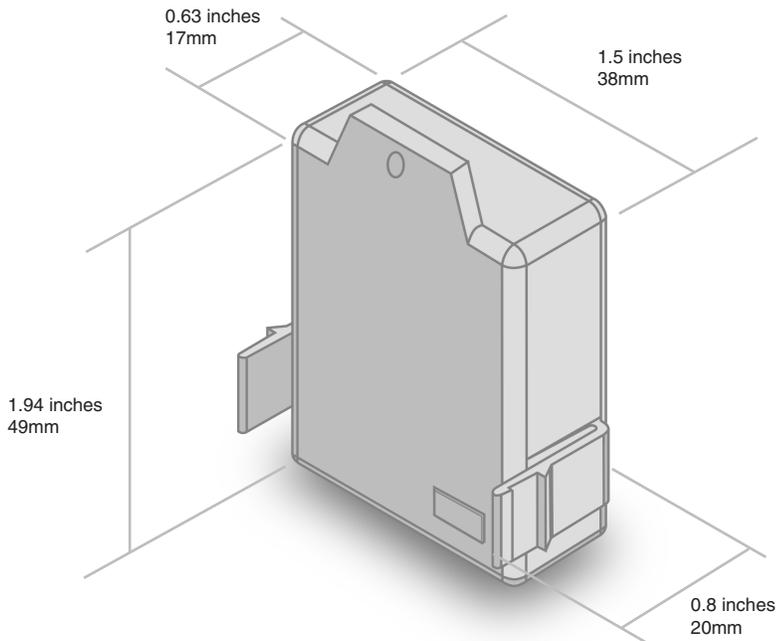
To install an AmpLife module into the charger, remove the fastening screw on the top of the port faceplate and detach the faceplate. Plug the control module into the port and secure in place using the original fastening screw. NOTE: the port faceplate and AmpLife control module are similar in appearance. You can recognize the AmpLife Charge Control Module by the presence of the LED indicator on the face.



## WARRANTY

The **AmpLife** is warranted from defects in materials or workmanship for three years from date of retail purchase, and limits the remedies to repair or replacement. This warranty is valid only in the continental United States and Canada. For complete warranty details, contact Customer Service or visit [www.iotaengineering.com](http://www.iotaengineering.com).

## DIMENSIONS



## CHARGING VOLTAGES

The charging voltage for the different stages varies depending on the voltage of the battery.

BATTERY VOLTAGE	BULK STAGE	ABSORPTION STAGE	FLOAT STAGE
12V	14.8V	14.2V	13.6V
24V	29.6V	28.4V	27.2V

The **Equalization Stage** will cycle the battery through the Bulk and Absorption Stages before returning the battery to the Float Stage.

Overall charging times will vary depending on several factors, such as the capacity of the battery, discharged state of the battery, the amperage of the DLS battery charger, and gauge of wire connections.

The LED Indicator on the **AmpLife** informs the user of the SDC charging state and the battery charge status. When first activated, the **AmpLife** will read the number of cells in the battery and indicate the voltage of the battery through a number of flashes. Refer to the LED Code Table below.

### LED CODE TABLE

#### CELL INDICATION

6 Flashes	12-Volt Battery (6 cells)
12 Flashes	24-Volt Battery (12 cells)

CHARGE PHASE	LED STATUS	VOLTAGE RATE
FLOAT	ON	2.266 per Cell
ABSORPTION	SLOW FLASHING	2.366 per Cell
BULK	RAPID FLASHING	2.466 per Cell