



- Optimal three stage charging
- State of charge / service LEDs
- Low standby battery drain
- Customizable charge algorithm
- Dual - isolated banks
- State of charge current sharing
- Vibration resistant
- Reverse polarity protected
- Over temperature protected
- Over current / voltage protected
- Waterproof / hermetically sealed
- UL/CSA 1236 certified
- Two year warranty



## Description

The CT500-3 is a rugged, waterproof and sophisticated three stage lead-acid battery charger with two isolated banks. With a wide operating temperature range (-20C to 50C) and UL/ CSA 1236 certification, this product is especially suited for high end industrial and marine applications. The CT500-3 is factory programmable to accommodate several charging algorithms and an LED display to indicate status. Total out-

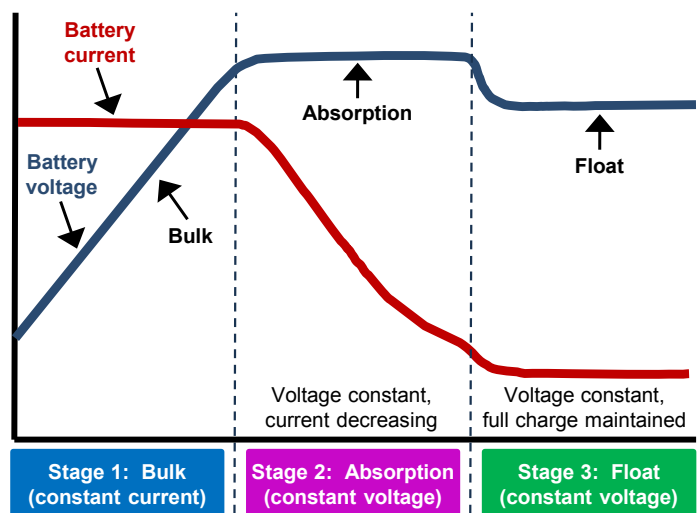
put current is 5 amps and distributed between Bank 1 and Bank 2 depending upon state of charge as 0/5, 5/0, 2.5/2.5 or any other ratio summing to 5 amps. Output current and battery voltage are controlled precisely to insure a complete recharge. The charger may be left connected indefinitely to the battery, maintaining full charge at all times.

## Charging specifications

PARAMETER	DESCRIPTION / CONDITIONS	MIN	NOM	MAX	UNITS
$V_{FSTERM}$	Fast charge termination voltage, 25C	14.4	14.6	14.8	VDC
$V_{FL}$	Float voltage, $I_{OUT} < 1.0 A$ , 25 C	13.2	13.4	13.6	VDC
$I_{FS}$	Fast charge current, $V_{BATTERY} = 24V$	5.0		6.0	Amps
$I_{ABTERM}$	Absorption mode charge termination current, transition from fast to absorption	2.0		2.5	Amps
$I_{FLTERM}$	Float charge termination current	0.85		1.5	Amps
$I_{SBY}$	Standby current, AC off			0.5	ma

**Charging algorithm:** Supplies constant current to battery until  $V_{FSTERM}$  transition to absorption mode follows and regulates battery voltage at  $V_{FSTERM}$  until current decreases to  $I_{ABTERM}$ . Float mode follows and regulates battery voltage at  $V_{FL}$ .

Three stage charging curve



# CT500-3 Datasheet

## Input specifications

PARAMETER	DESCRIPTION / CONDITIONS	MIN	NOM	MAX	UNITS
AC voltage	47 - 63Hz	180	220	250	VAC
Input current	180VAC, 15VDC output		1.2		Amps

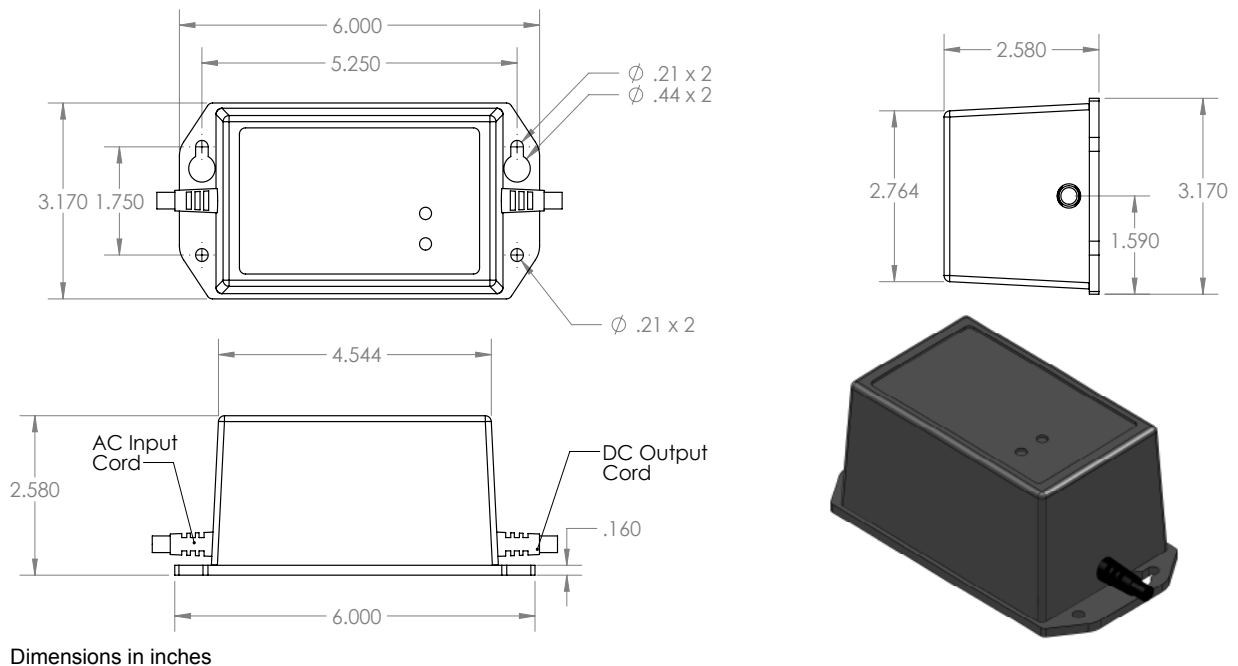
## Environmental specifications

PARAMETER	DESCRIPTION / CONDITIONS
Storage temperature	-40°C - 80°C
Operating temperature	-20°C - 50°C
Relative humidity	0 - 95% relative humidity (non-condensing)
Input to output / chassis voltage isolation	2KV (leakage current less than 1mA)
Output to chassis voltage isolation	50V (can be increased / consult factory)

## LED indicators

PARAMETER	DESCRIPTION	RED	GREEN
Charging mode	Indicates state of charge	Charging	Float
Service indicator	Indicates a charger failure	Fault	

## Outline and mounting



**NOTE:** Chargetek products are not authorized for use as components in life support systems, hazardous environments, nuclear control systems or other similar applications without the express written consent of the President of Chargetek, Inc. The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.