



- Optimal three stage charging
- State of charge / Amp / AC LEDs
- Low standby battery drain
- Customizable charge algorithm
- Optional control / status signals
- Optional temp compensation
- Vibration resistant
- Reverse polarity protected
- Over temperature protected
- Over current / voltage protected
- UL/CSA 1012 certified
- Two year warranty

## Description

The RTIC2405-FC is a rugged, intelligent and sophisticated three state lead-acid battery charger. With a wide operating temperature range (-20°C to 50°C) and UL/CSA1012 certification, this product is especially suited for high end industrial applications. The RTIC2405-FC is factory programmable to accommodate several charging algorithms and an LED display to indicate status. The charger is controlled by an

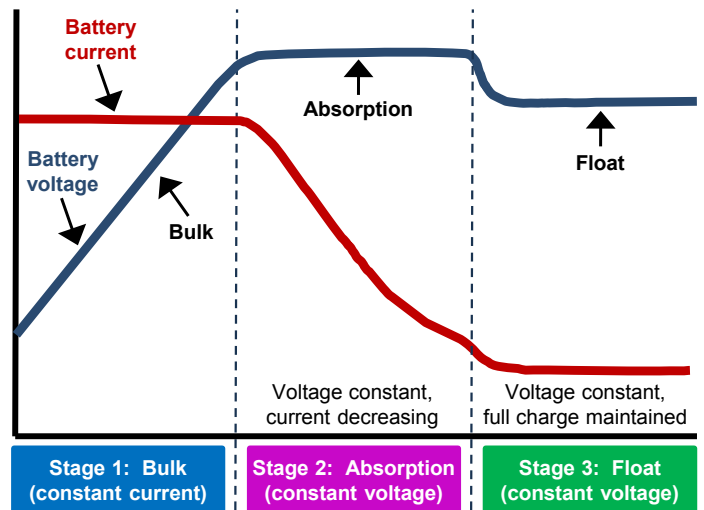
embedded microcontroller that contains software developed by and which is proprietary to Chargetek. The RTIC2405-FC precisely controls charging voltage and current to ensure a complete recharge every time. The charger may be left connected indefinitely to the battery, maintaining full charge at all times.

## Charging specifications

PARAMETER	DESCRIPTION / CONDITIONS	MIN	NOM	MAX	UNITS
$V_{FSTERM}$	Fast charge termination voltage, 25C	58.4	58.8	59.4	VDC
$V_{FL}$	Float voltage, $I_{OUT} < 1.0$ A, 25C	53.6	54.4	54.8	VDC
$I_{FS}$	Fast charge current, $V_{BATTERY} = 24V$	4.5	5.0	5.5	Amps
$I_{ABTERM}$	Absorption mode charge termination current, transition from fast to absorption	1.3	1.5	1.8	Amps
$I_{FLTERM}$	Float charge termination current	0.6	0.8	1.0	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  $I_{AB-TERM}$ . Float mode follows and regulates battery voltage at  $V_{FL}$ .

Three stage charging curve



# RTIC2405-FC Datasheet

## Input specifications

PARAMETER	DESCRIPTION / CONDITIONS	MIN	NOM	MAX	UNITS
AC voltage	47 - 63Hz	180	230	250	VAC
Input current	180VAC, 60VDC output		3.0		Amps

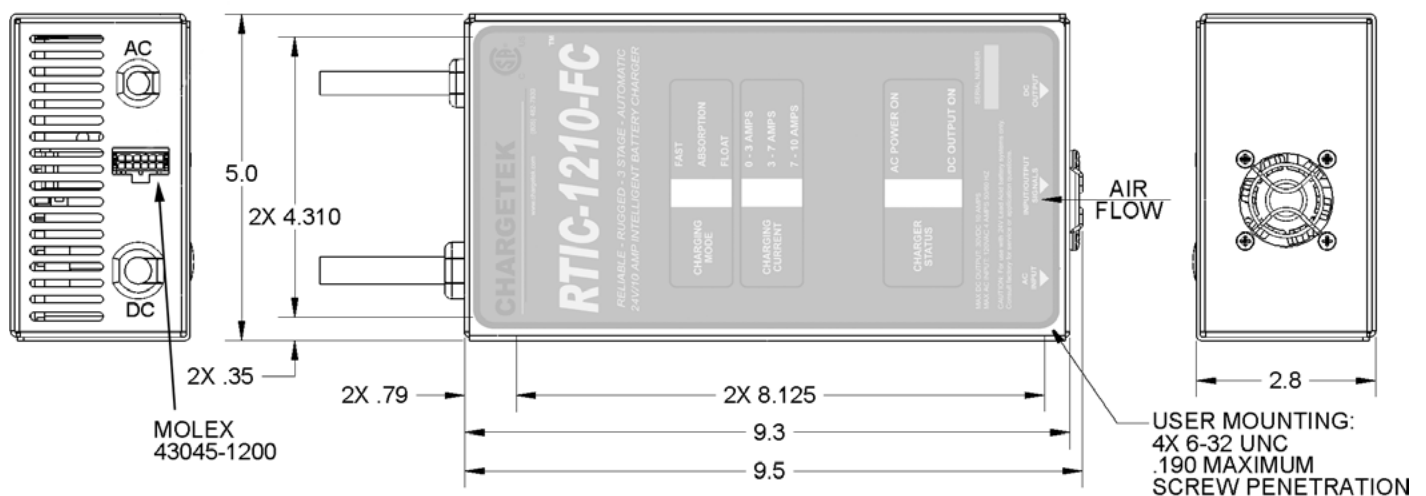
## Environmental specifications

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	YELLOW	GREEN
State of charge	Indicates battery charging status	Bulk	Absorption	Float
Charging current in amps	Indicates battery charging current	4 - 6	2 - 4	0 - 2
Input AC power	Indicates AC power good			On
Battery connected	Indicates battery connected properly			On

## Outline and mounting



Dimensions in inches

**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.

409 Calle San Pablo, Unit 104, Camarillo, CA 93012 Phone: (866) 482-7930 Fax: (805) 482-7936 www.chargetek.com

Rev B. 2014 July 17

Page 2 of 2