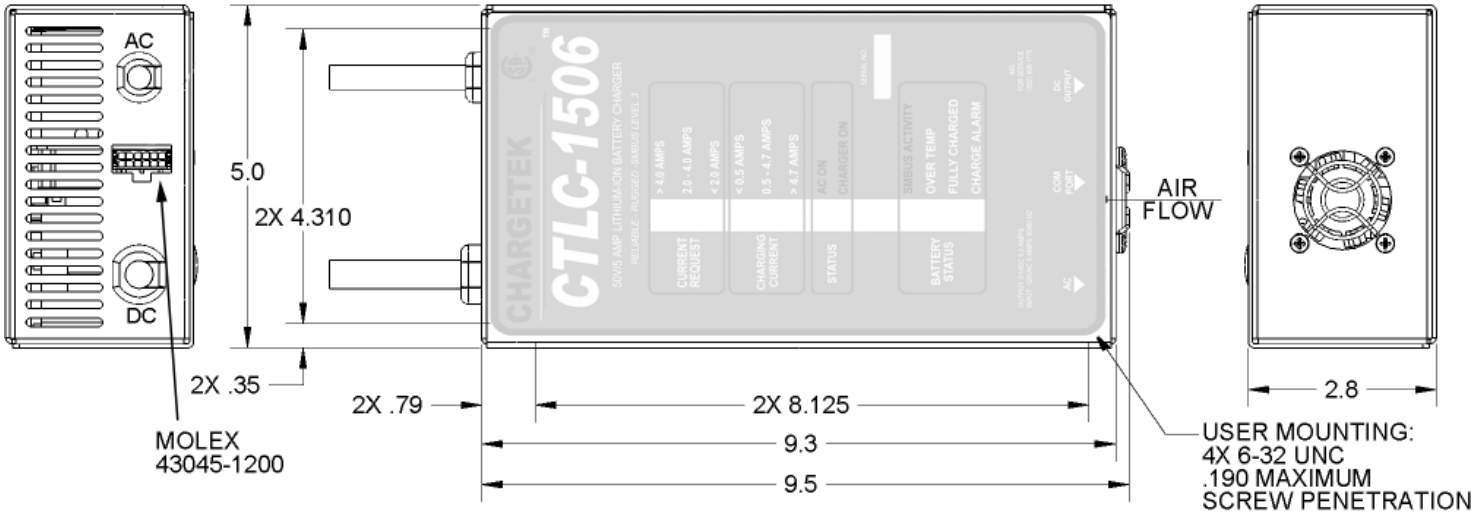
CTLCxxSyy-2 Datasheet

- *Optimal LiIon Charging*
- *State of Charge/Amp/AC LEDs*
- *Low Standby Battery Drain*
- *Fixed voltage/current or SMBus Level 2 or Level 3 operation*
- *220VAC Input*
- *Optional Status Signals*
- *Vibration Resistant*
- *Reverse Polarity Protected*
- *Over Temperature Protected*
- *Over Current/Voltage Protected*
- *UL/CSA Certification Pending*
- *Full Two Year Warranty*

Description

The Chargetek CTLC is a family of rugged, intelligent and sophisticated LiIon battery chargers with a 220VAC input. With a wide operating temperature range (-20C to 50C) and UL/CSA certification pending, this product is especially suited for high end industrial applications. The CTLC precisely controls charging voltage and current to insure a complete recharge every time. The CTLC LiIon charger is available in a number of output voltage/current variations with optional SMBus Level 2, SMB Level 3 communication and controls. Models are available for typical 2S, 4S, 8S, 10S and 12S applications as well as custom configurations. The charger is controlled by an embedded microcontroller that contains software developed by and proprietary to Chargetek. Simplified fixed voltage/current chargers are also available for less demanding applications. The charger may be left connected indefinitely to the battery. A user friendly LED display indicates charging conditions and battery status.

Outline and Mounting



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Input Specifications

PARAMETER	DESCRIPTION/CONDITIONS	MIN	NOM	MAX	UNITS
AC Voltage	Wide range AC input version, 47 - 63Hz	170	220	264	VAC
Input Current	170VAC, 300 Watt Output		4.0		Amps

Environmental Specifications

PARAMETER	DESCRIPTION/CONDITIONS
Storage Temperature	-40C - 80C
Operating Temperature	-20C - 50C
Relative Humidity	0 - 95C Relative Humidity (non-condensing)
Input to Output/Chassis Voltage Isolation	2KV (leakage current less than 1mA)
Output to Chassis Voltage Isolation	100V (can be increased/ consult factory)

LED Indicators (SMBus Version)

PARAMETER	DESCRIPTION	RED	YELLOW	GREEN
Battery Current Request in Amps	Charging current requested by the battery via the SMBus Interface	> 0.8C	0.2C - 0.8C	< 0.2C
Charging Current in Amps	Charger output current	> 0.9C	0.1C - 0.9C	< 0.1C
Green indicators are used for the following functions:				
Status - Charger Enabled	Charge enabled by the battery via the SMBus interface			
Battery Status - SMBus Activity	Solid On - SMBus interface active, Blink - Inactivite for last 45 s, Off - No Communcations			
Battery Status - Over Temperature	Battery reporting over-temperature condition via SMBus interface			
Battery Status - Fully Charged	Battery reporting fully charged, charger is disabled			
Battery Status - Charge Alarm	Battery requested charge off due to overcharge or over temperature condition			

Charging Specifications

When operating as a level 3 charger the CTLC also responds as a slave so it may respond to broadcast messages from the battery. Any charger alarm from the battery shuts down the CTLC until the alarm goes away and the SMBus voltage and current settings are both non-zero. On powerup the CTLC waits for both the voltage and current settings to be non-zero befire enabling charging. If the battery does not respond to commands(level 3) or broadcasts battery voltage/current requests (level 2) for 145 seconds the charger is disabled.

Ordering Information

The 220VAC input CTLC model numbers are in the form CTLC-xxSyy-2, where:

xx - Output Voltage - 3 (12V), 4 (16V), 5 (20V), 6 (24V), 7 (28V), 8 (32V), 9 (36V), 10 (40V), 11 (44V), 12 (48V), 13 (52V), 14 (56V), 15 (60V)

yy - Output Current in amps

For example, the CTCL9S10-2 would be a 220VAC model with an maximum output of 36V at 10 amps

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