



# CS1204B

## 24 Volt 120 Watt Intelligent Battery Charger



### Features/Benefits

- UL- recognized in sealed industrial form factor enclosure.
- 120 watts of continuous power output at 24 volts.
- Charger provides constant voltage (not pulsed) to reduce battery heating and increase battery life.
- Batteries charge twice as fast as conventional 6-amp-rated charger.
- Five software-controlled charging stages including cell preparation, charge qualification, bulk charge, cell balancing, and float charge (when used in system with CSLLC controller).
- LED indicators provide status including improper battery connection, charge timeout, and over-temperature conditions.
- Charger can operate as onboard charger with CSLLC controllers.
- Maintains a full “float” charge in all temperature conditions without damaging batteries.
- Integrated with motor controller to disable motor drive during charging (CSLLC controllers).
- Accurate float charge voltage allows charger to be left connected to batteries indefinitely to maintain full charge.

### Description

24V or series-wired pair of 12V lead acid batteries (24 Amp-Hour or larger). Utilizing an internal microprocessor, the CS1204B charger add multi-stage charging features and monitors the battery conditions to ensure batteries are fully charged without overcharging.

When used as a standalone charger or in conjunction with a Control Solutions CS11XX Motor Controller, the CS1204B battery charger provides a rugged, intelligent solution for charging and maintaining lead-acid batteries. The microprocessor controller in the charger protects against short circuits, voltage surges, reversed battery polarity, and over-temperature to ensure long battery life and safe operation.

The CS1204B intelligent charger has a front panel LEDs, displaying the charging status and diagnostic error codes. When used in conjunction with a CSLLC Motor controller, the battery charger diagnostic codes can also be monitored via the controller’s interface (optional display).

### About Us

We solve the world’s toughest motion control challenges, providing custom solutions focusing on personal mobility and patient transportation products as well as many commercial applications. For over 20 years, Control Solutions LLC has developed a wide array of microprocessor-based control and battery charging solutions designed for flexible integration, feature-rich functionality, and robust performance.



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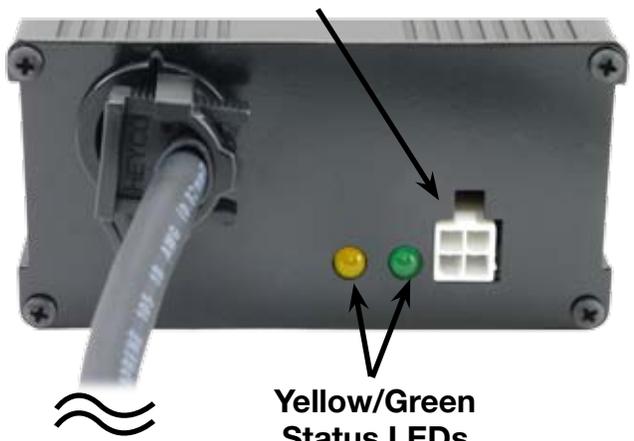
### Specifications

CS1204B Specifications	Unit Of Measure	Min.	Nominal	Max.
Output Bulk Charge	Volts DC	29.9	30	30.1
Output Float Charge	Volts DC	27.4*	27.6*	27.8*
Bulk Charge Current	Amps@24VDC		5.4	
Peak Bulk Charge Current	Amps			7.0
Trickle Charge Current	mA		50	
Input Voltage	Volts AC	90 (50 Hz)	120/220 (60 Hz.)	240 (60 Hz.)
AC Input Current	Amps		1.2/0.6	2.0
Operating Ambient Temperature	°F (°C)	14 (-10)	77 (25)	113 (45)
Dimensions	Inches (mm)		6.5 x 3.8 x 1.9 (165 x 97 x 48)	
Installed weight	Lb. (kg)		2.8 (1.27)	

\* Inversely proportional to ambient temperature – For example: Ambient greater than 25°C= float voltage less than 27.6 volts. Specifications subject to change without notice.

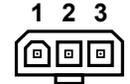
### CS1204B Side Panel

**DC Output and controller interface**  
(Mates to Molex part# 39-01-2045)



**Yellow/Green Status LEDs**

**AC Input**  
(Mates to: Molex part# 39-01-4031)

AC Input	DC Output
1 2 3 	4 3 2 1 
<b>Mates to:</b> Molex 39-01-4031	<b>Mates to:</b> Molex 39-01-2045

DC Output	Color	Connects to . . .
Pin 1	Green	Only CS11XX Controllers
Pin 2	Blue	Only CS11XX Controllers
Pin 3	Red	Battery +
Pin 4	Black	Battery -
AC Input		
Pin 1	White	AC Neutral
Pin 2	Green	AC Earth Ground
Pin 3	Black	AC Power

All specifications subject to change without notice.



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