



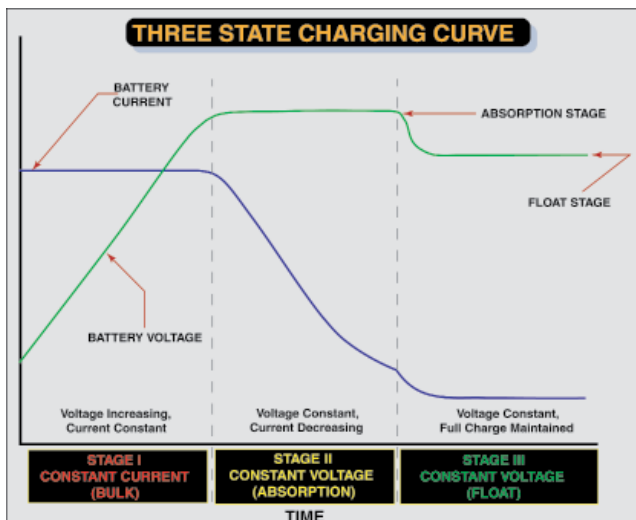
- **Input/Output Transformer Isolated**
- **Eliminates Ground Potential Problems**
- **Low Voltage AC and DC Inputs**
- **Optimal Three State Charging**
- **State of Charge/Service LEDs**
- **Low Standby Battery Drain**
- **Customizable Charge Algorithm**
- **Optional Control/Status Signals**
- **Optional Temperature Compensation**
- **Vibration Resistant**
- **Reverse Polarity Protected**
- **Over Temperature Protected**
- **Over Current/Voltage Protected**
- **Waterproof-Hermetically Sealed**
- **Full Two Year Warranty**

Description

The CKV WP Series is a DC/DC battery charger line designed pursuant to customization and flexibility. With the ability to accept low voltage AC and DC inputs, diverse requirements ranging from marine to automotive can be met. The input and output are transformer isolated, eliminating ground loops and allowing battery charging at potentials not referenced to the input. With

a wide operating temperature range (-20C to 50C), the charger is especially suited for high end industrial applications. The CKV WP 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 proprietary to Charge Tek.

Charging Specifications



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} . The table on the following page provides general specifications for a model CKVWP-WXYZ where XY is the battery voltage and Z is the charging current.

| PARAMETER | DESCRIPTION/CONDITIONS | MIN | NOM | MAX | UNITS |
|--------------|--|----------------|------------|----------------|-------|
| V_{FSTERM} | Fast charge termination voltage, 25C | 2.4V/cell | 2.43V/cell | 2.46V/cell | VDC |
| V_{FL} | Float voltage, $I_{OUT} < I_{FS}$, 25 C | 2.23V/cell | 2.25V/cell | 2.28V/cell | VDC |
| I_{FS} | Fast charge current, $V_{BATTERY} = XY$ Volts | Z | | Z+10% | Amps |
| I_{ABTERM} | Absorption mode charge termination current, Transition from Fast to Absorption | $0.4 * I_{FS}$ | | $0.5 * I_{FS}$ | Amps |
| I_{FLTERM} | Float charge termination current | $0.3 * I_{FS}$ | | $0.4 * I_{FS}$ | Amps |
| I_{SBY} | Standby Current, AC Off | | | 0.5 | ma |

CKV WP Battery Chargers

Available Input and Output Voltage Specifications

CKV WP Model Numbers are in the form CKV-WXYZ-O, where W specifies the input voltage, XY specifies the output voltage, Z specifies the output current and O specifies options (consult factory for temperature compensation and status output option availability). The available input voltage ranges are shown below:

| W | Model Number | DC Input Voltage Range | AC Input Voltage Range |
|---|--------------|------------------------|------------------------|
| 1 | CKVWP-1XYZ | 8VDC - 20VDC | 7VAC - 14VAC |
| 2 | CKVWP-2XYZ | 16VDC - 30VDC | 10VAC - 28VAC |
| 3 | CKVWP-3XYZ | 36VDC - 80VDC | 24VAC - 56VAC |
| 4 | CKVWP-4XYZ | 72VDC - 140VDC | 42VAC - 84VAC |

Standard models are follows (W is selected from table above):

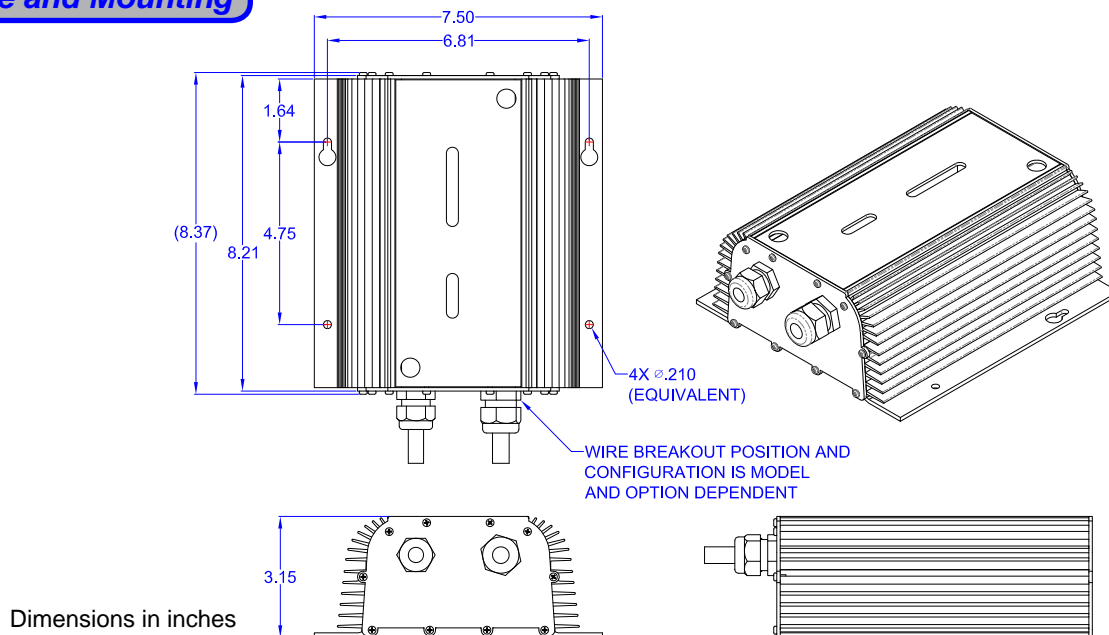
12V @ 20.0 Amps - CKVWP-W1220 24V @ 10.0 Amps - CKVWP-W2410
 36V @ 7.0 Amps - CKVWP-W367 48V @ 5.0 Amps - CKVWP-W485

Special output configurations are available, please consult Chargetek for volume requirements.

Environmental Specifications

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

Outline and Mounting



PLEASE 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.

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