

(Full Enclosure)



(Open Enclosure)

## AC Battery Chargers

### FBCS-2K Forklift Battery Charging System

#### Benefits

- Ultra-Quiet
- Compact and Lightweight
- Rugged & Reliable
- Ensure years of safe and trouble free operation
- Provides a fast & accurate charge

#### Applications

- Forklift Charging Stations
- Materials Handling Facilities
- Electric Utilities and Manufacturing Plants
- OEM Applications

#### Description

The FBCS-2K Forklift Battery Charging System provides up to 2000 watts to charge a 12, 24, 32, or 48 Volt battery system from a 110 or 220VAC source. The batteries must share a common ground.

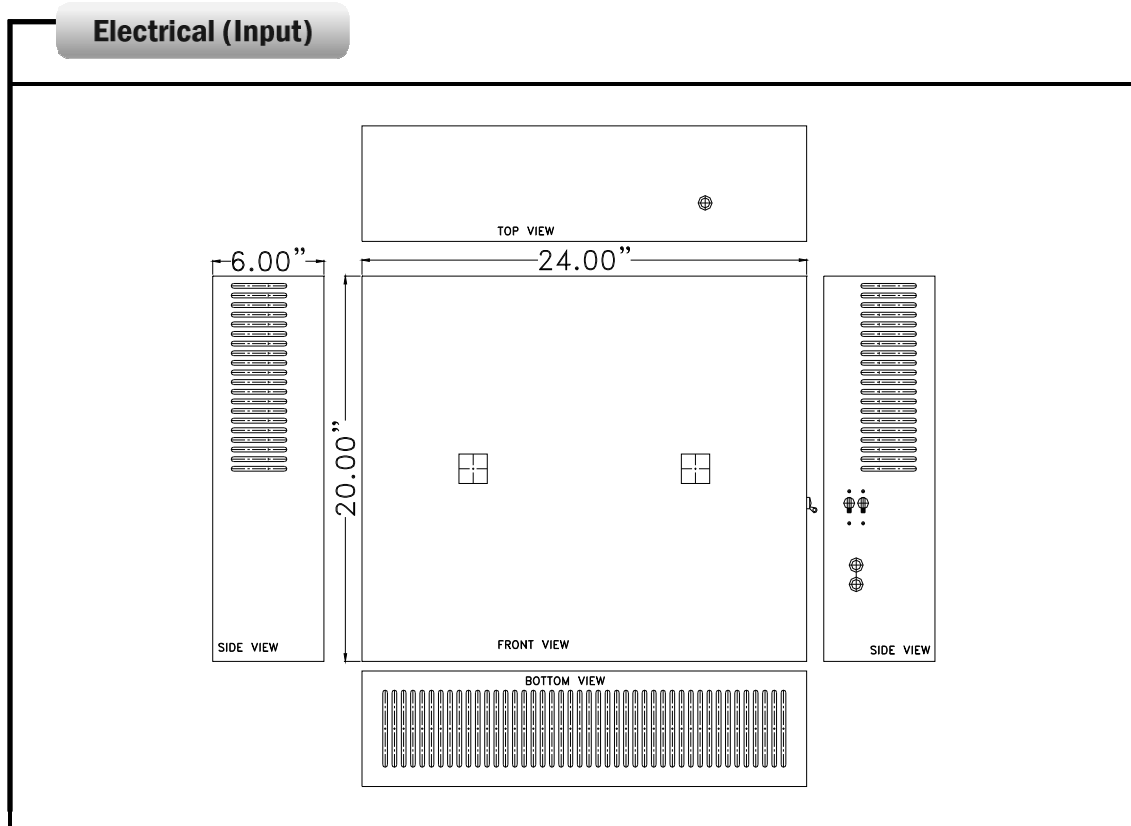
This all-new single board design incorporates state-of-the-art, switchmode technology for unmatched efficiency and ultra-quiet operation. Multiple stages of filtering reduce radiated or conducted noise to very low levels. Extra features include adjustable output voltage, audible and visual indicators for low input voltage, low output voltage, over temperature and an equalize charging cycle. Safety features include both charger and battery over-temperature shutdown, current limiting, short circuit protection with automatic recovery, input undervoltage shutdown, reverse battery hook-up protection, a dry contact alarm relay output, output overvoltage crowbar, as well as added silicone and conformal spray.

All units come standard with two precision Digital Volt/Ammeters and two Battery Temperature Sensors. We are confident that you will get many years of reliable service from this AC Battery Charging System.

#### Features

- Built for industrial plant and harsh shop environments
- Factory adjusted output voltage for charging standard or deep cycle lead-acid, VRLA or Gel cell type battery
- Temperature compensated charging
- High tolerance for shock and vibration
- Ultra-quiet, low EMI operation
- Can be left permanently connected
- 2-stage charger
- Dry contact output fail relay
- Conformally Sprayed
- Audible & visual indicators for output overload, low input voltage, low output voltage & over-temperature
- Over-temperature shutdown
- Short circuit protection
- Output over-voltage crowbar
- Inrush Current Limiting with solid state bypass
- Thermostatically controlled fans
- 3 year parts and labour warranty

# FBCS-2K Series Battery Charging System



## Specification

### Electrical (Input)

<b>Nominal Vac (ip)</b>	110	208	220
<b>Actual (Vac)</b>	105-125	190-230	210-250
<b>Input Amps (max)</b>	27.6	16.0	13.8
<b>Input Fuse (MDA)</b>	20A x2	10A x2	10A x2
<b>Input Frequency</b>	45-65 Hz		
<b>Noise on Input</b>	< 50 mV		

### Environmental Specification

<b>Operating Temp. Range</b>	-25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide temp. operation avail.)
<b>Humidity</b>	0 - 95°C Relative Humidity (non-condensing) with standard conformal coating
<b>Audible Noise</b>	NONE Ødb @ 3 ft (34.5 dB when fan operating)
<b>Typical Service Life</b>	> 10 yrs. (87,600 hrs)
<b>Isolation</b>	Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500VDC for 48V O/P)

### Electrical (Output)

<b>Output Nominal (op)</b>	12	24	32	48
<b>Output Volts (DC)</b>	13.6	27.2	36.3	54.4
<b>Absorption Voltage (Vdc)</b>	14.4	28.8	38.4	57.6
<b>Charging Amps</b>	120	80	60	40
<b>Output Adjustment (Vdc)</b>	± 1.0V			
<b>Output Fuses (ATC)</b>	(40 x 2) x 2	(40 x 2) x 2	(40 x 2) x 2	(30 x 2) x 2
<b>Battery Banks</b>	1 or 2 (3 Bank Option Available)			
<b>Output Crowbar</b>	16.0 ± 0.5V	32.0 ± 1.0V	42.7 ± 1.3V	63.9 ± 2.0V
<b>Battery Size (Amp Hrs.)</b>	480 - 720	320 - 480	240 - 360	160 - 240
<b>Output Ripple &amp; Noise</b>	< 50 mV			
<b>Regulation (Line &amp; Load)</b>	< +/- 0.5%			
<b>Temperature Comp.</b>	-30 mV/°C	-60 mV/°C	-80 mV/°C	-120 mV/°C
<b>Duty Cycle</b>	Continuous 100% for 24 hours per day			
<b>Efficiency</b>	> 75% @ Maximum Output			
<b>Stages</b>	2			

### Mechanical Specification

<b>Length</b>	24.0 in / 61.0 cm
<b>Width</b>	20.0 in / 50.8 cm
<b>Depth</b>	6.0 in / 15.3 cm
<b>Clearance</b>	1 inch (2.5 cm) all around
<b>Material</b>	Marine Grade Aluminium
<b>Finish</b>	Black Anodize / Powder Epoxy Coat
<b>Fastenings</b>	All 18-8 Stainless Steel
<b>Weight</b>	30.0 lb / 15.0 kg
<b>Connections</b>	Anderson Output Connectors
<b>Warranty</b>	3 years
<b>Safety</b>	Approval to CSA/UL Standard pending (Contact us for info)

Available from:



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[www.analyticssystem.com](http://www.analyticssystem.com)

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