BATTERY CHARGERS for NUCLEAR PLANTS

- **DC Voltages-24, 48, 110, 130, 220, & 260 VDC**
- **Thyristor-Based Operation -Full-Wave Rectifier (6 Pulse)**
- **DC Output Isolated from AC Input**
- **Output Filter**
- **Battery Overcharge Protection**
- **Wide Range of Options**
- **Seismic and Environmental Qualifications to meet your 1E Safety Related Applications**
- **Replacement in existing Charger footprints are accommodated**

Solidstate Controls, Inc. (SCI) has designed, manufactured and maintained hundreds of safety related, (1E) and non-safety, yet essential, Battery Chargers in Nuclear generating facilities around the globe. Each application requires a unique set of solutions in which SCI will help create the optimum Battery Charger System for your plant. SCI Battery Chargers are thyristor-based systems designed for high-efficiency conversion (>90%) of commercial AC power to DC power, for charging station type batteries. They are also compatible with our inverter systems to be used as an Uninterruptible Power System (UPS) as a float system, or as stand alone Charger for DC only applications. All models are equally compatible with all lead acid type batteries including, lead calcium & antimony, nickel cadmium, or valve regulated for station DC systems.

A dry type isolation transformer is used to isolate the DC output from the AC input and to provide the proper voltage for the rectification process. Standard output ripple filter, 2% with battery connected, is provided. Optional low ripple and battery eliminator low ripple options are available. The Charger can also be utilized, and packaged, with incorporation of a blocking diode, as a regulated rectifier package in SCI inverters.

We are available to create solutions to solve your specific problems.

Phone: 1-614-846-7500
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or
Please visit our website(s) for more information and assistance from the Nuclear Engineering Team.

www.solidstatecontrolsinc.com
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CERTIFIED ISO 9001

INTERTEK

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General Specifications

Cabinet
NEMA-1 (IP-20), Seismic Grade

Cable Entry/Termination
Top (rear) Standard
Optional Bottom (front), side and custom entry/termination locations available.....consult the Factory

Environmental

Ambient Temp.:	0°C to 40°C (50°C optional)
Relative Humidity:	0-95% non-condensing
Operating Altitude:	0 to 2500 meters (0-8300 ft.)
Audible Noise:	<60 dB(A) at 1 meter

AC Input

Voltages:	208, 220, 380, 415, 480 & 600 VAC/3-phase, 3 wire *custom voltages available
Range:	+10, -10% for 1% output regulation
Range: Optional	+10, -15% additional ranges available
Frequency:	50 or 60 Hz ±5%

DC Output

Float Voltage:	135, 270 ±5% adjustment
Equalize Voltage:	140, 280 ±5% adjustment *custom output voltages available
Regulation (Float):	±1.0%
Regulation (Equalize):	±1.0%
Ripple:	<2% RMS with battery connected per NEMA PE-5 *optional & custom ripple filters available
Current Limit:	Factory set at 125%, adjustable from 50-135%

Controls
Float/Equalize Push buttons 0-100 Hr Equalize Timer, manual start, auto reset. Independent float and equalize potentiometers on front panel

Standard Features

Circuit Breakers
AC Input: 3 pole molded case (Rated 14 KAIC)
DC Output: 2 pole molded case (Rated 10 KAIC)
(High KAIC ratings optional-*Consult the Factory)

Meters (2% Panel type)
DC Output Voltmeter
DC Output Ammeter
Custom meter locations and meter types available including 1% switchboard and digital. *Consult the Factory

Indicators and Alarms
Standard "LED" Indicators
Isolated Form "C" Contacts

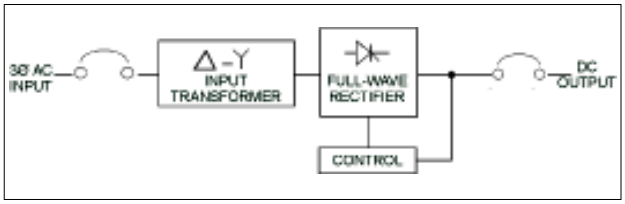
Custom Capabilities
Modular packaging for limited installation access
Multiple alarm capabilities
Fail safe alarms
Custom metering
Transducers
Mimic panels
Louvered recessed breakers
Annunicators

Additional sizes up to 1200 AMPS available-Consult Factory

							Weight (est)			
	Output	AC/DC	Cabinet Style		Heat Loss (Watts)		130 VDC		260 VDC	
Model	Amps	%Eff	130VDC	260VDC	130VDC	260VDC	Lbs.	Kg.	Lbs.	Kg.
85-CC0500-XX	50	91	D	D	642	1200	615	278	740	336
85-CC0750-XX	75	91	D	D	964	1760	720	326	940	426
85-CC1000-XX	100	92	D	D	1100	2100	765	347	975	442
85-CC1500-XX	150	93	D	D	1400	2750	940	426	1365	619
85-CC2000-XX	200	93	A	G	1830	3650	1255	569	1955	887
85-CC3000-XX	300	94	A	G	2350	4580	1535	696	2680	1216
85-CC4000-XX	400	94	G	H	3100	6250	1720	780	2960	1343
85-CC5000-XX	500	94	H	H	3900	7800	1950	885	3535	1603
85-CC6000-XX	600	94	H	GH	4700	9300	2565	1163	4650	2109

*Weight of 60 Hz units, 50 Hz 7% more 24 & 48 VDC also available...consult the factory- Larger sizes also available **Cabinet styles subject to change based on selection of filters and options

* Custom enclosures and dimensions are available to meet your specific needs. Please consult the Nuclear Engineering Team at Solidstate Controls, Inc. for assistance.



Battery Charger Block Diagram

Standard Cabinet Dimensions*

Cabinet Style	Inches (mm) H		W		D	Cabinet Style	Inches(mm) H		W		D
D	57 (1448	x x	29 737	x x	28 711)	G	85 (2159	x x	29 737	x x	36 914)
A	78 (1981	x x	29 737	x x	36 914)	H	85 (2159	x x	56 1422	x x	36 914)
GH	85 (2159	x x	85 2159	x x	36 914)						

Specifications subject to change without notice

11/2001