



Electro Service (India)
An ISO 9001:2015 Company



FLOAT CUM BOOST BATTERY CHARGER **(For Stand By Application)**

Battery Charger, when used in stand by application is not a stand-alone dedicated battery charger. Here battery charger along with a floating battery provides uninterrupted DC power supply to a critical load, such as supply to telecommunication & signaling equipment, SCADA network or supply to HV switch gear etc.

These types of chargers are popularly known as Float-cum-Boost battery charger or FCBC. An FCBC feeds the critical load as well as charges the battery. In the event of power outage battery feeds the load without any break in supply to the load. When mains power supply resumes, FCBC charges the discharged battery and feeds the load.

In most of the applications connected load is not only critical to supply interruption but also to voltage fluctuation and superimposed ac ripple.

There are various topologies of Float cum boost Chargers.
Most popular among those are:

- Float cum boost battery charger with one rectifier
- Float and boost battery charger with two rectifiers
- Dual Float cum boost battery charger with 100% redundancy but with alternative float/boost selection
- Dual Float cum boost battery charger with parallel operation
- 2 FCBC with 2 Battery sets, but feeding a single load bus

In ESI we design and manufacture Thyristor controlled Float Chargers up to 400V, 300KW of each rectifier.



"Quality Endures"

Warranty – Unconditional 12 months with life time service support



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SALIENT FEATURES OF ESI MAKE AUTOMATIC THYRISTOR CONTROLLED

- ESI make “Float-and-Boost” and “Float-cum-Boost” Battery chargers are fully automatic.
- Automatic commencement and termination of battery charging or automatic float/boost mode selection by the microcontroller protects battery from deep discharge and over charging.
- In “Float-and-Boost” version when Float charger fails Boost charger switches automatically to “Float-cum-Boost” mode with an audio alert but maintains a complete no-break supply to critical and sensitive load. That is boost charger operates as spare float charger in auto emergency float mode.
- Full wave fully controlled rectifier configuration in three phase version for better reliability and low inherent ripple.
- Separate analogue P & I Controller for precise adjustment of transient response.
- Test points provided on PCB to enable easy troubleshooting.
- All supervisory fault sensing, relay change over, alarm annunciation circuits are controlled by a 40-pin high end micro-controller IC. This has eliminated false alarm and hunting. Microcontroller has reduced the component failure drastically and increased the reliability of the system.
- All the battery chargers are normally air cooled but have the provision of current controlled fan cooling, which maintains an excellent thermal stability of the system.
- Phase fail cum phase sequence reversal PCB is digital and operates in an wide input voltage variation.
- Pluggable pin connectors and edge connectors used for fast replacement of PCB.
- All components within the panel are laid out with sufficient space for easy maintenance and better ventilation.
- Comprehensive user’s manual with trouble shooting chart and detailed drawings are furnished to end user for easy maintenance.

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RATING:

- Input supply – 3 phase, 415V or 1 phase, 230V
- DC output voltage (nominal): Suitable for any Battery bank – 24/30/48/110/220V
- DC output current: From 5A to 800A

TECHNOLOGY USED:

- 3 Phase 6 pulse thyristor converter
- Single phase half controlled thyristor converter
- 2 Switch forward converter in SMPS

APPLICATION:

- Power stations or power plants
- Cement Plants
- Transmitting and distributing stations
- Steel Plants
- Telecom installations
- Anywhere for uninterrupted D.C. supply
- Switchyards
- As a part of the UPS Equipment
- Petrochemicals
- Oil sector
- Educational institutions
- Hospitals, etc



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