



**GROW CONTROL
POWER TECH PVT. LTD.**

We Provide Solutions....

AN ISO 9001:2015 COMPANY



FLOAT CUM BOOST CHARGER



GROW CONTROL is a research-based power electronics organization that blends technology, innovation, and engineering to transform concepts into world class products and solutions.

GROW CONTROL Float Cum Boost Charger (FCBC) is a state-of-the-art, dual-functional power supply that combines the benefits of a float charger and a boost charger. This compact, efficient, and reliable charger is designed to charge and maintain lead-acid batteries, as well as boost charge them to the desired voltage.

GROW CONTROL Float Cum Boost Charger (FCBC) offers a high-performance solution for a variety of applications requiring efficient and reliable frequency conversion. Utilizing **indigenous technology**, these converters are engineered to meet the demands of industrial, research, and defense sectors, delivering exceptional performance and versatility.

Features

- **Float Charging:** Provides constant, low-voltage charging to maintain battery health and prevent overcharging.
- **Boost Charging:** Quickly and safely charges batteries to the desired voltage level, ideal for applications requiring rapid charging.
- **Compact Design:** Space-saving design makes it ideal for use in a variety of applications.
- **Efficient:** High efficiency rates reduce energy loss and heat generation.
- **Reliable:** Durable construction and built-in protection circuits ensure reliable operation and prevent damage to batteries and the charger.
- **Easy to Use:** Simple and intuitive controls make it easy to select the desired charging mode.
- **Multi-Voltage Compatibility:** Charges and maintains batteries of various voltages (e.g., 12V, 24V, 48V).
- **EMI/EMC Compliance:** Designed to meet MIL-STD-461 and EN 55022 standards, ensuring minimal electromagnetic interference.

Key Advantages

1. Indigenous Technology:

Developed and manufactured in India, tailored to meet local industry needs with accessible support and customization options.

2. Versatile Applications:

Ideal for a wide range of applications, from industrial machinery to renewable energy systems, providing flexibility in usage.

3. High Reliability:

Engineered for durability and stability, ensuring consistent performance in demanding operational environments.

4. Energy Efficient:

Low power losses translate to reduced operational costs and enhanced sustainability, making it an environmentally friendly choice.

5. Comprehensive Customization:

GROW CONTROL offers tailored solutions to meet specific operational requirements, ensuring optimal functionality for every application.

Applications

1. Industrial Drives:

Provides precise frequency control for motor drives, improving efficiency and performance in manufacturing processes.

2. Renewable Energy Systems:

Essential for wind and solar applications, enabling the integration of renewable energy sources into the grid.

3. Telecommunications:

Supports frequency conversion in telecom systems, ensuring reliable transmission and reception of signals.

4. Defense Systems:

Used in various defense applications requiring reliable frequency conversion for radar, communication, and electronic warfare systems.

5. Aerospace Applications:

Ideal for converting frequencies in aerospace systems, enhancing operational reliability and efficiency.

6. Research and Development:

Supports experimental setups in research laboratories requiring precise frequency control and conversion.

Customization Options

GROW CONTROL provides a variety of customization options for the Float Cum Boost Charger (FCBC) to accommodate specific application requirements:

- **Custom Input and Output Frequency Ranges**
- **Enhanced Control Algorithms for Specific Applications**
- **Integrated Monitoring Systems** for real-time feedback
- **Optimized Cooling Solutions**
- **Modular Configurations for Scalable Power Ratings**
- **Additional Communication Interfaces** for enhanced integration

Our engineering team works closely with clients to deliver tailored solutions that precisely fit their operational needs, ensuring optimal performance and compatibility.

Why Choose **GROW CONTROL**?

- **Indigenous Expertise:** Tailored to meet Indian industry standards with local support for customization and maintenance.
- **Reliable and Efficient:** Designed for stability and high efficiency, ensuring consistent power delivery for critical applications.
- **Low Maintenance Requirements:** Durable design reduces wear and tear, minimizing downtime and maintenance costs.
- **Energy Efficient and Cost-Effective:** Low energy losses lead to cost savings and enhanced operational efficiency.
- **Customer Support:** From initial design consultation to installation and ongoing support, **GROW CONTROL** offers a full range of services.

Certifications

- **MIL-STD-810** – Environmental Testing Standards
- **MIL-STD-461** – Electromagnetic Compatibility Standards
- **EN 55022** – EMI Compliance
- **ISO 9001:2015** – Quality Management Systems



**GROW CONTROL
POWER TECH PVT. LTD.**

We Provide Solutions....

Technical Specification

| | |
|---------------------------------------|--|
| Model no | GCPT60FCBC |
| Nominal Voltage | 415V AC $\pm 10\%$, 4 wire |
| Frequency | 50Hz $\pm 5\%$, |
| Output voltage | 48V |
| Float voltage adjustment | 80% to 115% of nominal |
| Boost voltage adjustment | 80% to 115% of nominal |
| Output current | 120A |
| Ripple | <3% RMS |
| Regulation | Within $\pm 1\%$ according to variation of input AC main supply |
| Rectifier bridge | Full wave half controlled or full wave full controlled |
| Efficiency | Better than 80% at full load |
| Noise level | <65dBA natural cooling and 75dBA for forced cooling |
| Protection | <ul style="list-style-type: none">• Short circuit• Over load• Over current• Over temperature |
| Temperature range of operation | -20 to 55°C |
| Storage temperature | -30 to 70°C |
| Humidity | 0 to 95% RH non-condensing |
| Options | <ul style="list-style-type: none">• Frequency: 60Hz• Ambient temperature: 50°C• Computer connectivity : RS485• Redundant cooling fans• LCD display with keyboard for setting |



**GROW CONTROL
POWER TECH PVT. LTD.**

We Provide Solutions....

| | |
|------------|-------------------------|
| | parameters of charger |
| Indication | • DC distribution board |
| | • Float |
| | • Boost |
| | • Battery low |
| | • DC High |

