

AN ISO 9001:2015 COMPANY



CHARGING DISCHARGING DEVICE



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

GROW CONTROL Charging Discharging Device is a versatile electronic tool designed to manage and control the charging and discharging cycles of batteries, capacitors, and other energy storage devices. It ensures optimal performance, extends battery life, and provides accurate data for monitoring energy flow. This device is essential for industries requiring precise energy management, such as electric vehicles, renewable energy systems, and telecommunications.

Features

- Automatic Charging/Discharging Cycles: Seamless operation for both charging and discharging processes.
- **Real-time Monitoring:** Continuous tracking of voltage, current, and temperature to ensure safe operation.
- **Adjustable Parameters:** Customizable charging and discharging rates for different applications.
- **Safety Protections:** Overcharge, over-discharge, short-circuit, and thermal protections to prevent damage.
- **Energy Efficiency:** Optimized processes to maximize battery lifespan and energy use.

Key Advantages

1. Extended Battery Life:

Proper charge/discharge cycles reduce wear and tear, improving battery longevity.

2. Improved Safety:

Protection mechanisms ensure safe operation, preventing damage or hazards.

3. Cost-effective:

Reduces the need for frequent battery replacements and improves operational efficiency.

4. Enhanced Performance:

Maintains optimal voltage and capacity, maximizing energy storage efficiency.



Applications

1. Flight Battery Charging and Discharging for Optimal Performance:

Efficient charging and discharging of flight batteries are critical for maximizing performance, longevity, and reliability. Advanced power management systems ensure precise control, optimizing energy transfer while preventing overcharging or deep discharging. This is essential for aerospace applications, where efficiency, safety, and durability are paramount.

- 2. Electric Vehicles: Optimizes battery usage for efficient vehicle performance.
- 3. Renewable Energy Systems: Manages energy storage for solar and wind power setups.
- 4. Telecommunications:

Powers backup systems with controlled battery management.

5. Consumer Electronics:

Used in devices like laptops and smartphones to optimize battery life.

6. Power Tools: Ensures efficient power management for cordle

Ensures efficient power management for cordless tools.

Customization Options

GROW CONTROL provides a variety of customization options for the Charging Discharging Device to accommodate specific application requirements:

- Custom Input and Output
- Enhanced Control Algorithms for Specific Applications
- Integrated Monitoring Systems for real-time feedback
- **Optimized Cooling Solutions** (Air or liquid)
- 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



Technical Specification

Model no	GCPT-IPR-BCH	GCPT-ZRU-BCH
Input Voltage	220VAC / -27VDC	198-242VAC / 24-33V DC
Operations	Mode1, Mode2	Mode1, Mode2
Mode1		
Discharging current	0.5Amps	260±30mA
Discharging end voltage	10 V	6.0±0.2V
Charging current	0.25Amps	130±20mA
Charging end voltage	14 .5 V	9.4-0.2V
Charge time	14 Hrs	15 Hrs
Mode2		
Recharging current	0.8Amps	260±30mA
Recharging end voltage	10 V	-
Charging current	1Amps	-
Charging end voltage	1 4 .5 V	
Charge time	3hr	1 Hr



OUR CLIENTS



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