**GRP Intess Telco Graphene Power**

**Introducing the GRP Intess Telco Series: Revolutionary Graphene Power Batteries with Integrated Smart Battery Management, Engineered by GRP Battery.**

**The Intess Telco graphene power battery heralds a groundbreaking leap in energy storage technology, meticulously designed for the precise needs of base stations and data warehouses. This exceptional battery capitalizes on the incredible properties of graphene to deliver an uninterrupted power supply for all your BTS equipment and server systems.**

**With its remarkable fast-charging capabilities, the Graphene Power battery guarantees constant backup power, even in the face of volatile grid conditions. A quick recharge during brief breaks is all it takes to keep your equipment running smoothly throughout the day, eliminating the need for additional backup batteries or backup generators.**

**In contrast to traditional lead-acid or lithium batteries, the Graphene Power Battery offers substantial benefits. It is notably lighter, boasts an extended lifespan of up to 20,000 cycles, and is accompanied by an impressive 15-year warranty. Furthermore, it demands no maintenance, presenting a hassle-free solution for your energy storage requirements.**

**GRP offers a comprehensive range of graphene power batteries, accommodating diverse equipment sizes and voltage specifications:**

* **Voltage Range: 12 to 48 Volts**
* **Power Output: 10 to 2MW**

**Each variant of the Intess Telco Graphene power battery is designed to seamlessly integrate into a standard 19” rack, eliminating the need for additional battery compartments.**

**The GRP Intess Telco Graphene battery stands as the ultimate solution to guarantee uninterrupted and enduring equipment operation, establishing new benchmarks for efficiency and reliability in the industry.**

A black box with a red knob

Description automatically generatedA black and red electrical equipment

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SUPER CAPACITOR MODULE TECHNICAL DATA SHEET

Part Number: SY48V5KWh50E | Version Date: April 2023

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# Scope

This Specification is applied to Super capacitor Battery Pack manufactured for GRP Battery.

# Ratings

|  |  |  |  |
| --- | --- | --- | --- |
| **Part Number** | | **SY48V5KWH50E** | **Remark** |
| Nominal Capacity | | 100Ah | ±5% @25℃ |
| Nominal Voltage | | 51.2V | --- |
| Nominal Energy | | 5.12Kwh | --- |
| Upper volatge | | 57.6V |  |
| Low voltage | | 41.6V |  |
| Pack resistance | | < 50 mΩ | @ 1KHz AC，50% SOC |
| Max. Continuous Charge | | 100A |  |
| Max. Continuous Discharge | | 100A |  |
| Peak dis current | | 120A | ：@50%soc ，10s |
| Weight | | 45kg |  |
| Projected Cycle Life ( 25℃) | | 20,000 times |  |
| Warranty | | 15 years |  |
| Self-discharge Rate | | 2% per month |  |
| Cooling | | Natural cooling |  |
| Case material | | Steel case |  |
| Storage Temperature | | -20℃~40 ℃ | SOC>30%，one full charge needed per two months |
| Storage Humidity | | 25% ~ 95%RH | --- |
| Operating Temperature | Discharge | "-20 ℃~60 ℃ | --- |
| Charge | 0 ℃~55 ℃ | --- |
| Dimension（mm） | | 560\*730\*133 |  |

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1. **System electrical diagram**

The system is function modularity design.

1. The interface of charge and discharge is integrated.
2. The cell voltage and battery temperature is detected by BMS.

A diagram of a control unit

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# Caution

* 1. Place the battery out of the reach of children and infants.
  2. Do not place the battery in microwave ovens or other similar appliances.
  3. Do not remove the product label.
  4. Do not attempt to open or service the battery pack.
  5. Do not expose to temperatures above 80oC.
  6. Do not short-circuit the positive and negative terminals of the battery with wire or other metallic objects. Do not transport or store the battery with metallic items.
  7. Do not expose the battery to direct heat or flame, and do not use or store it near a fire or a location, subject to high temperatures. In addition, do not immerse or dampen the battery in water, saltwater, or any other liquid.
  8. Do not puncture the battery with any sharp objects, hit it with a hammering device or similar device, step on it, drop it or subject it to strong shock.
  9. Do not use battery if it is damaged or deformed.
  10. Immediately cease use of the battery if it produces strange smells or smokes or becomes abnormally hot.
  11. If the battery fluids leak and come into contact with an eye, do not rub the eye and immediately flush it with plenty of water before seeking medical assistance.

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