



5GPL5048

5G Power Life 50-48

The 5GPL5048 back-up battery system is developed for backup of Telecom equipment. Under normal condition, grid AC power supply to rectifier module and the Telecom loads and charge battery pack; When the AC power fail, rectifier module stop power supply, the battery serves for Telecom equipment, to ensure the Telecom equipment runs normally; when the AC power is switched on again, power rectifier module for Telecom equipment recover to while charge the battery pack.

Innovative Features

- RS485 communication output for monitoring
- Built-in BMS with Charging current limitation
- Built-in automatic protection for over-charge, over-discharge and over-temperature conditions
- State of charge and state of health indication
- Built-in battery control for efficient operation
- Internal cell balancing
- Compatible with standard Telecom rectifiers
- Maintenance free
- More energy per volume
- Weight: easy installation, one person

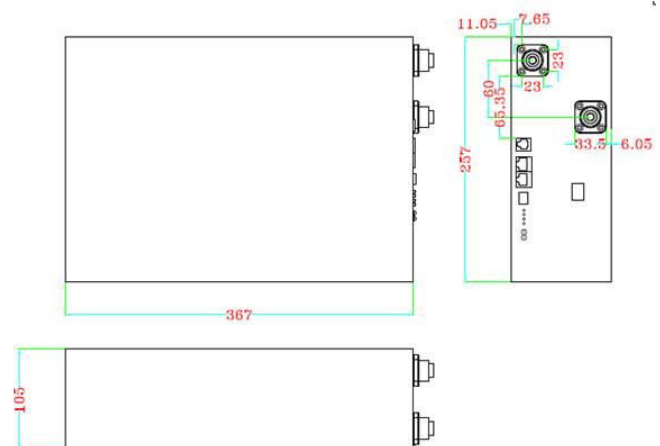


Specifications

Voltage	48V
Nominal capacity (40°C, 0.5C)	45Ah
Normal energy (40°C, 0.5C)	2200 Wh
Standard discharge 25°C	
Max. constant current	50A
Cut-off voltage	42V
Standard charge 25°C	
Charge voltage	53.5V~54V
Max. constant current	50A
Recommended charging current and time	30A for 1.6 hr
Round trip efficiency (%)	>98%
Cycle life (0.2C, 25°C)	80% DOD, 1000 cycles
Recommended operating temperature	
Charging	0°C~45°C
Discharging	-20°C~45°C
Recommended storage temperature	
Recommended range	-20°C~45°C

Dimensions and weight

L x W x H in mm (± 2mm)	367x105x257
Weight	13kg



Manufactured in ISO9001, ISO14001, OHSAS 18001 certified facility





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BMS Parameters

No.	Type		Function	Setting value	Remarks
1	Voltage	Charge	Cell Voltage Protection	4.25V Protection	Recover at 4.2V
2			Total Voltage Protection	54.5 Warning / 55.0V Protection	Recover at 54.0V
3		Discharge	Cell Voltage Protection	3.0V Protection	Recover at 3.6V
4			Total Voltage Protection	43.2V Warning / 42V Protection	Recover at 46.5V
5	Current	Charge	Normal	≤ 50A	
6		Discharge	Normal	≤ 50A	
7			Over-Current Protection 1	> 50A and < 80A	Delay 60s, recovery every 1
8			Over-Current Protection 2	> 80A	Delay 3s, recovery every 1
9			Short Circuit Protection	≥ 200A	Delay 1mS
10	Temp	Cell Temp 1	Low Temp Protection	Charging < -10°C Discharging < -20°C	Delay 1~2S
11		Cell Temp 2	High Temp Protection	Charging ≥ -70°C Discharging ≥ -75°C	Delay 1~2S
12		PCB	Range	≥ 95°C	Recovery at 75°C
13	Cell Balance	Balance	Make all cells be balanced during charging process. Current: 100±10mA	V _{Max} ≥ 4.08V and V _{Min} ≥ 40mV, Start Balance	When the battery enters protection. Stop balance.

Battery Status

- 1) **Stop/Transport Mode.** In working mode, turn off the air switch, battery will go to Stop MODE with low self-discharge. In STOP mode, charging MOS and discharging MOS are open, battery can't charge, discharge or communicate.
- 2) **Working Mode.** In STOP mode, connect the battery to SMPS, turn on the air switch, battery will go to working mode. In working mode, BMS will monitor battery voltage, current and tem and communication is available, charging MOS and discharging MOS are close. Battery will operate as the settings.
- 3) **Sleep Mode.** After turning on the battery, if the battery voltage is below low voltage protection, BMS will go to sleep mode in 1 minute. In sleep mode, charging MOS and discharging MOS are closed, BMS will check the current every 1 minute, if there's charging current connecting, battery will turn to working mode.
- 4) **Error Mode.** In working mode, if there is: ① Battery cells, $\Delta U > 2.5V$, or ② any cell voltage $> 4.4V$ or $< 0.5V$, or ③ battery temp is $< 30^{\circ}C$ or $+100^{\circ}C$, BMS will go to error mode, ALM will bright and other LED will shut down, and to STOP mode, charging MOS and discharging MOS are open. **Need to troubleshoot.**

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