5GPL5048

5G Power Life 50-48

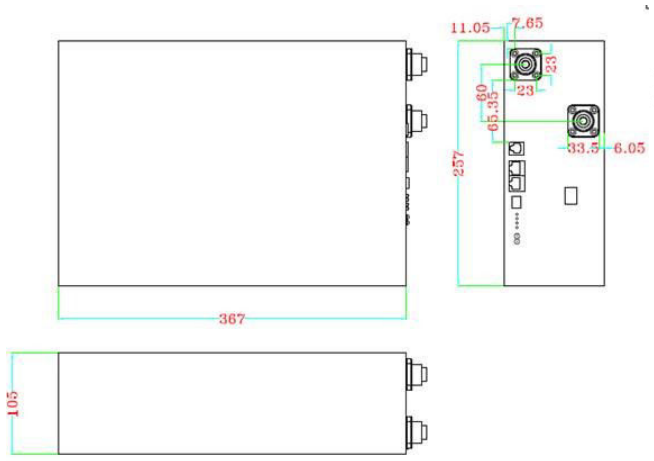
The 5GPL5048 back-up battery system is developed for backup of Telecom equipment. Under normal condition, grid AC power supply to rectifier module and the Telecom loads and charge battery pack; When the AC power fail, rectifier module stop power supply, the battery serves for Telecom equipment, to ensure 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 (25°C, 0.2C)	40Ah
Normal energy (25°C, 0.2C)	2100 Wh
Standard discharge 25°C	
Max. constant current	40A
Cut-off voltage	44.8V
Standard charge 25°C	
Charge voltage	55V~56V
Max. constant current	40A
Recommended charging current and time	20A for 2 hr
Round trip efficiency (%)	>98%
Cycle life (0.2C, 25°C)	80% DOD, 2000 cycles
Recommended operating temperature	
Charging	0°C~50°C
Discharging	-20°C~50°C
Recommended storage temperature	
Recommended range	-20°C~50°C

Dimensions and weight	
L x W x H in mm (± 2mm)	392x110x260
Weight	18.3kg



Manufactured in ISO9001, ISO14001, OHSAS 18001 certified facility

Rev. 11/2022

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BMS Parameters

No.	Type		Function	Setting value	Remarks
1	*Voltage*	**Charge**	Cell Voltage Protection	3.80V Protection	Recover at 3.6V
2			Total Voltage Protection	57.6V Warning / 59.2V Protection	Recover at 56.0V
3		**Discharge**	Cell Voltage Protection	2.7V Protection	Recover at 3.8V
4			Total Voltage Protection	46.4V Warning / 44.8V Protection	Recover at 48.0V
5	*Current*	**Charge**	Normal	≤ 40A	
6		**Discharge**	Normal	≤ 40A	
7			Over-Current Protection 1	> 55A and < 80A	Delay 2s, recovery every 1s
8			Over-Current Protection 2	> 80A	Delay 300ms, recovery every 1s
9			Short Circuit Protection	> = 300A	Delay 1mS
10	*Temp*	**Cell Temp 1**	Low Temp Protection	Charging < 0°C Discharging < -20°C	Delay 1~2S
11		**Cell Temp 2**	High Temp Protection	Charging > =55°C Discharging > =65°C	Delay 1~2S
12		**PCB**	Range	> = 115°C	Recovery at 85°C
13	***Cell Balance***	**Balance**	Make all cells be balanced during charging process. Current: 100±10mA	$V_{Max} \geq 3.40V$ and $V_{Min} \geq 40mV$, 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, Δ U>2.5V, or ② any cell voltage >4.4V or <0.5V, or ③ battery temp is <30°C or +100°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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