

HPA100-16系列 锂电池保护板

LITHIUM BATTERY PROTECTION BOARD



HPA100-16
控制板
Control Board



HPA100-16-050
功率板
Power Board



HPA100-16-080
功率板
Power Board



HPA100-16-300
功率板
Power Board

● 简介

HPA100-16 系列分体式锂电池保护板主要用于 7-16 串锂电池基站通信备用电源、AGV 动力锂电池组和户用储能等系统，实现对电池组过压、欠压、过流、过温、反接等报警和保护，可通过 RS485、CANBUS 等接口实现数据监控、参数配置和固件升级。

● 特点

- 4个通道的电芯温度检测，传感器类型为NTC 10K-3950
- MOS管/环境温度采样
- 电池模块回路充/放电控制
- 2个可编程输入口
- 休眠与唤醒功能，实现低功耗
- 被动均衡功能，最大均衡电流77mA
- 实时时钟，历史记录功能（1000），黑匣子
- 蜂鸣器报警
- 电池模块加热功能
- 预充电路最大满足容性负载30000uF，数值以系统实测为准

Overview

HPA100-16 series split-type lithium-ion battery protection board is mainly used for 7-series to 16-series batteries in base station backup power, AGV power battery pack, and household energy storage system. It can provide alarm and protection of over/under voltage, over current, over temperature, and reverse connection. The board can realize functions of data monitoring, parameter setting and firmware update via RS485 and CANBUS ports.

Features

- Four channels of cell temperature detection are supported, and the temperature sensor type is NTC 10K-3950
- MOSFET and ambient temperature sampling
- Battery module loop charge and discharge control
- Two aux. input ports
- Sleep and wake-up functions for low power consumption
- Passive balance function, and the max. balanced current is 77mA
- Functions of real-time clock, event log (1000 records), and black box
- With buzzer alarm
- With battery module heating function
- The maximum capacitive load of the pre-charging circuit is 30000uF, and specific value is subject to the actual measurement of the system



电源 Power	工作电压: DC(17~64)V 整机功耗: ≤1.2W(休眠: ≤15mW)	Operating Voltage: DC(17~64)V Power Consumption: ≤1.2W(Sleep mode: ≤15mW)
电流采集 Current Sampling	型号: HPA100-16-50范围: (-50~+50)A 型号: HPA100-16-80范围: (-80~+80)A 型号: HPA100-16-300范围: (-300~+300)A (分辨率: 0.01A, 精度: 1%FS(满量程))	Model: HPA100-16-50 Range: (-50~+50)A Model: HPA100-16-80 Range: (-80~+80)A Model: HPA100-16-300 Range: (-300~+300)A (Resolution: 0.01A, Accuracy: 1%FS(Full Scale))
电芯电压采集 Cell Voltage Sampling	范围: (0~5000)mV 分辨率: 1mV 精度: ±5mV	Range: (0~5000)mV Resolution: 1mV Accuracy: ±5mV
温度采集 Temperature Sampling	范围: (-40~+125)°C 分辨率: 1°C 精度: ±1°C 传感器类型: NTC 10K-3950	Range: (-40~+125)°C Resolution: 1°C Accuracy: ±1°C Sensor Type: NTC 10K-3950
通信接口 Communication Port	CAN接口: 1路, 250kbps, 隔离 RS485接口: 2路, 9600bps, RS485-1隔离, RS485-2非隔离	CAN Port: One, 250kbps, isolated RS485 Port: Two, 9600bps, RS485-1(isolated), RS485-2(non-isolated)
环境 Environment	工作温度: (-40~+70)°C 工作湿度: (20~93)%RH 贮存温度: (-40~+80)°C	Working Temperature: (-40~+70)°C Working Humidity: (20~93)%RH Storage Temperature: (-40~+80)°C
结构 Structure	外形尺寸 控制板: 94 × 80 × 12.6mm HPA100-16-50功率板: 89.3 × 74.2 × 16.7mm HPA100-16-80功率板: 93 × 90 × 18.7mm HPA100-16-300功率板: 100 × 70 × 24.2mm 安装尺寸 控制板: 74 × 88mm HPA100-16-50功率板: 80 × 65.5mm HPA100-16-80功率板: 85 × 82mm HPA100-16-300功率板: 92.9 × 62.7mm	Overall Dimensions Overall Dimensions: 94 × 80 × 12.6mm HPA100-16-50Power Board: 89.3 × 74.2 × 16.7mm HPA100-16-80Power Board: 93 × 90 × 18.7mm HPA100-16-300Power Board: 100 × 70 × 24.2mm Installation Dimensions Overall Dimensions: 74 × 88mm HPA100-16-50Power Board: 80 × 65.5mm HPA100-16-80Power Board: 85 × 82mm HPA100-16-300Power Board: 92.9 × 62.7mm

● 尺寸 Dimensions

单位(Unit): mm

