

艾默生PSM-E20模块

产品名称	艾默生PSM-E20模块
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价格	300.00/台
规格参数	
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产品详情

“艾默生监控（PSM-E20）”详细介绍

艾默生监控模块PSM-E20

电池管理：

监控模块对电池的智能化管理主要体现在以下几种工作状态：

1、正常充电状态

监控单元自动记录均充和浮充的开始时刻，在上电（或复位）初始，如果监控单元发现均充过程尚未结束，则会继续进行均充。如果上电（或复位）前是处于限流均充状态，则继续进行限流均充；如果是处于恒压均充状态，则继续进行恒压均充。在限流均充时，当充电电压达到恒压均充电压值的时候，会自动转入恒压均充。

2、定时均充状态

用户可选择是否采用定时均充这种维护方式，还可对定时均充的时间间隔及每次均充的时间进行设定。一旦设定，电池管理程序就可自动计算电池定时均充的时间，以便确定在何时启动定时均充，何时停止定时均充，所有这些操作都是自动进行的，运行维护人员可在现场通过监控单元上的显示来明确这一过程，也可在远程监控中心的主机上查看这一过程。一般电池以每隔30天均充一次，每次均充24小时为宜，特殊情况必须根据电池说明书的实际情况设置。

3、电池放电后均充状态

交流停电后，电池组对设备进行供电，放电终止后，再次恢复交流供电时，若电池电流大于设定值（转均充参考电流），则监控单元会自动控制模块进行均充。在监控模块的软件设置中，放电终止后的均充转换条件为：电池充电电流。

4、其它电池管理功能

设置功能?

电池的均浮充电电压均可通过键盘设置，用户可根据不同型号的电池，不同的电池电压灵活配置，极大地方便了用户管理。均浮充电电压设置好后，监控单元会根据当前的均浮充状态把电池端电压调节到设定的值。需要注意的是，若此时动力母排上有模块发生通讯中断，则模块进入自动保护运行模式，输出电压降为234V/117V，通讯正常后可自动退出保护运行模式。

温度补偿?

用户可选择是否对均浮充电电压进行温度补偿，并可对温度补偿中心点、温度补偿系数进行设置。一旦设定，监控单元就会根据电池房的温度自动对浮充电电压进行调节，确保电池工作温度正常。

容量分析?

用户可设置电池的充电效率、放电特性曲线等参数来调整电池容量的计算结果。监控单元可根据电池电流、充放电状态以及充放电系数对电池容量进行估算，每隔15秒计算一次电池容量的变化量，并在菜单上实时显示出来，使用户能一目了然地看到电池容量的实时变化。

自动与手动相结合?

监控单元可在“自动”和“手动”两种方式下工作，在“自动”方式下，监控单元可自动完成上述的所有功能，完全不需人工干预；在“手动”方式下，电池的管理交给维护人员来完成，维护人员可通过菜单控制电池的均浮充转换，调节电压及模块限流点，还可以对模块作开关机控制，此时监控单元将只通过通讯采集各模块的数据及配电数据，不对模块作任何控制处理，因而不会在放电后作自动均浮充转换，也不会启动定时均充，但仍可对电池的容量进行估算。由于长期均充可能导致电池寿命下降，为了防止在“手动”方式下均充时间过长，监控单元会自动监视均充时间，当均充时间超过用户设定的定时均充时间时，就会转入浮充。

异常处理

当直流电源系统异常运行时，为了保证电池不会因过充而受损，同时兼顾到负载需求情况，监控单元会自动把电池置为浮充状态，并打开所有模块的限流点，直到系统恢复正常为止。这些异常情况包括：母线电压异常、馈电柜配电监控板通讯中断、电池熔丝断。

告警

当电力电源系统异常时，监控系统将通过监控模块显示屏、监控模块面板告警指示灯、电力电源系统上的告警指示灯和蜂鸣器发出告警。同时还通过监控模块上的6个告警继电器向远端发出告警信号。如果监控模块已经连接到了综合自动化系统上，监控模块还会将告警信息上报到综合自动化系统中。

后台通信

与后台综合自动化系统实现RS232/RS485通讯。通讯规约为Modbus、CDT91、DNP3.0、IEC101或IEC103协议中的一种，用户可根据需要现场选择所需协议。

Detailed Introduction to Emerson Monitoring (PSM-E20)

Emerson Monitoring Module PSM-E20

Battery management:

The intelligent management of batteries by monitoring module is mainly embodied in the following working conditions:

1. Normal Charging State

The monitoring unit automatically records the start time of charging and floating, at the beginning of power-on (or reset), if the monitoring unit finds that the charging process has not ended, it will continue charging. If the current is equally charged before power-on (or reset), then the current is equally charged; if the current is equally charged at constant pressure, the constant pressure is continuously charged. In the case of current limiting and charging equally, when the charging voltage reaches the value of constant voltage and charging equally, it will automatically be transferred to constant voltage and charging equally.

2. Timing equalization

Users can choose whether to adopt the maintenance mode of timing equalization, and can also set the time interval of timing equalization and the time of each time equalization. Once set up, the battery management program can automatically calculate the time of battery timing charging, so as to determine when to start timing charging and when to stop timing charging. All these operations are automatic. Operation and maintenance personnel can make this process clear on the spot through the display of the monitoring unit, or remote monitoring. View this process on the central host. Generally, batteries should be charged once every 30 days and 24 hours for each time. Special circumstances must be set according to the actual situation of the battery instructions.

3. Battery charging after discharge

After AC power failure, the battery pack supplies power to the equipment. When AC power supply is restored again after discharge termination, if the battery current is greater than the set value (the reference current for conversion equalization), the monitoring unit will automatically control the module for equalization. In the software settings of the monitoring module, the uniform charge conversion condition after discharge termination is: battery charging current.

4. Other Battery Management Functions

Setting up Functions

The uniform floating charging voltage of batteries can be set by keyboard. Users can configure the batteries flexibly according to different types of batteries and different battery voltages, which greatly facilitates user management. When the floating charge voltage is set, the monitoring unit will adjust the battery terminal voltage to the set value according to the current floating charge state. It should be noted that if communication interruption occurs on the power bus at this time, the module will enter the automatic protection operation mode, and the output voltage drop is 234V/117V. When communication is normal, the protection operation mode can be automatically withdrawn.

Temperature Compensation

Users can choose whether to compensate the temperature of the floating charge voltage, and set the temperature compensation center and temperature compensation coefficient. Once set, the monitoring unit will automatically adjust the floating charging voltage according to the temperature of the battery room to ensure the normal working temperature of the battery.

Capacity analysis

Users can set parameters such as charging efficiency and discharge characteristic curve to adjust the calculation results of battery capacity. The monitoring unit can estimate the battery capacity according to the battery current, charging and discharging status and charging and discharging coefficient, calculate the change of battery capacity every 15 seconds, and display it on the menu in real time, so that users can see the real-time change of battery capacity at a glance.

Automatic and manual combination

The monitoring unit can work in both "automatic" and "manual" modes. Under the "automatic" mode, the monitoring unit can automatically complete all the functions mentioned above without manual intervention. Under the "manual" mode, the battery management is handed over to the maintenance personnel to complete, and the maintenance personnel can control the floating charge of the battery through the menu. Conversion, voltage regulation and module current limiting point can also be used to control the switch of the module. At this time, the monitoring unit will collect the data of each module and distribution data only through communication, without any control processing of the module, so it will not automatically float charge conversion after discharge, nor will it start timing charge, but it can still charge the battery. Capacity is estimated. Because long-term charging may lead to a decline in battery life, in order to prevent the "manual" mode of charging time is too long, the monitoring unit will automatically monitor the charging time, when the charging time exceeds the user set timing charging time, it will be transferred to floating charging.

exception handling

When the DC power supply system runs abnormally, in order to ensure that the battery will not be damaged by overcharging and take into account the load demand, the monitoring unit will automatically set the battery to floating state and open the current limiting point of all modules until the system returns to normal. These abnormal conditions include: abnormal bus voltage, communication interruption of feeder cabinet distribution monitoring board, battery fuse break.

Give an alarm

When the power supply system is abnormal, the monitoring system will send out the alarm through the monitor module display screen, the monitor module panel alarm indicator lamp, the alarm indicator lamp and buzzer on the power supply system. At the same time, six alarm relays on the monitoring module send alarm signals to the remote end. If the monitoring module has been connected to the integrated automation system, the monitoring module will also report the alarm information to the integrated automation system.

Background communication

Realize RS232/RS485 communication with background integrated automation system. Communication protocol is one of the protocols of Modbus, CDT91, DNP 3.0, IEC101 or IEC103. Users can choose the required protocol on the spot according to their needs.

PSM-E20监控系统主要为合作厂家设计，用以组成各种容量配置的直流系统，可应用于电厂、电站、变电站和各类用户变和其他需要直流供电的场合。配合充电模块及艾默生公司采集模块，PSM-E20监控系统可完成智能化电池管理和直流系统监测及告警。PSM-E20监控系统具备远程管理功能，可选择通过 Modbus、CDT91、DNP3.0、IEC101 或 IEC103 规约和综合自动化系统通讯上报数据，用于电站实现无人职守。

系统组成 PSM-E20 监控系统包括充电模块内部的监控电路，监控模块（PSM-E20）、配电监控（PFU-12 和 PFU-13）和绝缘监测仪（JYM-II 和 JYM-S2），以及电池检测仪（EBU01、EBU02）等设备。系统满配置部件 监控模块 配电监控模块 开关量采集模块 充电模块 绝缘监测仪主机

电池监测仪型号 PSM-E20 PFU-12 PFU-13 HD系列、ER 系列 JYM-II EBU01或EBU02满配置数量 1 两类设备个数总和为64 40 1 12

系统监测的信号量PSM-E20 监控系统监测的模拟量和开关量，由PFU-12、PFU-13、JYM-II、EBU01或EBU02等采集设备采集计算，然后上送到监控模块显示或发出告警。系统监测的模拟量序号
信号名称 数量 输入范围 可显示范围 误差1 交流电压 2路 0~2Vac标准信号 0~500V ±2%2 母线电压 2段 0~5Vdc标准信号 0~275V ±0.5%3 电池组电压 2组 0~5Vdc标准信号 0~275V ±0.5%4 负载电流 2路 0~4Vdc标准信号 0~3000A ±0.5%霍尔满量5 电池电流 2路 -4Vdc~+4Vdc标准信号 -3000A~+3000A ±0.5%霍尔满量6 电池环境温度 1路 0~5Vdc标准信号 -25~100 ±2

7 AC/AC电压 1路 0~4Vac标准信号 0~400V ±2%8 AC/AC电流 1路 0~4Vac标准信号 0~4000A ±2%9 DC/AC电压 1路 0~4Vac标准信号 0~400V ±2%10 DC/AC电流 1路 0~4Vac标准信号 0~4000A ±2%11 DC/DC电压 1路 0~4Vdc标准信号 0~400V ±0.5%12 DC/DC电流 1路 0~4Vdc标准信号 0~4000A ±0.5%13 单体电池电压 21 6节 14 馈电支路绝缘电阻及电容 2×384路 系统监测的开关量序号 信号名称 状态 备注1 馈出支路空开状态 常开或常闭（可设置）2 电池熔丝通断状态 常闭3 绝缘继电器告警状态 常开4 交流空开跳闸告警信号 常闭5 交流接触器工作状态信号 常闭6 防雷器故障信号 常闭7 AC/AC故障 常闭8 DC/AC故障 常闭9 DC/DC故障 常闭告警节点接12V 是闭合状态，反之为分状态

系统功能1 电池管理 根据用户设置的均浮充转换参数，对电池进行自动均浮充管理、限流充电管理、温度补偿、电池核容测试 可进行30小时的手动均充操作根据用户设置的自动均充保护时间，完成对电池的均充保护 手动均充和自动均充的保护时间不同，需要分别设置2 电池均充保护 系统异常时转浮充 3 告警 64×24路馈出支路空开跳闸告警 主馈电屏24~30路，分电屏63×24路 电池熔丝断、交流空开跳、防雷器故障告警，绝缘继电器告警 母线绝缘下降，384支路绝缘下降告警 使用JYM-II，一个E20监控模块只可以显示384路告警AC/AC、DC/AC、DC/DC故障告警 交流过欠压、停电告警（交流电压<50V） 母线、电池电压过欠压告警 电池充电过流告警 电池单体过欠压告警 电池组温度异常告警（电池温度在（-15~45）范围以外告警，并停止电池温度补偿） 模块保护、故障告警 配电监控（PFU-12），开关量采样盒（PFU-13）、充电模块、电池仪、绝缘仪通讯中断告警

本公司专业致力于华为、艾默生、中兴电源柜的研究，为客户提供全程一站式服务，我公司可以根据客户的具体特点和需求量身定做不同型号的通信电源柜，具体包括设计--选型--安装等跟踪指导，客户的需求就是我们的工作，做各类通信电源柜我们更专业。