

## 基于活性因子激励的仓储系统温湿度监测方法

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**摘要:** 对嵌入式仓储系统温湿度进行监测可以保证仓储系统稳定运行, 改善仓储环境的基础条件. 传统的仓储系统温湿度监测方法无法有效获取电路静态功耗的变化特征, 导致监测过程耗能过大、电压升高, 增加了嵌入式仓储系统温湿度检测电路的负荷. 提出基于活性因子激励的嵌入式仓储系统温湿度监测方法. 通过分析嵌入式系统的功耗消耗形成机制, 设计嵌入式仓储温湿度监测系统功耗测量 GPRS 连接电路图, 并引入活性因子激励方法, 测量系统电路的静态功耗, 根据电路中每条路径时序信息, 对嵌入式系统的双阈值电压分配, 减小了嵌入式仓储系统温湿度监测电路的供电电压, 由此实现嵌入式仓储系统温湿度的监测的改进. 实验结果表明, 采用该监测方法, 能实时有效实现嵌入式设计的仓储系统温湿度监测, 准确性较高, 稳定性好.

**关键词:** 活性因子; 嵌入式仓储系统; 温湿度监测

## Temperature and Humidity Monitoring Method of Storage System Based on Embedded Design

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**Abstract:** For embedded storage system for temperature and humidity monitoring can ensure warehouse system stable operation and improve the basic conditions of warehouse environment. Traditional warehousing system of temperature and humidity monitoring method, unable to effectively gain static power circuit characteristics, energy consumption is too large, the voltage monitoring process, increase the temperature and humidity detection circuit load embedded storage system. Based on embedded storage system for temperature and humidity monitoring method based on active factor motivation. Formation mechanism by analyzing the power consumption of embedded system, the design of embedded storage temperature and humidity monitoring system for power measurement of GPRS connection circuit diagram, and introducing active factor motivation method, static power consumption measurement system circuit, according to the circuit of each path timing information, double threshold voltage distribution on the embedded system, reduced the embedded storage temperature and humidity monitoring circuit of power supply voltage, thus to realize the improvement of embedded storage system of temperature and humidity monitoring. And the experimental results show that the monitoring method, can realize the embedded real-time and effective design of storage temperature and humidity monitoring, high accuracy, good stability.

**Key words:** Active factor; Embedded storage system; Temperature and humidity monitoring

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