

## 石英温度传感器遥测温度计的设计

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摘要:

文章介绍了Y切型石英晶体作为传感器的数字温度计, 其输出的频率信号与温度存在较好的线性关系, 没有模拟传感器难以克服的温漂、时漂等问题, 这种温度计可以用于高精度的温度测量与控制系统中。实验结果显示, 该数字温度计分辨率为 $0.05^{\circ}\text{C}$ 。最终系统使用无线数据模块实现了温度数据的传输。

关键词: 温度计 传感器 分辨率 无线数据模块

## the Design of Quartz Temperature Sensor for Remote Thermometer

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**Abstract:**

The paper introduces the digital quartz thermometer designed with Y cut crystal sensor, it has better linear relationship between output frequency signal and temperature, and overcomes the problem of analog sensor temperature and time drift, etc. The quartz thermometer can be used for high-precision temperature measurement and control system. The experimental results show, the digital quartz thermometer resolution is  $0.05^{\circ}\text{C}$ . Finally, the system uses wireless data module to realize the temperature data transmission.

**Keywords:** thermometer sensor resolution wireless data module

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