

分布式网络控制——实现温室环境调控自动化的一种新方案(英文)

DNCS——A New Scheme for the Automation of Greenhouse Environment Control

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中文摘要:

针对传统计算机控制技术在温室环境调控中呈现的控制复杂、维修不便和价格昂贵的缺点,该文分析了温室环境调控自动化的现状,提出了一种全新的实现方案。采用分布式网络控制技术并使用国际先进的微型单片机技术和国外高精度、高稳定性的湿敏及温敏器件,研制出全数字化“智能温湿度传感器”和“双回路智能温湿度控制器”。目前研制的温室环境调控自动化系统已在国内数家现代化智能温室推广应用。还对温室环境调控自动化的发展提出了几点看法

英文摘要:

To solve the problems emerged in the traditional computer control system in greenhouse, the present situation of the greenhouse environment control is analyzed and a new scheme of it is presented. By using distributed network control technology, the advanced single chip microcomputer (SCM) technology and humidity sensitive and temperature sensitive device which possess the ability of high precision and high reliability, an all digitalized “intelligent humidity temperature sensor” and “double direction intelligent controller” was developed. The new developed greenhouse environment control was successfully used in several greenhouses in China. The future development of this system which can be used in livestock houses or other agricultural structures is also discussed.

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