

Product Name :
Room Temperature Control

Product Code :
AR766



Description :

Room Temperature Control

Technical Specification :

This experimental unit aids introduction to industrial control engineering. The objective is to control the temperature in a virtual room. The individual components of this temperature control loop are laid out separately on panels. They are inserted in the frame and interconnected by cables.

The controlled system is a soldering iron. The soldering iron represents the heater in the virtual room. The room, with a temperature sensor, is mapped out on the panel as an aid to understanding.

Investigation of a temperature control loop

Control loop components on panels allowing for variation in installation in frame

Soldering iron as controlled system

Power controller as actuator

Parameterisable digital industrial controller

Thermocouple type k as temperature sensor

Transducer for thermocouple with digital temperature display

Bar display for manipulating variable

2 metal plates with differing thermal conductivities for disturbance generation

Line recorder

Technical Data:

Soldering iron power output: 16W

Controller

Input signals: 0/4...20ma and 0...10v

Output signals: 0...20ma
P, PI or PID controller
2-point controller
Power controller
Output power: 0...16w
Input signal: 0...20ma
Thermocouple and transducer
Measuring range: 0...400°C
Output signal: 0...10vdc
2 metal plates for disturbance generation
Stainless steel
Copper
Recorder module
3 channels
Measuring range: 0...20ma
Chart width: 100mm
Feed rate: 0...3600mm/h, stepped
230V, 50Hz, 1 phase

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