

Product Name :
Temperature Process Control

Product Code :
CE854



Description :

Temperature Process Control

Technical Specification :

Temperature Process Control

The Temperature Training System is a two loop system, using water as the process fluid which allows the study of the principles of process control using primary and secondary circuit temperatures as the process variables to be controlled. Both circuits pass through the heat exchanger and the secondary circuit contains a fan-assisted cooling radiator. Thermistor temperature sensors are located in the inlet and outlet streams of both primary and secondary sides of the heat exchanger and the outlet of the radiator.

The primary flow is also monitored. The Trainer can be used with a cold mains water supply through the Auxiliary Temperature Control Pack, which is supplied as part of the system. This comprises a motorised control valve, a flow meter and a signal conditioning unit. Alternatively the Temperature Trainer can be connected to the Level & Flow Process Trainer, which then supplies the cold water circuit. This combination allows more complex control systems to be investigated.

Curriculum Coverage

Temperature familiarisation & calibration

Interface familiarisation & calibration

Controller familiarisation & calibration

Pulse Flow Transmitter

On-Off Control

Study of P, PI and PID control of temperature & flow

Manual Flow Control

Temperature Process Control

Complex Control Loops

Features:

- Temperature monitored in primary & secondary circuits
- Flow monitored
- P, PI & PID control with auto tune facility
- Primary circuit flow controlled by motorised control valve
- Primary circuit heater and pump
- Secondary circuit fan-assisted cooling radiator
- Modern push fittings
- Water used as the process fluid
- Operates from mains water supply using water pressure regulator
- Comprehensive experiment manual

Technical data:

- Operates from mains water supply using water pressure regulator
- For operation with 110 V or 120 V 50/60 Hz supplies
- 3 phase supply is required so nominal 220 volts available across 2 phases
- Dimensions (net): 1080 mm width x 375 mm depth x 705 mm height
- Weight: gross 72 kg, net 52 kg

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