

PROCON - Level & Flow, Temperature Process Control 38-003



Description

The combined PROCON Level/Flow and Temperature Process Control System is self-contained and has all of the features of the individual Level/Flow and Temperature systems plus Remote Set Point Control.

Remote Set-Point Control can be affected with the PROCON Level/Flow and Temperature Process Control System by using two Process Controllers. The 4-20mA Analogue Remote Set-Point input allows various forms of cascade control to be implemented between linked or interactive control loops.

The process set-point can be Local and Remote or Dual, selected from the front panel, or in response to a logic input. When Dual Set-Point is selected the function can be ratio or bias action.

A Programmable Logic Controller (PLC) 38-350 is also available. It can be used with the Process Interface 38-200 to provide an alternative control method with on/off elements to the standard Process Controller 38-300.

For operation with 110 V or 120 V 50/60 Hz supplies a three phase supply is required so 220 volts are available across two phases.

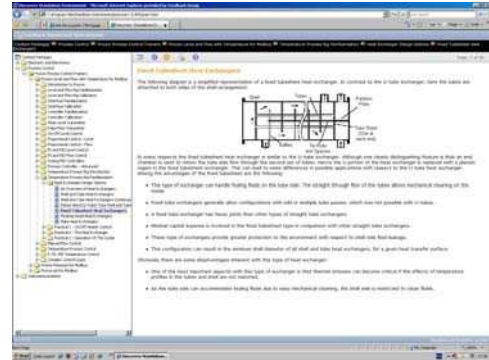
Features

- Contains a selection of level flow and temperature sensors and indicators
- Primary and secondary flow controlled by linear motorised control valves
- On/Off and proportional control

- P, PI and full PID control with autotune facility
- Can perform dual loop cascade control
- Modern push fittings
- Water used as the process fluid
- Comprehensive lab notes and ESPIAL Software

Curriculum Coverage

- Flow and Level familiarisation and calibration
- Interface familiarisation and calibration
- Controller familiarisation and calibration
- Float level transmitter
- Pulse flow transmitter
- On-Off control
- Study of P, PI and PID control of Level and Flow
- Tuning PID controllers
- Advanced process control
- Temperature familiarisation and calibration
- Interface familiarisation and calibration
- Controller familiarisation and calibration
- Pulse flow transmitter
- On-Off control
- Study of P, PI and PID control of Temperature and Flow
- Manual flow control
- Temperature process control
- Complex control loops



Heat exchange theory

Dual loop (process) control - using Level/Flow and Temperature Trainers:

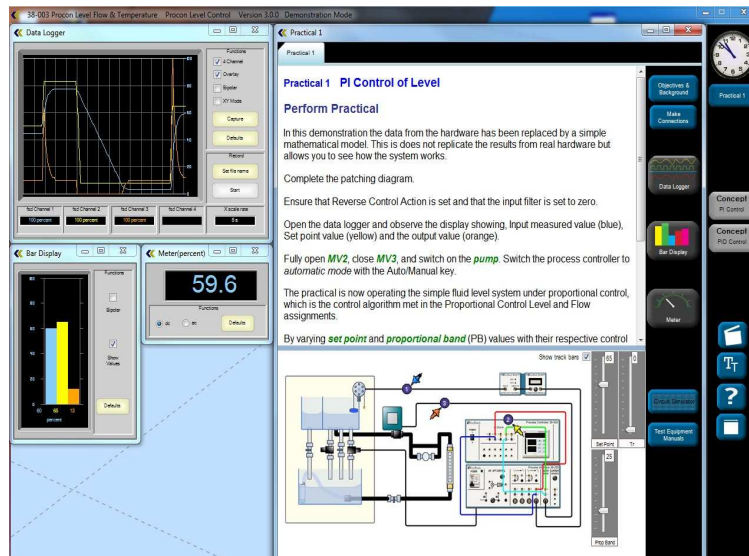
- Remote Set Point Control
- Set Point Ratio Control
- Cascade Control
- Feedforward Control

Remote set-point facility covering:

- Setting-up a primary and secondary controller
- Set-point Ratio Control (dual loop)
- Cascade Control (temperature and flow)
- Feedforward Control (Flow & flow)

ESPIAL

The teaching content is provided by the Espial software including the underlying theory, relevant background and all instrumentation. Test instruments are initialised with settings suitable for the required measurements but can be changed. Displays and measurements may be printed or exported for inclusion in laboratory reports



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Feedback reserves the right to change these specifications without notice.