

RT 614 – RT 674 INTRODUCTION TO INDUSTRIAL PROCESS CONTROL

RT 614 Level Control Demonstration Unit



RT 624 Flow Control Demonstration Unit



RT 634 Pressure Control Demonstration Unit



RT 674 Flow / Level Control Demonstration Unit



RT 644 Temperature Control Demonstration Unit



The practice and teaching systems in this equipment series provide a broad-based introduction to the fundamentals of process control. Familiarisation with process control components as they currently occur in industrial applications is a further key aspect of the learning. The relevant control loop is displayed clearly on the vertical panel. The student's understanding is further aided by a large-scale process schematic.

Each system in itself represents a complete course in the fundamentals of process control, with differing process behaviour being observed in each. Level, flow and pressure control systems display rapid changes in the process variable, while a temperature control represents a slow control process.

Key process variables are delivered as analogue signals on lab jacks, enabling external recording devices such as a chart recorder or oscilloscope to be connected.

Every training system can be connected with ease to the instrumentation and control software RT 650.40 (accessory), enabling all the advantages of computer-aided data acquisition and processing to be utilised.

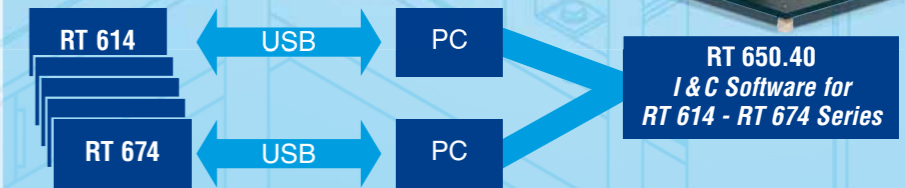
The systems are suitable for two learning situations: demonstration by the tutor or independent laboratory experimentation by the students.

Didactic goals and exercises

- Introduction to the fundamentals of process control based on experimentation
 - Familiarisation with different types of controlled system (if multiple training rigs are available)
 - Familiarisation with current industrial process control components: controllers, transducers, actuators
 - User control and parameter setting of a state-of-the-art digital industrial controller
 - Multi-variable control (cascade control with RT 674)
 - Downstream processing of process variables with external recording devices: chart recorder, oscilloscope
 - Familiarisation with and use of instrumentation and control software (accessory RT 650.40)
- The well structured instruction material sets out the technological fundamentals and provides a step-by-step guide through the experiments.



RT 650.40 Instrumentation and Control Software for RT 614 - RT 674 Series



- Chart recorder function with storage of measured data
 - Recording and storage of time functions
 - Evaluation of step responses
- Software controller with PID and 2-step action
- 4 pre-selectable languages and 1 user-defined language possible
- Easy connection to PC via USB port