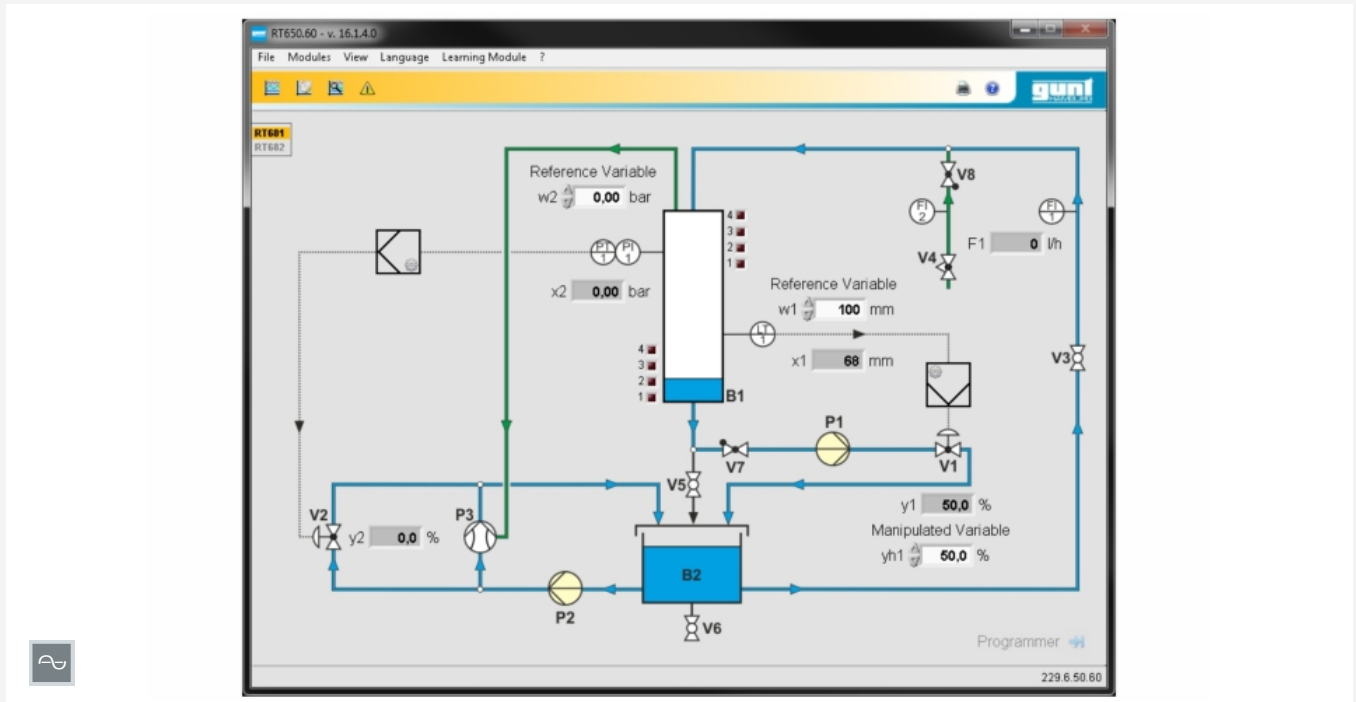# RT 650.60
Process control software for RT 681 and RT 682

Description

- **process control software for PROFIBUS DP connection**
- **control station function provides for simultaneous operation of both trainers**
- **automatic operation with programmer possible**
- **alarm function with four limit values for triggering an alarm or message**

The RT 650.60 process control software (SCADA) was developed specifically for the RT 681 and the RT 682. It is possible to connect both trainers simultaneously. The software and the trainers communicate via PROFIBUS DP modules. Changes to the software are transmitted to the controller of the relevant trainer.

The process is represented in the "System diagram" window. The reference variable, controlled variable and manipulating variable are displayed in real time. Status displays for the alarms are also included.
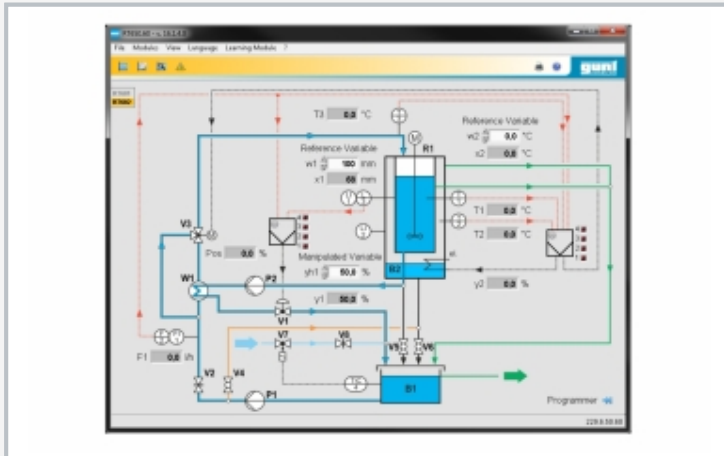
The "Charts" menu item offers features including controller mode selection, parameterisation, setting of the reference variable and limit values for the alarm function, as well as display of the controlled and manipulating variables. The reference variable characteristic is specified in the programmer. A total of three programs are available, each with 15 segments, which are saved together with custom controller parameters. The messages are divided into alarms (status indicators, over/under limit) and information (status monitoring, approaching the limit). The message status is colour-coded. The control station function permits simultaneous monitoring and (if required) access to both connected trainers.
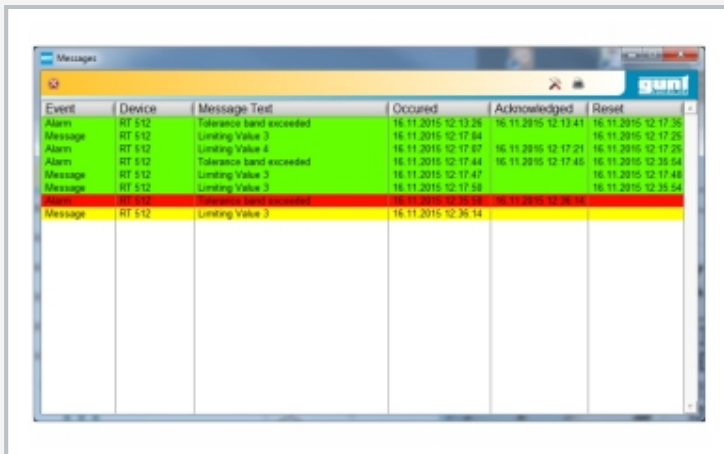
Learning objectives/experiments

- familiarisation with and use of a process control system
- stand-alone with a single trainer
  - process schematics with online display of all process variables
  - alarm function with logging
  - parameterisation of the single controllers
  - manual or automatic controller mode
  - mode of operation of a programmer
  - network mode with Server/Client
- additionally with combination of both trainers on a PC
  - control station function
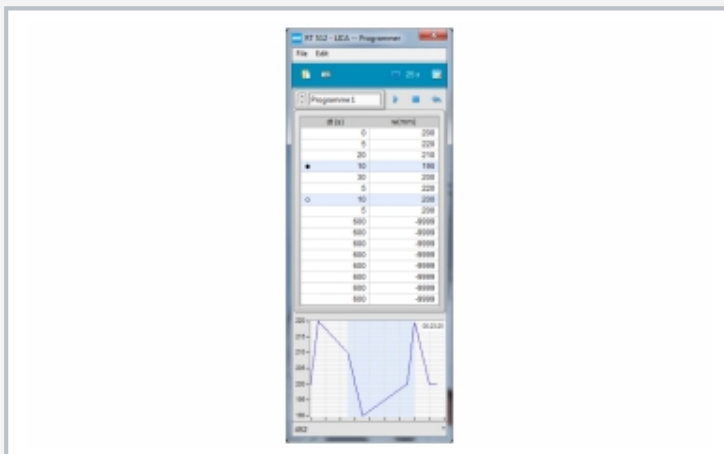

RT 650.60
Process control software for RT 681 and RT 682

Menu for selection of trainer, controller and user interface

Alarm log

Programmer for input of a reference variable characteristic

Specification

- [1] interactive, menu-driven process control software (SCADA) for operation and monitoring of control processes
- [2] control station function for simultaneous operation of both trainers
- [3] process schematic with real-time data display
- [4] recorder function with data saving
- [5] operation and parameterisation of hardware controllers
- [6] automatic operation with programmer (input of reference variable characteristics)
- [7] alarm function with logging
- [8] data communication via PROFIBUS DP
- [9] GUNT process control software via PCIe under Windows 10
- [10] use together with PROFIBUS card RT 650.12; one PROFIBUS DP card RT 650.12 per PC workstation required

Technical data

Recorder function with data saving
- plotting and saving of time charts
- evaluation of step responses

Programmer
- up to 3 programs with 15 values in each
- custom controller parameters for each program
- setting of a tolerance band

Alarm function with 4 programmable values
- upper and lower alarm limit
- upper and lower message limit
- comments about alarms/messages can be entered

Language selection
- 4 pre-selectable languages
- 1 user-defined language possible

Software basis: LabVIEW

Required for operation

PC with Windows

Scope of delivery

1 GUNT process control software
1 manual

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We reserve the right to modify our products without any notifications.
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RT 650.60
Process control software for RT 681 and RT 682

Required accessories

RT 650.12   PC-Interface Card Profibus DP

Optional accessories

RT 681   Multivariable control: vacuum degassing
RT 682   Multivariable control: stirred tank