

# RT 450.40

## Visualisation software



### Learning objectives/experiments

- PC-based automation with fieldbus system for data interchange
- familiarising yourself with hardware components and cabling
- installation and configuration routines
- communication principles
- process monitoring and operation via software
- tracking the values of signals in the control loop, track via software time functions
- familiarising yourself with elements of a fieldbus system

### Specification

- [1] PC-based automation
- [2] process monitoring and operation via visualisation software
- [3] chart function for visualising time functions
- [4] data interchange via fieldbus system
- [5] communication protocol Modbus TCP
- [6] GUNT software via LAN under Windows 10

### Technical data

Language selection: 4 pre-selectable languages

### Required for operation

PC with Windows

### Scope of delivery

- 1 GUNT software + data cable
- 1 router used as network switch

### Description

- **GUNT visualisation software with display of time functions of process variables**
- **fieldbus system for data interchange between software and accessories of a control loop**

The automation of a process with PC-supported process monitoring and operation via software requires fast data interchange between the software and the individual accessories of a control loop. The use of fieldbus systems for this purpose is widespread in industry. Modbus TCP is a protocol in fieldbus communication based on Ethernet.

Modbus TCP is used as the communication protocol for RT 450.40. To integrate the RT 450.10 and RT 450.11 controllers into the communication network, they must be equipped with the RT 450.41 Ethernet module.

An important feature of the visualisation software, based on LabVIEW, is a chart function for displaying time functions in order to be able to track the values of the signals in the control loop, such as reference value, controlled variable or manipulating variable. The RT 450.10 and RT 450.11 controllers can also be operated and parameterised via the software. Changes made by the software are sent directly to the controllers. Controller settings made using the buttons on the controllers are also sent to the software.

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Required accessories

RT 450.41      Ethernet module for controller