

**Product Name :**  
Optimization of Control Loops

**Product Code :**  
AR149



**Description :**

Optimization of Control Loops

**Technical Specification :**

**Optimization of Control Loops**

This experimental unit with the interaction between controller and controlled system, the objective being for the closed control loop, comprising the controller and the controlled system, to exhibit the desired optimum response. The setting of controller parameters "a key practical aspect" can be practised safely and intensively using simulation software. Concepts such as open and closed loop control, stability, step response, disturbance and control response are clearly demonstrated.

Experimental unit for controller tuning

Digital controller, configurable as a P, PI or PID controller with interface

Interface for PC

Data acquisition card for PC

Simulation software for different controlled system types, such as first and second order lags, time-delayed systems etc.

Recording and evaluation of time response on pc

Configuration software for process controller

Software via PCI under Windows 7, 8.1, 10 including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

**Technical Data:**

Controller

Configurable as P, PI or PID controller

Proportional gain  $X_p$ : 0...999,9%

Integral action time  $T_n$ : 0...3600s  
Derivative time  $T_v$ : 0...1200s  
Process variables as analogue signals: 0...10V  
Controlled system simulation models with proportional, integral, first-order lag, second-order lag  
Time-delayed response, non-linearity and limitation possible  
230V, 50Hz, 1 phase

## Naugralabequipments

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