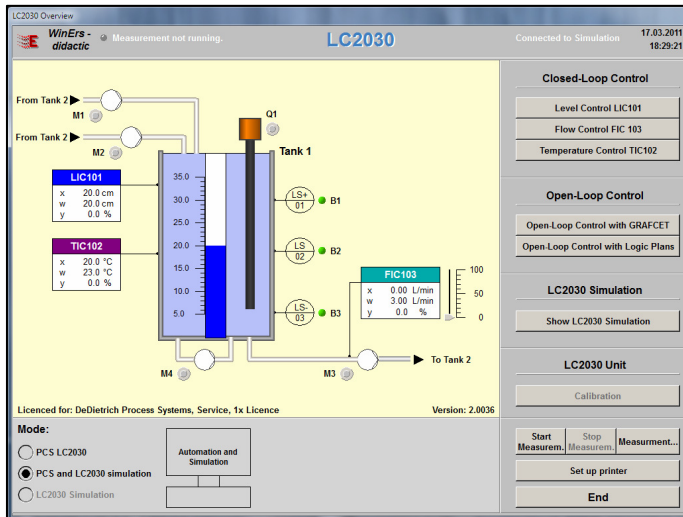# WinErs-Didactic: LC2030-Training

With the **LC2030-Training**, tasks from the field of open-loop and closed-loop control technology can be edited. The LC2030-Training allows you to work with the real training unit **LC2030** or with a simulated system.

One can implement open-loop and sequence controls using **GRAFCET-** or **Logic-plans** for different exercises. The plans can be tested online with the real or the simulated training station.

In **closed-loop control** engineering level, flow and temperature control are available. The systems can be controlled with **standard controllers** P, I, PI, PID and two-point controller.
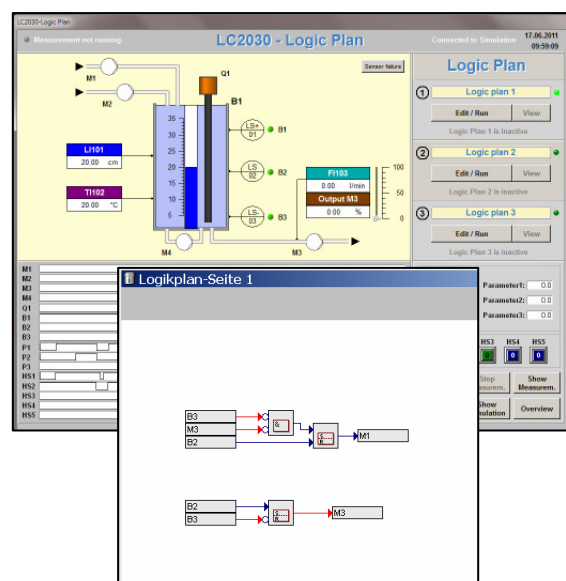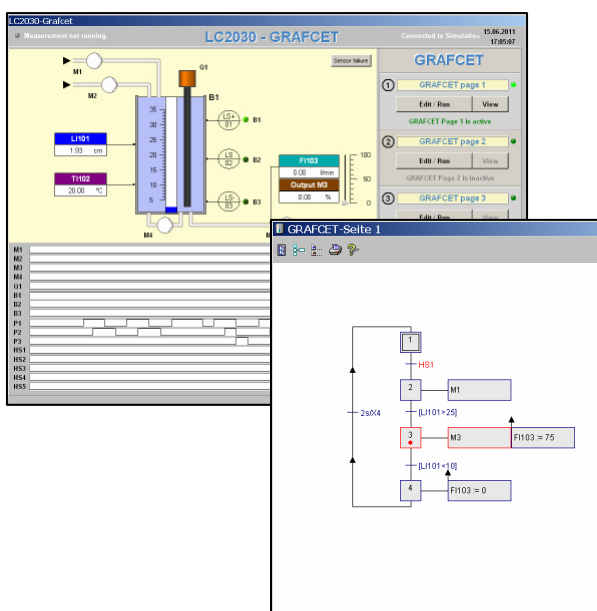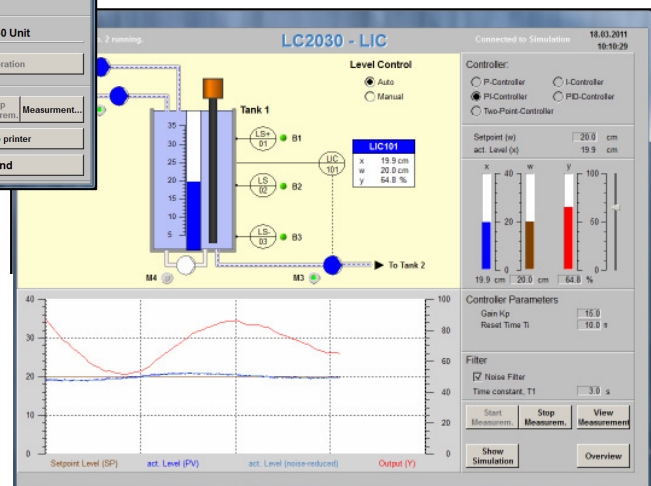

Open- and Closed-loop Control

♦ Control with GRAFCET

♦ Control with logic-plans

♦ Level control

♦ Flow control

♦ Temperatue control

Adjustable Controller
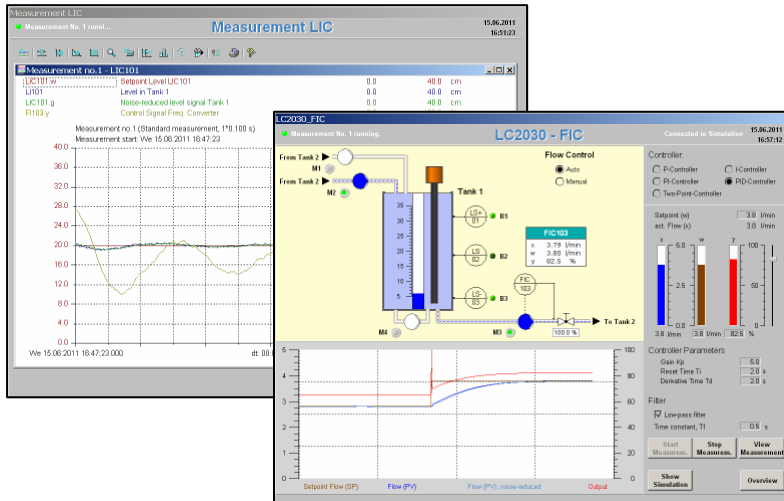
♦ P-controller   ♦ I-controller

♦ PI-controller   ♦ PID-controller

♦ Two-point controller

Open-Loop Control with GRAFCET

Open-Loop Control with Logic-Plans

Didactical Structure

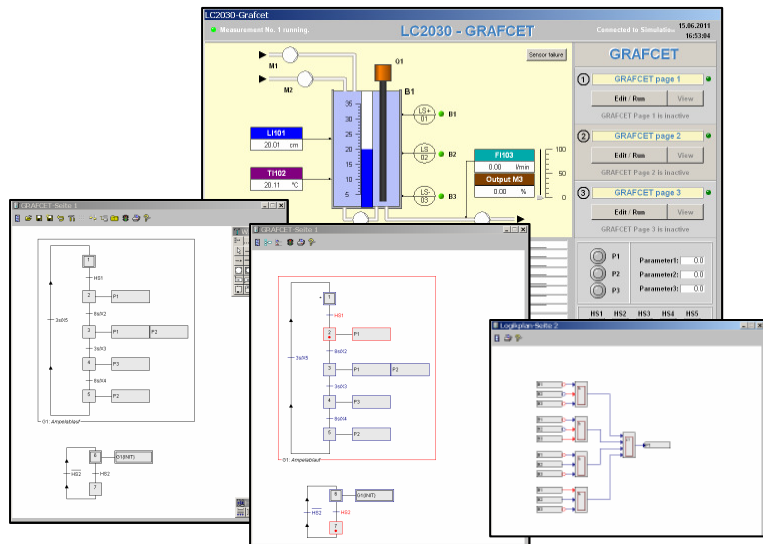**Closed-Loop Control:**

♦ Choice of process

♦ Choice of controller

♦ Examin process and controlled system

♦ Graphical analysis of the stored measured values in a timing diagramm

♦ Optimise closed loop control by changing the controller and the controller parameter

Open loop control with GRAFCET and Logic-Plans

♦ Editing control with GRAFCET- or logic-plans

♦ Activate GRAFCET- or logic-plans

♦ Test and monitoring the actual control

Connecting to the real training unit LC2030 or the integrated simulated system:

♦ Connecting real training unit LC2030 to PC with the interface I/O-Board 4488

♦ Work with the simulated training unit

All exercises of open and closed loop control can be done with the real training unit LC2030 as well as the simulated system

Educational material and exercises of control and an introduction to GRAFCET will be provided with the software.