

# PLC-Lab Pro

With **PLC-Lab** you can create your own simplified digital twin for PLC training or to find all logical bugs in your PLC program. The objects in PLC-Lab offer extensive design and setting options, so the variety of project types that can be implemented with PLC-Lab is very high

The objects can be assigned physical properties, which then influence the behavior of the objects during simulation. For example, objects can be depend on gravity and be magnetic. In addition, you can set parameters such as density, surface friction and elasticity. An integrated physics engine ensures the realistic simulation of the objects. The user interface and the drawing area of PLC-Lab are entirely vector-oriented. This means that the objects in PLC-Lab can be enlarged or reduced in size without any loss of quality. The user interface is also displayed razor sharp on high-resolution screens (e.g. 4K). The setup of a system or test environment is straightforward. Use of PLC-Lab is based on programs such as PowerPoint by Microsoft.

## From simple to complex

The complexity of creating your digital twin is up to you. You can just use buttons, lamps and a few cylinders, or you can create a virtual scene as realistic as possible using real photos of the installation or images created by a designer. The goal should be that the virtual system delivers the same signals to the PLC and reacts to the outputs as the real system.

## Differences to Factory I/O

Factory I/O is 3D and PLC-Lab is 2D. But much more important: Factory I/O is designed for PLC training and it can be used to build certain and simplified machine types. The visual representation of the created scenes in 3D and the real-time sound ensures a wow effect. If you can build your desired scene with the parts of Factory I/O, it is the perfect product for you. However, if you want to digitize an existing hardware model or have exact requirements for a virtual scene, then PLC-Lab is the right choice. PLC-Lab is suitable for PLC training and for professional users.

## For education

A virtual system simulation is indispensable for educational institutions today. Every student has a virtual model at his fingertips to test his PLC program. But much more important is that working with virtual models brings much more fun and motivation than just working with lamps and switches. Furthermore the institutions can share the licenses of PLC-Lab over a cloud license server.

## For professional users

Everyone knows this: If you prepare well, you are more relaxed about the task ahead. With PLC-Lab you can test your PLC program more precisely and you will not be surprised during

commissioning. If you have tested insufficiently, you will have to fix the bugs under more difficult conditions. Reduce commissioning time and save expensive hotel bills.