

fischertechnik Presents Training Factory Industry 4.0 24V

# PLC Factory for Training Applications

**Throughput times, maintenance, material flows, networking, and Industry 4.0: These are just some of the complex processes that have to be considered when planning a modern production system. Now, fischertechnik has developed a model that can realistically replicate these processes, the 24V Training Factory 4.0. This is a model for the factory of the future, with the option to connect to a PLC controller and digital mapping of all processes via sensors and in the cloud.**

Programmable logic controllers are essential in today's forward-thinking production systems. They allow operators to constantly adapt to new circumstances, ensure performance capability, and reduce system susceptibility to faults. When developing a smart factory, the biggest challenge is creating smart machine networks to efficiently read and utilise data.

This industrial model from fischertechnik facilitates in-depth learning and simulation using a realistic system that reflects production conditions. Physical and digital processes alike can be mapped in real time.

fischertechnik GmbH

Klaus-Fischer-Strasse 1  
72178 Waldachtal

The Training Factory 4.0 24V is a great choice for many different applications:

- In companies for learning PLC programming and controlling.
- At colleges and universities to research and teach digital processes.
- In IT companies and departments to simulate new technologies, like voice control, augmented reality, virtual reality, artificial intelligence, or machine learning.
- As a demonstrator model for exhibitions and events, to teach Industry 4.0 themes through appealing, tactile means.

The model, which is roughly one square metre in size, consists of a production system with different manufacturing steps connected to one another by a conveyor belt. The integrated environmental sensor reports values for temperature, humidity, air pressure and air quality. A camera covers the entire system.

The individual workpieces go through a variety of production steps and are tracked via NFC (near field communication), while data are read out via an RFID reader. A Raspberry PI and Node-RED are integrated, allowing operators to track and view the current status of workpieces in the production processes. The Training Factory 4.0 24V can also be connected to the operator's own cloud, adding further potential applications.

Dashboards contained in the Learning Factory 4.0 allow users to display platforms in three different perspectives: Customer view, supplier view, and production view. The customer view shows a web shop interface with a shopping cart, where you can order a workpiece and track the current status of the order in the shopping cart. This process is displayed on the interface

for the customer so that he/she is informed about the status of his/her order. The process of ordering the raw material is displayed and visualised in the supplier view. The factory status, production process, inventory, NFC/RFID reader and sensor values are accessible through the production view.

The smart Training Factory 4.0 24V is “Made in Germany”, and is already available by now. Together with the 9V version, it is the second generation of digital learning factories from fischertechnik. The company is a toy manufacturer well-known for its construction sets and has also successfully marketed simulation systems in the training and industrial sector for many years.

Overview of the Training Factory Industry 4.0 24V:

- NFC/RFID
- Remote monitoring via camera
- Sensor applications
- Integrated cloud connection with dashboard
- Controlled via smart devices
- Own cloud and dashboard can be integrated
- Raspberry PI 4 with Node-RED interface
- Communication via OPC/UA and MQTT
- Includes complete PLC program as ST (structured text)

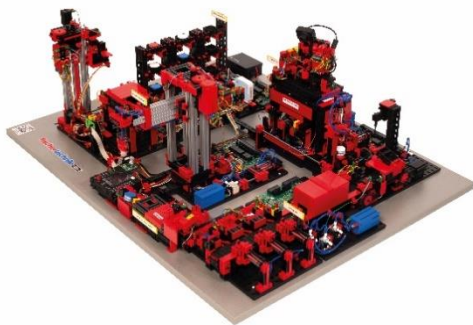
Further information is available on the following website:

<https://www.fischertechnik.de/en/products/simulating/training-modules/554868-sim-training-factory-industry-4-0-24v-simulation>

**Captions:**



*Image 1: The fischertechnik Training Factory Industry 4.0 24 V can be used to realistically simulate real and digital processes in a smart factory.*



*Image 2: The fischertechnik Training Factory Industry 4.0 24 V offers the option of connecting to a PLC controller.*

*Pictures: fischer*

## **fischer group of companies**

The fischer group of companies based in Waldachtal, in the Northern Black Forest, achieved a turnover in 887 million euros in 2019 with 5,200 employees. The family company is represented in 37 countries with 49 companies and exports to more than 100 countries. It includes the five divisions fischer fixing systems, fischer automotive, fischertechnik, fischer Consulting and LNT Automation.

fischer fixing systems is the technological market leader in key fields of fixing technology. fischer provides products with technical perfection to a wide range of customers, from DIY enthusiasts to craftsmen to key account partners.

fischer automotive manufactures high-quality vehicle interior components. The company has a high level of expertise in plastics processing and is an important partner for the automotive industry. The product range includes air outlets, drinks holders, storage compartments and multi-functional components.

With its building sets, fischertechnik is active both in the toy and the education sector. fischertechnik is one of the last toy providers to develop and produce its toys exclusively in Germany.

fischer Consulting grew from the expertise developed in the company. This is where the fischer ProcessSystem can be found which mainly deals with continuous improvement. The fischer ProcessSystem is always geared towards the benefit for the customer, fischer Consulting advises medium-sized companies, authorities and large corporations on their way to slim and efficient processes.

LNT Automation develops and produces customer-specific electronic solutions. The company also deals with the development, the production and the sale of customer-specific and capacity touch systems such as multi-touch solutions made from glass and matching controller units. The electronics are produced in-house.

On the Internet: [www.fischer.group](http://www.fischer.group)

## **Contact person**

**Sandra Roth**

fischertechnik Press Officer

Tel.: +49 7443 12 – 6251

Email: [Sandra.Roth@fischer.de](mailto:Sandra.Roth@fischer.de)