



FMS Production System Model

FMS Production System Model is an integrated teaching station demonstrating a fragment of the production line. It consists of freely selected modular stations that simulate various production processes. The model enables the teaching of basic functions in the field of control technology, such as logical operations and conditional functions, it has special functions, among others counters (up / down counting) with positioning, allows for sequential programming with error recognition. Additionally...

Parameter	Specification
Profile plate dimensions	350 × 700 × 30 mm
Overall dimensions	430 × 350 × 700 mm
Cable trunking type	H-profile
PLC Controller	Siemens S7-1200
Common Equipment	
Air preparation unit	With pressure gauge
Valve manifold	3 valves, fittings, silencer
Terminal strip	D-SUB
Controller power supply unit	Siemens
Delivery condition	Station pre-wired and tested

Module	Includes	Skills
Drilling and Drill Inspection Station	Rotary table module, drill unit module with drive control, and drill hole verification module.	Implementation and automation of the drilling process, drive control, and process quality control.

Module	Includes	Skills
3-Axis Gantry / Pick-and-Place Station	Rotary table module, horizontal stroke module with 50 mm guide, and vertical stroke module with 50 mm guide and vacuum gripper.	3-axis manipulator motion programming, positioning control, and implementation of automated pick-and-place operations.
Testing and Inspection Station	Inductive, optical, and capacitive sensor modules, along with vertical and horizontal stroke modules.	Workpiece property identification using various sensor types, measurement execution, and inspection sequence programming.
Sorting Station	Conveyor module, inductive, optical, and capacitive sensor modules, and horizontal module with an 80 mm stroke cylinder and pusher.	Automated workpiece identification and sorting, sensor integration with the control system, and transport/sorting sequence programming.
Automated Storage and Retrieval System (ASRS)	20-shelf storage unit, 20 mm aluminum profiles, X and Y linear axis modules, 24 V geared motor drive, and digital position indicator.	Fundamentals of automated storage and retrieval systems (AS/RS), linear axis control, and warehouse process programming.