Compact handling system YXMx for desktop applications

Ready to use!

Screwdriving, dispensing, testing, soldering, gripping, opening and closing containers and much more: the compact handling system YXMx forms the basis for a wide variety of desktop applications. This well-matched system kit comprising kinematics, controller and software saves you money and reduces your time to market – from development to programming and commissioning. There is also an optional software package for condition monitoring.

Quick and easy
The YXMx is a low-cost solution consisting of standard components that keeps engineering work down to a minimum. Predefined function elements from the software library make programming and commissioning easy.

Compact and connective
The compact controller enables numerous functions to be carried out in very small spaces. A range of predefined interfaces to the master control system are included along with the OPC UA interface for Industry 4.0.

Flexible applications
The system kit is your basic platform for a large number of applications. All you have to do is integrate a front unit, which is made very easy by the open interfaces.

Data and energy monitoring
Improve the transparency of maintenance requirements, energy consumption and the production process with the optional condition monitoring software.

Highlights
- Ready-to-use system kit comprising kinematics, controller and software
- 1 basic platform for a wide variety of applications
- For very small installation spaces
- Motion software for fast programming and commissioning included
- Optionally with condition monitoring software
- Easy integration
- Compatible with Industry 4.0
Ready-to-use system kit: from kinematics ...

The system components in detail
The components of the compact handling system YXMx are all perfectly matched and are easy to integrate into your application environment:

1. Control technology
   - Controller
     • Compact
     • Powerful
     • Dual-core architecture
     • SoftMotion for 3D path applications
     • Image processing function
     • High connectivity thanks to numerous interfaces

2. Scalable hardware
   - Planar surface gantry
     • Based on EXCM-30
     • Compact and flat
     • For very small installation spaces
     • Scalable stroke lengths
       - X: 90 ... 700 mm
       - Y: 110 ... 510 mm
     • Motors with integrated controller and frequency converter
     • Clean look
   - Optional:
     • USB remote camera
     • Z-axis: precision spindle axis with 75 mm or 125 mm stroke
   - Festo accessories:
     • Adjusting kit
     • 3D energy chain
     • Universal flange adapter

3. Software
   - Included: Festo Positioning Desktop Library
     Motion control for the kinematics
     • Quick and easy commissioning
     • Intuitive sequence processing
   - Optional: Festo Condition Monitoring Library
     Monitoring of operating parameters
     • Maintenance information
     • Process monitoring
     • Energy monitoring

Just add your front unit – done!

Screwdriving  Gripping  Gluing  Soldering  Dispensing
... to software

Festo Positioning Desktop Library

The reliable, quick and easy way to your goal: with the software package for motion control

The operating software is already installed on the controller and therefore ready to use as soon as system integration is complete. No programming skills are needed. Process sequences can be quickly and intuitively parameterised using the graphical user interface of the integrated sequencer. Everything is displayed clearly and logically.

The modular software in CODESYS is compatible with all kinds of human-machine interfaces like PC/laptop, tablet and others. Visualisation takes place in a web browser via TCP/IP.

Parameterisation rather than programming

The application-specific functions provided allow you to reduce the complexity and time required for commissioning.

- Plug and play function for automatic identification and configuration of motors
- Defined interface for communication with the host system via TCP/IP
- Parameterisation in line with the connected kinematic system
- Homing and jogging of the kinematic system
- Teach-in function
- Sequence processing
- Selection of predefined CNC programs:
  - Point-to-point
  - U-Pick
  - Curved path
- File management
- Notification system and error handling

Highlight: the sequencer

The processes are automatically generated in the background using the graphical user interface of the sequencer. This makes application programming easy, quick and completely intuitive – without the need for any programming skills.

Software available
in the Festo App World
www.festo.com/appworld
Festo Condition Monitoring Library for YXMx

One piece of software for maintenance requirements, energy consumption and monitoring of the production process!

Nowadays, all equipment and machinery is expected to provide maximum availability and reliability, especially in the electronics industry where the compact handling system YXMx is predominantly used. The additional condition monitoring software package monitors the operating parameters and current values of the compact handling system YXMx, such as the running performance, supply pressure, air consumption, energy consumption and much more besides.

As a result, it can help you plan your maintenance work professionally while at the same time cutting the associated costs. In addition, it allows you to analyse the production process and offers comprehensive energy monitoring.

Optimum integration

The software is based on VDMA standard 24582, i.e. the status information is output in a hierarchy in accordance with this standard. This enables systems and components from various manufacturers to be easily integrated into one solution. Visualisation of the status information takes place in a web browser, whose intuitive user interface can also be used to make all the necessary customised settings. Open interfaces like OPC UA let you back up the data in your customer system using a cloud connection, for example.

Programming of customised dashboards is available on request.

Added value on request: the software package for condition monitoring

Condition monitoring functions in detail

Condition monitoring

The status information shows a complete overview of all the individual components of the compact handling system YXMx.

- Hierarchical structure in accordance with VDMA standard 24582
- Further details are just a click away

Maintenance information

provides information about wear.

- Electric axes
  - Running performance of the X/Y gantry and the Z-axis via kilometre counter
  - Evaluation of motor current and motor temperature

- Pneumatic peripherals
  - Operating pressure level
  - Vacuum pressure level

Energy monitoring

provides transparency about energy consumption.

- Air consumption per cycle
- Power consumption of the motors per cycle
- Energy consumption of the entire system per day

Process monitoring

leads to better quality.

- Vacuum monitoring for gripping or screwing function
- Monitoring of process cycle times
- Counter for valid/aborted cycles
- Calculation of overall equipment effectiveness