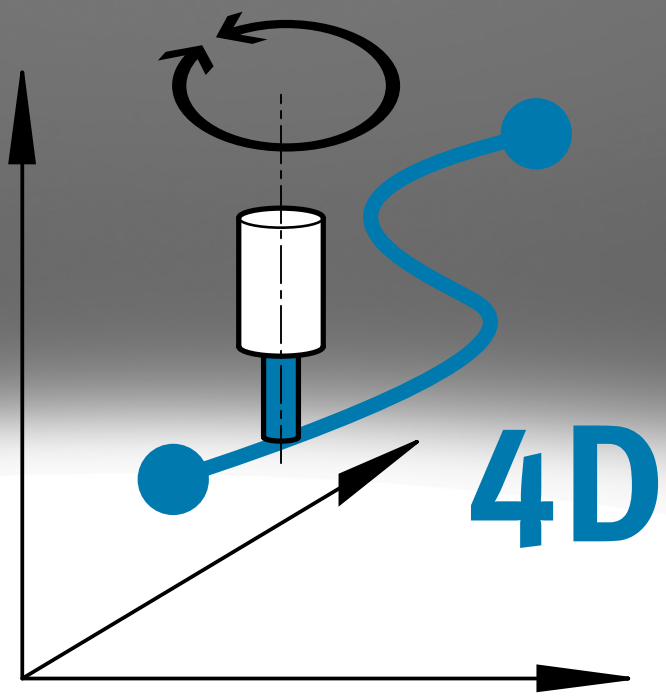
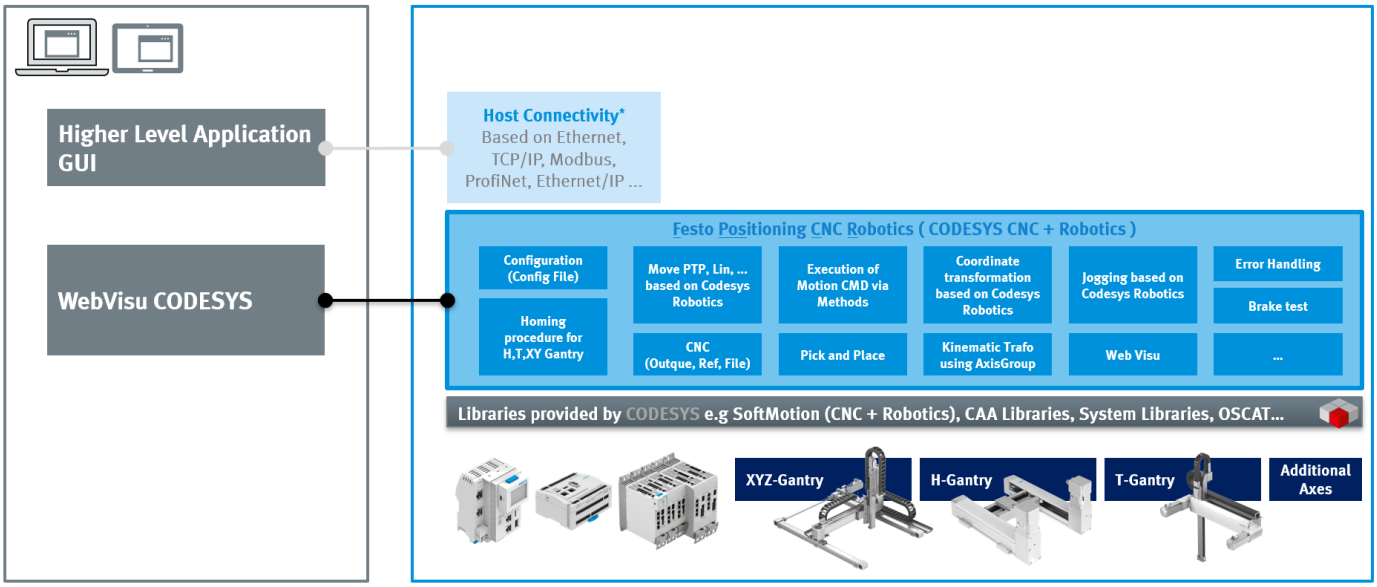
Software package GSAY-A6

FESTO



Characteristics

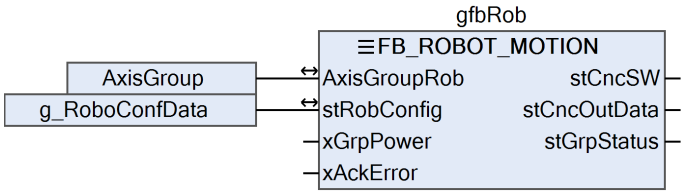
At a glance



* Optional software library

With the application software library Positioning CNC Robotics (FPosCR) a wide variety of motion applications, based on Cartesian handling systems or Cartesian robots, can be easily implemented. The library contains a broad range of complementary function blocks and methods for typical pick-and-place tasks as well as for CNC motion control or robotic solutions. FPosCR functionality can be easily integrated into your own IEC61131 3 code (Codesys V3, Softmotion).

Overview

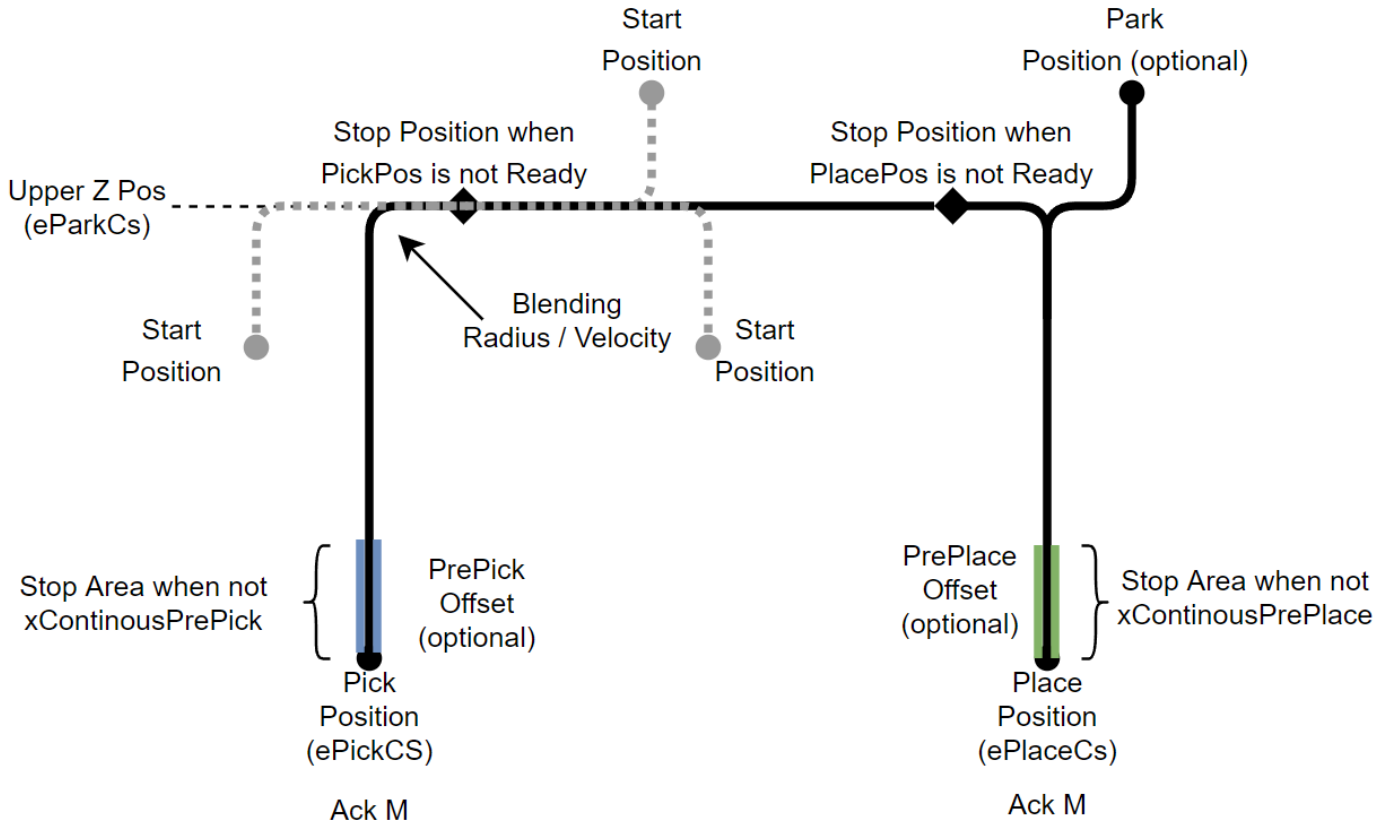


Integrating the FPosCR library functions in an application program

- The function block FB_ROBOT_MOTION is the main function block of the software library FPosCR. It summarises all the functions and commands for the movements as well as for controlling and monitoring them.
- Thanks to its compact yet powerful input/output interfaces, the motion range of an application can be effectively mapped with significantly reduced program code.

Characteristics

Application example



The function block FB_PICK_AND_PLACE is also available for conventional, standard applications.

This module contains a ready-to-use pick and place sequence in its basic form. To create this kind of sequence (pick and place cycle) for simple applications, only the following parameters need to be determined:

- Upper Z Pos (highest position travelled to on the Z-axis)
- Pick Pos (position at which the item/object is picked up)
- Place Pos (position at which the item/object is set down)

The FB_Pick_and_Place function block uses the robotics functions in the background.This optimises the movements in terms of:

- Clean and gentle movement sequence (improved jerk limitation)
- Shortening the cycle time

The following parameterisation options and settings are also available:

- Move to a park position option after executing a pick and place cycle
- Selecting individual dynamic parameters for the pick and place phase
- Continuous mode of operation
- Optional control intervention in the pick and place cycle

Datasheet

Functionality

- Commissioning
- Homing
- Manual movement

- Jogging
- Stepping
- Positioning

- CNC
- Robotic functions
- Coordinate transformation
- Diagnostics
- Brake test
- Web visualisation

CODESYS / platform

- Version 3.5 Sp16 Patch5
- >= SoftMotion V4.12.0.0
- Multicore support

Suitable for the following products from Festo

Axes and Cartesian handling units:

- Linear gantries EXCT, YXCL, YXML
- Three-dimensional gantry YXCR, YXMR
- Cantilever system YXCA
- Planar surface gantry EXCH, EXCM, YXCF, YXMF

Controllers and servo drives:

- Control unit CPX-E-CEC-M1-PN or -EP, CECC-X-M1
- Servo drive CMMT-AS, CMMT-ST, CMMT-...-MP

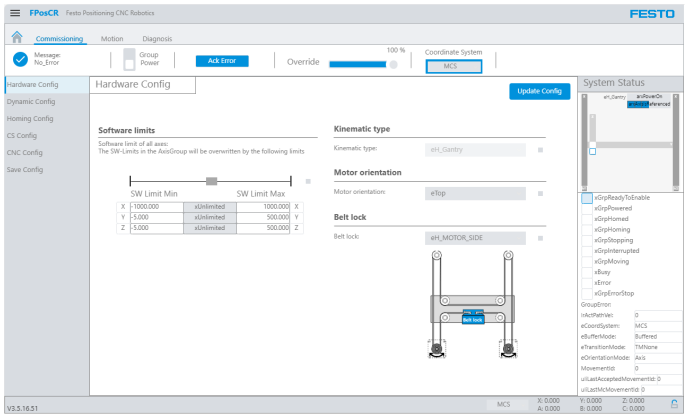
Web visualisation

The web visualisation (UI) included in the software library FPosCR provides support in all operating phases:

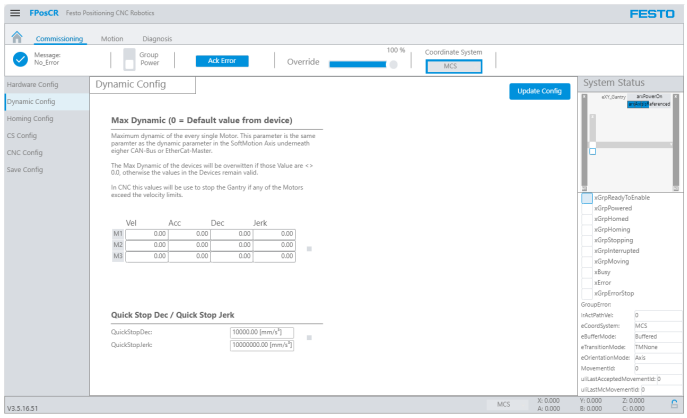
- System and movement configuration
- Commissioning/set-up
- Status monitoring/operation
- Event management/diagnostics

Datasheet

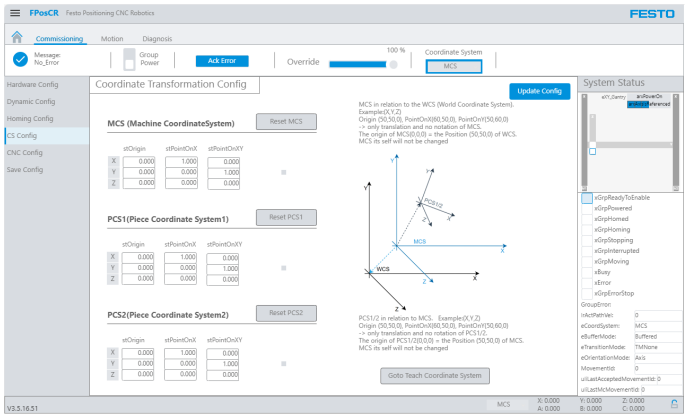
Dialogue for configuring the kinematics hardware



Dialogue for defining the dynamic limit values

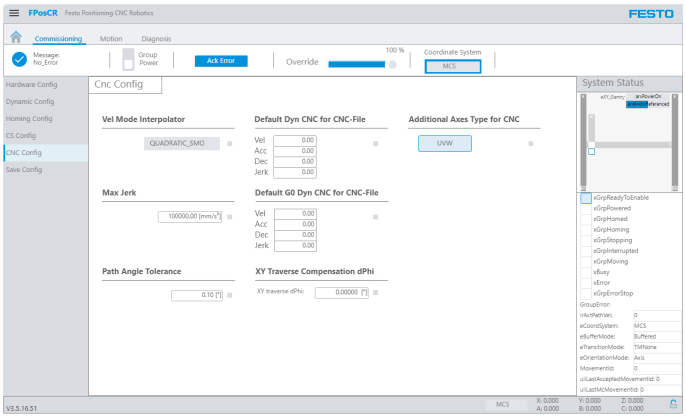


Dialogue definition of coordinate systems/transformation

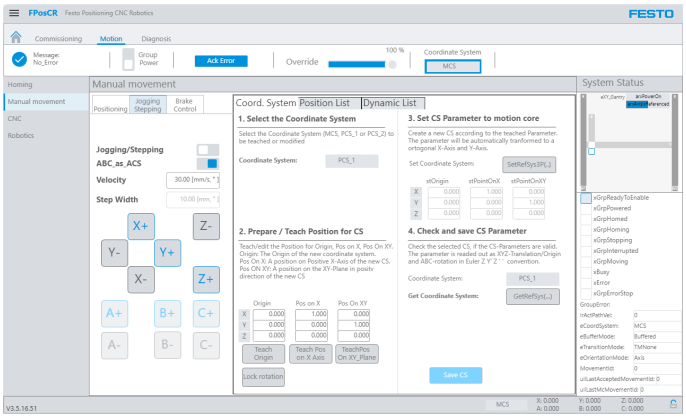


Datasheet

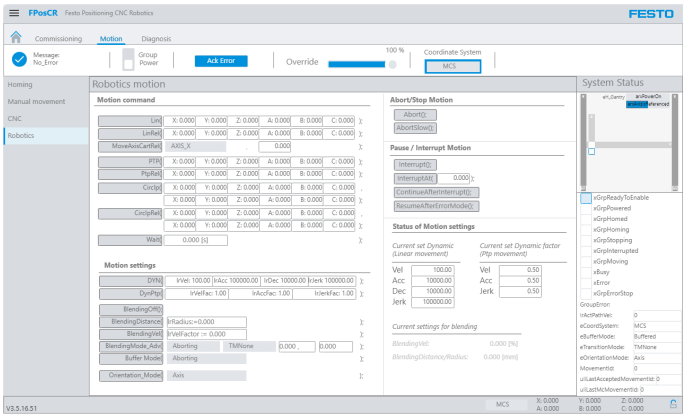
Dialogue for configuration as CNC application



Dialogue for manual movement (jogging, stepping)



Dialogue for applications with Robotics Motion Function

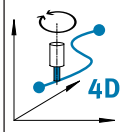


Ordering data

Application library FPosCR for Festo controllers

- Delivery format: digital
- Documentation: digital
- Development environment:CODESYS
- Licence:Non-exclusive single licence, indefinite, assigned to the control hardware (via product key)

Ordering data

	Short type code	Part no.	Type
	GSAY	**8185158**	**GSAY-A6-F0-Z4-L-Y0**