

CMXR multi-axis control



New perspectives for system solutions in handling technology: the CMXR multi-axis control with robotic functions ensures the shortest travel times and allows path applications with up to 6 degrees of freedom for tasks such as adhesive application, labelling or laser welding.

Simply complete

The CMXR is the core of a complete kinematic system solution: The multi-axis control combines the mechanical system, electrical drive technology and control technology to form a complete motion control product with integrated and standardised interfaces to all relevant system components.

Simple commissioning

All programming, operational and diagnostic functions are carried out via a control module in FTL macro language text. Simple teach-in programming allows positions to be changed quickly. The system solution is configured using the standardised Festo Configuration Tool FCT.

Simply more productive

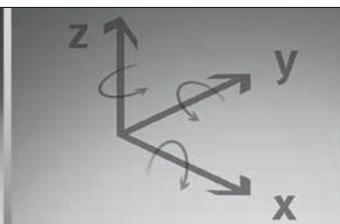
Because of the system's robotic functions it is ideally suited for handling technology. Special features such as smooth position transitions help to considerably reduce travel times.

Simple engineering

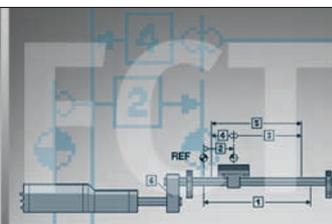
Standardised interfaces, convenient configuration and intuitive programming offer a high degree of reliability. This reduces engineering times and shortens the time to market.



Shorter travel times



Align words and picture



Quicker configuration

129.1.PSI →

Product Short Information

CMXR multi-axis control

Product elements

- Central module with interfaces: 2x CAN and Ethernet
- Digital input module with 16 inputs
- Digital output module with 14 outputs, with 2A capacity
- Digital input/output module with 8 inputs and 8 outputs, outputs with 2A capacity
- Analogue module with 4 inputs and 4 outputs, ± 10 V
- Analogue module with 4 inputs and 4 outputs, 0 to 20 mA or 4 to 20 mA
- Encoder module with 2 Encoder inputs, 5 V or 24 V signals
- Profibus DPV0 slave module
- Handheld terminal with touch screen, emergency stop and accept buttons
- Fully assembled cable for handheld terminal, in 5, 10 and 15 m lengths
- Wall bracket for handheld terminal incl. cable holder

Programming

- Easy to understand, text based Festo Teach Language (FTL) macro language
- Numerous program macros available for positions, dynamics and I/O processing for instance.
- Logical branches, e.g. IF...THEN...ELSE or loops, e.g. WHILE, LOOP are possible
- Use of variables
- Clear administration of programs in projects
- Online programming with the handheld terminal, supported by a graphic dialogue system
- Online changes to the program are possible
- Following an interruption, it is possible to continue the program at a desired program record
- Recently used macros are available via function keys
- Fast programming via the teach-in function and insertion of a position command at the touch of a button

Functionality

- Coordinate transformations: the internal transformations for Cartesian and tripod kinematics permit a Cartesian movement in space with up to 6 degrees of freedom
- Coordinate systems: the kinematics can be moved in an axis coordinate system and in Cartesian coordinate systems
- Inching operation: it is possible to move the axes in jog mode in percentage increments and to select a coordinate system
- Constant path speed when performing Cartesian movements
- Position transition: position transition can be achieved dynamically via speed or Cartesianally via position
- Ramp shapes: trapezoidal, sine, sine² or for soft movements which are gentle on the mechanical system, the MinJerk ramp with minimal jerk.
- Set advance, enables path planning over several positions
- Tools can be defined

- Consideration of tool data during Cartesian movements in space

Parameterisation

- Mechanical and electrical peripheral equipment can be parametrised via Festo configuration software

Integration

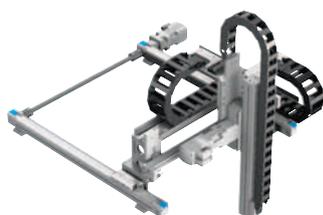
- PLC interface with I/O: simple interface for system integration with reduced functions
- PLC interface via Profibus: comprehensive interface with several functions including external operation
- Drives: fully implemented drive interface to Festo servo and stepper motor controllers
- Valve terminals: integrated drivers for Festo valve terminals, e.g. CPV

CDSA handheld terminal

Programming in the Festo Teach Language (FTL)



Compatible with Cartesian and tripod kinematics



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