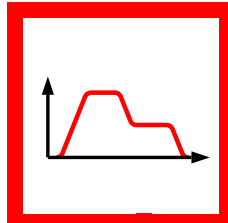


modular motion control

SYSTEM-90E



This motion control module is designed to control servo motors equipped with an absolute encoder with a digital EnDat 2.2 interface.

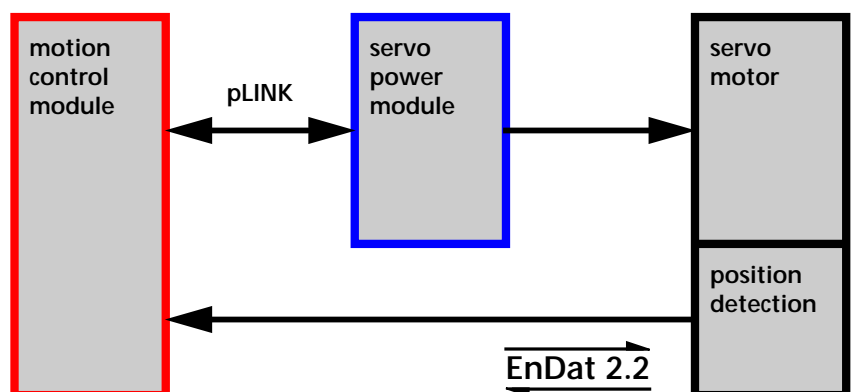
Within a control system, this module can be randomly combined with other motion control and axis modules to create complex multi-axis topologies, whereby setting parameters for and programming of the respective axes is identical.

Together with a servo power module, this module is especially suitable for ultra-precision driving of rotational direct drives, torque motors and AC servo motors.

MCE-9

Motion control module
for
absolute encoders
with EnDat 2.2 interface

- Position detection using an absolute encoder with a digital EnDat 2.2 interface
- Optimum motion design with defined acceleration and jerk control
- Setting of parameters and performing diagnosis are made easy by following fully digitalized routines.
- Can be combined with servo power modules for driving motors with a power rating of up to 11 kW.
- Direct connection of a servo power module via the uniform pLINK interface



► Position detection using a high-resolution EnDat 2.2 encoder

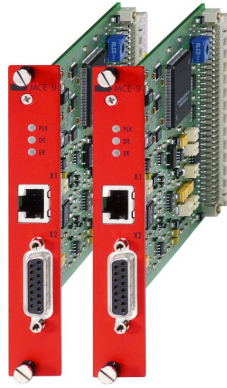
The MCE-9 motion control module uses an absolute encoder with EnDat 2.2 interface for position detection.

Run time compensation circuitry incorporated into the motion control module permits high-speed transmission, even when long cables are involved. Consequently, this minimizes times needed for position transmission, which in turn makes ultra-high-dynamic regulation possible.

The absolute position information is transmitted as a purely digital signal to the motion control module, thus reducing expenses for wiring.

The encoder is connected directly on the motion control module. Connecting the encoder to the servo power module is not necessary, thus simplifying wiring.

Appropriate motion control modules are available for other position detection methods. They can be combined in any manner in multi-axes applications.



► Position command with control

Every motion control module is equipped with a quick-reacting position command generator. This creates a sequence of time-equidistant high-resolution set points from the data for the prescribed run sequence (target position, velocity, acceleration, and jerk).

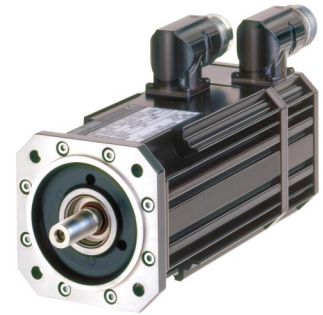
Together with the ultra-precision jerk control, this produces an especially harmonic motion profile which minimizes wear on the mechanical elements.

A special feature is that a motion will be started within one millisecond without any delay. In addition, velocity and target position can also be modified while a specific motion is still going on.

► Servo power modules

For motors of varying power there are different servo power modules available. They can be combined in any desired manner with the available motion control modules.

- **TrioDrive C**
Continuous current 2 to 6 A_{rms}
Power supply 1 × 230V_{AC}
- **MidiDrive C**
Continuous current 2 to 20 A_{rms}
Power supply 3 × 400/480V_{AC}



► Servo motors of any type

Since all the properties of the servo motor can be set digitally, the MCE-9 motion control module can control virtually any drive equipped with an encoder with EnDat 2.2 interface. This also includes AC servo motors and torque motors.

This means that for any given installation the most suitable motors can be selected and combined regardless of their respective manufacturers.

Technical specifications

EnDat 2.2 interface

Transmission method	Synchronous-serial
Electrical interface	RS422 (differential line driver)
Monitoring	Line break CRC-check Plausibility
Speed	10 x 10 ⁶ measurement steps / second
Motor temperature monitoring	PTC with settable switching threshold
Frequency	8 MHz

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