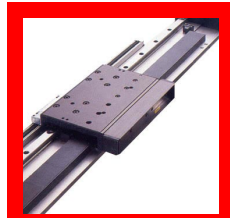


# modular motion control

# SYSTEM-90E

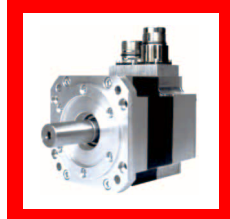


This motion control module serves to control servo motors equipped with an incremental encoder using square-wave signals.

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



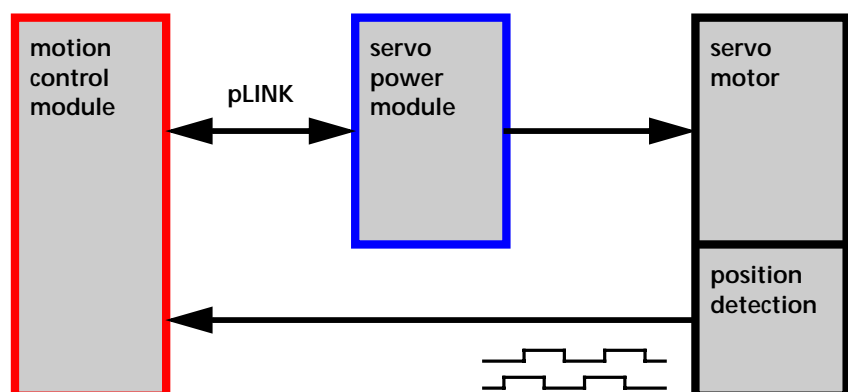
Together with a servo power module, this module is especially suitable for driving the most diverse types of AC servo motors and direct drives.



## MCQ-5

Motion control module  
for  
incremental encoders

- Position detection via an incremental encoder using square-wave signals
- 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



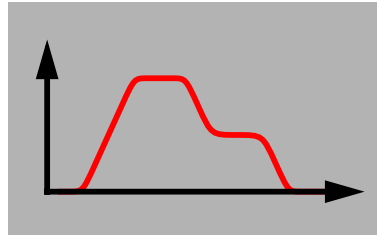


## ➤ Position command with control

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 6A<sub>rms</sub>  
Power supply 1 × 230V<sub>AC</sub>
- **MidiDrive C**  
Continuous current 2 to 20A<sub>rms</sub>  
Power supply 3 × 400/480V<sub>AC</sub>



## ➤ Servo motors of any type

Since all the properties of the servo motor can be set digitally, the MCO-5 motion control module can control virtually any motor equipped with an incremental encoder using square-wave signals. This also includes rotational and linear direct drives.

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

**promicon**  
SYSTEMS

D-72124 Pliezhausen  
Fon: + 49 (0) 7127 - 93730  
www.promicon.com

## ➤ Position detection via an incremental encoder using square-wave signals

The MCO-5 motion control module employs an incremental encoder using square-wave signals for position detection.

Incremental encoders are on the one hand inexpensive and on the other there is a wide range of motors available which are provided with such encoders as standard equipment.

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.

### Technical specifications

Transmission method	2-channel with 90° phase-shifted square-waved signals
Electrical interface	RS422 (differential line driver)
Monitoring	Line break Phase monitoring Distance of zero pulses Failure signal monitoring
Motor temperature	PTC with settable switching threshold
Speed	5 x 10 <sup>6</sup> measurement steps / second