

EPOS Positioning control unit



EPOS is a modular constructed digital positioning controller. It is suitable for DC and EC motors with incremental encoder with a power range from 1 - 700 watts.

A number of operating modes provides flexible application in a wide range of drive systems in automation technology and mechatronics.

Point to point

The "CANopen Profile Position Mode" helps position the motor axis from point A to point B. Positioning is in relation to the axis zero point (absolute) or current axis position (relative).

Position control with anticipatory control (feed forward)

The combination of controlling feedback control and controlling feed forward measures provides ideal control. Anticipatory control reduces control error. EPOS supports acceleration and speed anticipatory control.

Speed control

In "CANopen Profile Velocity Mode", the motor axis is moved with a set speed. The motor axis retains speed until a new speed is set.

Torque control

Under "current mode", a constant torque can be controlled on the motor shaft. The sinusoidal commutation used produces minimum torque ripple.

Reference route

The "CANopen homing mode" is for referencing to a special mechanical position. There are more than 30 methods available for finding the reference position.

Electronic gearhead

In "Master Encoder Mode", the motor follows a reference input produced by an external encoder. A gearhead factor can also be defined using software parameters. Two motors can be very easily synchronised using this method.

Step/Direction

In "Step/Direction Mode" the motor axis is moved gradually with a digital signal. This mode can replace stepping motors. It can also allow the use of EPOS to PLC controls without CAN interface for example.

Capture inputs (position marker)

EPOS digital inputs can be configured so that the current position value can be saved when a positive and/or negative flank of an input appears.

Technical data page 286 / 287

Standardised, extendable

CANopen standard CiA DS-301 and DSP-402. Can easily be integrated into existing CANopen systems. Interactive with other CANopen modules
Alternatively controllable through serial interface (RS232)

Flexible, modular

The same technology for DC and EC motors.
Configurable inputs and outputs for limit-switches, reference switches, brakes and for other sensors and displays near the drive.

Easy start-up procedure

Graphic user interface (GUI) with many functions and wizards for start-up procedure, automatic control settings, I/O configuration, tests.

Simple programming

Numerous prepared IEC 61131-3 libraries for CAN-Master units of various PLC manufacturers and Windows-DLLs for PC-Master.

Latest technology

Digital position, speed and current-torque control. Sinusoidal commutation for high synchronism with EC motors

