

MOTOR CONTROLLER

For stepper and BLDC motors

The CL3-E controller from Nanotec (Germany) is intended for small stepper and brushless DC (BLDC) motors with a continuous output of up to 70 W. The controller can be connected via CANopen.

DESIGNED AS A HOUSING-FREE BOARD with a size of 40 mm x 60 mm, the controller is suited for laboratory automation equipment as it covers a range of

applications with a variety of motors and interfaces. These range from open-loop stepper motors, which respond autonomously to digital inputs, to highly dynamic BLDC motors with encoders that are controlled via the CAN network. Nanotec's sensor-less closed-loop control of stepper motors is supported as well.

The controller is CANopen configurable (Photo: Nanotec)

With an operating voltage of 12 V to 24 V, a nominal current of 3 A, and a peak current of 6 A, the board offers a solution for miniature BLDC motors and stepper motors with a size up to Nema 23. The controller can be connected via USB, CANopen, EIA-232 or EIA-485 interfaces and has five digital inputs, two analog inputs, and three digital outputs.

Application programs created in the NanoJ programming language can be executed directly in the motor controller. The programs are synchronized with the digital inputs and outputs and with the instructions received from the fieldbus in 1-ms cycles via the real-time operating system. In this way, simple applications can be implemented entirely without higher-level control. In complex applications, the higher-level controller is unburdened and the busload reduced.