

Kuhnke FIO

Kuhnke FIO Drive Control

The Kuhnke FIO Drive Control is a compact single-axis drive controller for two-phase stepper motors and brushless DC motors. In contrast to the three-axis FIO Stepper Control, the module offers closed control with encoder feedback. Field-oriented vector control and sine commutation enable quiet and efficient motor operation. In stepper motors, the controller corrects step errors during movement and compensates for load angle errors within a full step. The demand-based control of the motor current reduces power dissipation. Configuration is carried out without additional software via the integrated web server and a PC with Ethernet connection and web browser.



Features

- Interpolation: Cyclic Synchronous Position Mode
- Absolute and relative positioning
- Speed control
- Torque control
- Homing methods

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Technical Data	
Type	Kuhnke FIO Drive Control
Motor type	2 Phase Stepper motor or Brushless DC motor
Power supply	Electronic 24 V DC, Motor 12..72 V DC (cULus 12..48 V DC)
Rated current	5 A (cULus: max 55°C, 5A @ 12..24 V DC / 4A @ 48 V DC)
Peak current	Stepper motor: 10 A / Brushless DC motor: 15A
Incremental encoder	5 V / 24 V (A, /A, B, /B, Z, /Z)
Hall sensor	24 V (H1, H2, H3) or 3 additional zero-switching digital inputs
Digital Inputs	5 x 1 ms (configurable, for example, reference, limit or release switch)
Digital Outputs	1 x 0.5A (brake output or standard output)
Fieldbus	EtherCAT® 100 Mbit/s LVDS: E-Bus
Mounting	35 mm DIN-Rail
Indication	LED, assigned to the clamping point locally
Shield connection	Directly at module
I/O connection	Spring-loaded plug with mechanical ejection
Ambience conditions	0 °C...+55 °C, IP 20, Interference immunity Zone B per EN 61131-2
Housing (W x H x D)	Aluminum, plastic, 25 x 120 x 90 mm
Certifications	CE, cULus



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