

CANopen Power Drive

The pdc-x85 controller operates 2-phase stepper and 3-phase steppers as well as DC-motors and BLDC-motors. The operating range spans from 24V to 130V and motor currents from 1A to 10A. Despite the high power output the controller has a remarkably small foot print. The robust metal housing can either be wall-mount or snapped on to a standard DIN rail. All necessary peripheral equipment interfaces such as for limit switches, encoders etc. are optically isolated and easily accessible on the front panel. The integrated cooling fan automatic allows for mounting the drive in virtually any location. All required settings can be done directly at the front panel, and therefore no external input device is needed. These product features make the pdc-x85 suitable for rough industrial environments. Typical application fields are in general automation as well as in the device technology where multiple axis are controlled via CAN bus. The pdc-x85 is a CANopen slave device and meets the entire CANopen specification. The communication is realized with the CANopen specified „Predefined Connection SET“. So by using standard settings full compatibility is achieved. The command structure is very simple: First there is a command identifier (1-Byte) that defines the type of task and then there is an added parameter value (4-Byte) e.g. to set the target position. Only one PDO is required for the full functionality and only a few CANopen objects are required in total. This significantly reduces the set-up time and effort and also the necessary memory to be mapped for each CAN object. To avoid extensive bus traffic by continuously polling with the master, the CANopen object „Status-Word“ is automatically sent to the master e.g. when the motor has reached the target position. This minimizes the bus load. Extensive motion and control functions are already integrated. Part of these are absolute and relative motion functions, reference moves etc. or simple set-up parameters such as motor current, step resolution and more. Additional Interfaces are RS232, RS485, Pulse/Direction, or I/O-Extension for manual control or with a PLC and digital Inputs/Outputs. Through comprehensive parameter settings the application can be optimally adjusted to the application. Because of the expanded supply voltage range and motor current range a wide range of applications can be covered with only a few motor variants. All electrical connections are removable. The pdc-x85 controls stepping motors in micro steps and shows excellent running performance such as low resonance and smooth quiet run at high step angle accuracy and constant torque from step to step.

