

Drive system with CANopen and Ethernet connectivity

The CDS (cyber dynamic system) from Wittenstein Cyber Motor (Germany) is a motor-integrated servo drive system. Four sizes from 17 mm to 40 mm outer diameter are available.

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(Source: Wittenstein)

The system's connection to the PLC (programmable logic controller) can be realized via CANopen or a multi-Ethernet interface. Ethercat, Profinet, and Ethernet/IP (in the future also Sercos III) are supported. CANopen and Ethercat implementations support the CANopen profile for drives and motion control (CiA 402, also standardized in IEC 61800-7-201/-301). The integrated safety function STO (safe torque off) complies with the safety requirements according to SIL 3 (safety integration level) and PL e (performance level).

The drive system can execute motion tasks (e.g. positioning with definable trajectories and work according to motion block tables) independent of the machine control. This is usable for non-synchronized axes or for single-axis movements. The drive is designed for integration into Industry 4.0 environments. It targets applications that currently implement pneumatics-based drive technology.

The drive's integrated electronics is based on the company's redesigned Cyber Simco Drive 2 generation. The devices are about 30 % smaller than the predecessor series. The core kinematic component is a brushless servo motor in a 400-mm stainless steel housing with a maximum torque of ca. 1 Nm. The series is shipped with an absolute single-turn encoder with a 12-bit resolution. A battery-free, gearless multi-turn encoder, and a holding brake can be optionally integrated. Depending on the task, the drive can be supplemented with planetary gearboxes.

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