New small servo drive system  
for smart engineering

The second generation of WITTENSTEIN cyber motor’s small servo drive system, which will be on show at SPS 2019, convinces as a complete package in several key areas like connectivity, configurability and compactness. The redesigned, roughly 30 percent smaller cyber® simco® drive 2 with a multi-Ethernet interface, CIP Sync real-time functionality, a Safe Torque Off (STO) function and decentralized intelligence represents the highlight. A motor-integrated version of these drives can now also be realized as a new configuration variant. The option of integrating multiturn encoders, holding brakes and planetary gearboxes further expands the functionality of the servo motors in the cyber® dynamic line.

The industrial-grade small servo drive system sets a new benchmark in its market segment in terms of automation connectivity thanks to the redesigned cyber simco drive 2 series. These drives are offered with both a CANopen and a multi-Ethernet interface. The latter allows users to choose between an EtherCAT, PROFINET or EtherNet/IP CIP Sync fieldbus – and in future also SERCOS III – with one and the same hardware.

These second-generation servo drives additionally impress with their extraordinary compactness. Compared to the predecessor version, they are about 30 percent smaller. That saves space not only in the switch cabinet but also in the area around the application, where the integrated Safe Torque Off (STO) function ensures the highest safety levels; all variants of the cyber simco drive 2 meet the safety requirements of SIL3 and PL e.

Motor-integrated version for the field level

This is equally true of the new motor-integrated version, the cyber dynamic system (CDS). A 40 mm motor and a special drive housing together form an ultra-compact unit that fits into even the smallest mounting space and completely eliminates wiring apart from the power supply and fieldbus communication. Just like the other drives, the CDS also features decentralized control intelligence to enable autonomous positioning.

Space saving drives with expanded functionality

In combination with the high torque and force density of the small servo motors in the cyber dynamic line, these drives pave the way for what are probably the most compact drive solutions of their kind in the market. All four sizes – with outer diameters from 17 mm to 40 mm – come either in a high quality, easy-to-clean standard stainless steel housing or in a special inox version. The size 40 motors can now be optionally equipped with a holding brake and operated with an NP-type low-backlash planetary gearbox in the alpha Value Line from WITTENSTEIN alpha. On the performance side, the actuators can produce torques of up to 22 Nm and forces of up to 2 kN, even at speeds of up to 1000 mm/s – as testified to by the high torque density and dynamics of the motors. Finally, suitable power supply units and preassembled cables underline the “everything from a single source” approach of the small servo drive system.

Increasingly modular engineering, automation structures with the emphasis on decentralized intelligence in the field, uncomplicated connectivity due to the flexible fieldbus connection, a growing number of applications where real-time capability is a must – the next generation of WITTENSTEIN cyber motor’s industrial-grade small servo drive system is exactly what the world of smart machine concepts was waiting for.

Texts and photographs in printable quality can be downloaded from presse.wittenstein.de.

**Photos (all © WITTENSTEIN SE):**

**01-wittenstein-cds-gcp-45**

Building on the optimized drive and motor-side technology platforms, WITTENSTEIN cyber motor has also designed a motor-integrated version: the cyber® dynamic system.



**02-wittenstein-cds-spindel-gcp**

The small servo motors enable both rotary and linear drive solutions with an integrated gearbox or ball screw.



**03-wittenstein-cds-simco-ng-ip20-simco-ng-ip65**

With their ability to create decentralized motion tasks directly in the drive, the cyber® simco® drive 2 series and the cyber® dynamic system reflect the trend towards decentralized drive technology with distributed intelligence in the field.



**04-wittenstein-simco-ng-ip20-simco-ng-ip65**

The cyber® simco® drive 2 series are the most compact servo drives available in the market, both in the version for DIN rail mounting in the switch cabinet with IP20 protection and in the variant for installation in the machine with IP65.



**05-wittenstein-simco-ng-ip20-simco-ng-ip65-cds-cdl**

A multi-Ethernet interface, CIP Sync real-time functionality, a Safe Torque Off (STO) function and decentralized intelligence – the new small servo drive system from WITTENSTEIN cyber motor is exactly what the world of smart machine concepts was waiting for.



**06-wittenstein-simco-ng-ip20-simco-ng-ip65-sim2050:**

Compared to the predecessor version (right), the new drives are about 30 percent smaller. That saves space not only in the switch cabinet but also in the area around the application.

**WITTENSTEIN SE – one with the future**

With around 2900 employees worldwide and sales of €436.4 million in 2018/19, WITTENSTEIN SE enjoys an impeccable reputation for innovation, precision and excellence in the field of mechatronic drive technology – not just in Germany but internationally. The group comprises six pacesetting Business Units with separate subsidiaries for servo gearboxes, servo actuator systems, medical technology, miniature servo units, innovative gearing technology, rotary and linear actuator systems, nanotechnology and electronic and software components for drive technologies. Through its 60 or so subsidiaries and agents in approximately 40 countries, WITTENSTEIN SE ([www.wittenstein.de](http://www.wittenstein.de)) is additionally represented in all the world's major technology and sales markets.