

MOTION CONTROL UNIT

## Drive positioning and synchronization

Together with its subsidiary, Zub Machine Control, Maxon develops and produces control modules for drive positioning and synchronization. The latest solution Minimacs 4/50/10 comes with CANopen interfaces.



(Source: Maxon/Zub)

Macs (multi-axis controller system) modules independently control the highly dynamic positioning and synchronization of up to 32 axes of servo and asynchronous motors, or control autarkic small devices. The control systems are preferably used where PLC (programmable logic controller) solutions are too expensive or do not meet specific requirements, explained the company. Interfaces for incremental Sincos and high-speed latching inputs are integrated in the controllers. The motion controllers operate CAN, Ethernet, and Ethercat interfaces.

High-performance controllers, such as the Mastermacs, synchronize processes in industrial machines, react lightning-fast to highly dynamic changes in the process, or monitor functional safety. With the latest development, the Minimacs 4/50/10, Maxon presented the next generation of its motion controllers. The controller is suitable for system developers who design compact and autarkic robots or shuttle systems, such as storage and order picking, said the company. The product controls up to four axes and can be expanded modularly. The controller contains power amplifiers for four brushless drives with up to 50 V and 30 A per drive.

Each of the internal amplifiers offers 400-W continuous and 1,5 kW peak power for direct control of drives. Position feedback or master signals are processed by encoder inputs for direct connection of incremental and hall sensors. Four encoder inputs are available and supporting SSI, Sin/Cos, or incremental encoders. A variety of digital inputs and outputs process sensor signals and commands actuators. The number of I/Os can be extended by CANopen I/O modules. Bus interfaces like two CANopen and USB are integrated and allow communication with computers or other devices, commissioning, firmware updates, and programming possibilities. This controller can be integrated into CANopen as a fully featured Ci402 multi axis slave device.

The unit supports optional programmability with the automation software Aposs win and the license-free motion control library (in program language C). The integrated interfaces allow data exchange with PC and PLC. Entire process sequences can be mapped and executed independently without PLC or PC.

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