



AX5160/AX5172



AX5190/AX5191

AX5000: high-performance EtherCAT drives

The AX5000 Servo Drive series from Beckhoff is being expanded to include drives with higher rated currents. A total of six new Servo Drives enhance the universally designed drive family for highly dynamic positioning tasks. With this development, Beckhoff is responding to the increasing demand for drives with even greater power, in order to replace pneumatic or hydraulic drives with more maintenance-friendly electrical axes, or to cope with the highest dynamism demands, even at high loads.

The AX5000 Servo Drive series from Beckhoff integrates high-end control technology while supporting fast and highly dynamic positioning tasks.

- | current control: min. 31.25 μ s
- | speed control: min. 125 μ s
- | position control: min. 125 μ s

The drives utilize EtherCAT for high-performance system communication that is ideal to interface with PC-based control technology. The single-channel Servo Drives from the AX51xx series (rated up to 25 A) and the dual-channel AX52xx series (rated up to 2 x 6 A) are available and already widely used.

AX5000 series expanded to 120 kW

The AX51xx will be supplemented with Servo Drives rated from 60 to 170 A for higher power. The AX5000 drives are designed in three sizes with rated currents of 60 A, 72 A, 90 A, 110 A, 143 A

and 170 A. Designed for maximum flexibility, a wide range of motors can be connected to the AX5000. Motors of different sizes and types can be connected without additional measures. Examples include synchronous, linear, torque and asynchronous motors. The multi-feedback interface supports all common standards:

- | resolver
- | SinCos encoder 1 Vpp
- | TTL encoder with/without Hall
- | single- or multi-turn encoder with Hiperface, EnDat or bidirectional sensor interface BiSS
- | connection option for further feedback

A major highlight of the AX5000 drive series is its high power built into a small device. A great advantage of full EtherCAT integration is that no additional interface cards are required and



AX5192/AX5193

The AX5000 drives are designed in three sizes with rated currents of 60 A, 72 A, 90 A, 110 A, 143 A and 170 A.

no internal conversion in the controller is necessary. EtherCAT permits the design of simple drives with no local parameter storage, resulting in greatly simplified commissioning and service in the event of maintenance.

The 120 kW power packs are ideally suited for the replacement of hydraulic drives or for use as the main drive in machines with many small drives. Preferred applications for these high-powered drives include plastics processing (injection molding), metal working as well as in milling and boring machines and extruders.

The range of Synchronous Servomotors from the AM3000 series is also being expanded with versions that have higher standstill torques of 80 Nm, 110 Nm and 150 Nm. These servomotors are matched to the rated currents of the AX5000 Servo Drives. This provides users optimally matched drive axes.

www.beckhoff.com/AX5000

Features:

- | high-speed EtherCAT system communication
- | rated currents of the new devices:
 - AX5160: 60 A
 - AX5172: 72 A
 - AX5190: 90 A
 - AX5191: 110 A
 - AX5192: 143 A
 - AX5193: 170 A
- | supply voltage:
 - from 60 A: 400...480 V AC $\pm 10\%$
- | multi-feedback interface
- | flexible motor type selection
- | high-speed capture inputs
- | integrated mains filters up to 72 A rated current, Cat. C3 according to EN 61800-3
- | optional safety functions: restart lock/TwinSAFE safety functions



The Synchronous Servomotor series AM3000 is being expanded with versions that have higher standstill torques of 80 Nm, 110 Nm and 150 Nm.



The Beckhoff highlight at Hanover Fair 2009 for Drive Technology: the new Servo Drives up to 120 kW.