



The power electronics are integrated at the rear end of the motor shaft, ensuring that the attachment dimensions of the servomotor remain unchanged.

Interview with Andreas Golf, Product Manager Drive Technology, on the possible application and expansion of the AMP8000 system

AMP8000: the ideal drive system for modular machines

For which applications are the AMP8000 distributed Servo Drives particularly well-suited?

Andreas Golf: The AMP8000 distributed drive system is particularly suitable for manufacturers who want to build more modular machines. Flexibility, equipment space reductions and simple expandability represent important prerequisites for the success of such modular machine concepts. The available space for a machine is all too often very limited and cost-intensive. The distributed drive system puts machine builders in an advantageous position where they can offer their customers a very compact and easily expandable drive solution. There is currently no comparably compact system that gives machine builders such a free choice between conventional or distributed drives without having to modify the machine design.

Up to what size can the AMP8000 system be expanded in terms of space and number of axes?

Andreas Golf: The distributed drive system was specially developed with the goal of reducing cable lengths, because the components no longer have to be mounted so far apart. The maximum number of axes is only limited by the current load. However, with our Motion Designer software it is very simple to verify whether a given configuration is viable in the field or not. Here, the total load for the power supply unit is calculated on the basis of a specified work cycle and suggestions for a system expansion are given if possible. The maximum extension with regard to cable lengths can also be checked easily.

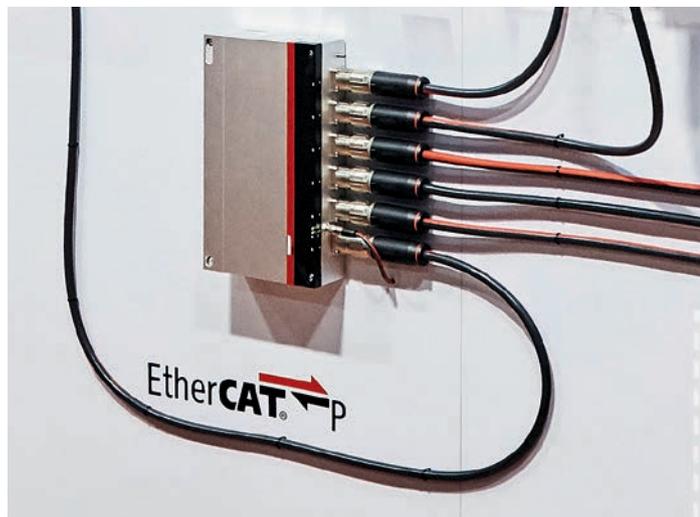
How big are the potential savings in terms of cabling and assembly effort for a typical AMP8000 application?

Andreas Golf: As the basis for calculation let's use an average number of axes of eight motors per machine and assume that a control cabinet is on average 15 meters away from the machine. These eight motor cables are now replaced by a single OCA cable. If you then add two of the distribution modules required



The AMP80xx distributed Servo Drives were presented for the first time at the SPS IPC Drives trade show in 2017 – initially in flange sizes F4 and F5.

The AMP8805 distribution module is equipped at the front with a power input and five power outputs – each with an EtherCAT P B23 socket – as well as with an EtherCAT P M8 interface for the connection of EtherCAT P I/Os.



for the AMP8000 system and eight short cables supplying the distributed motors, the costs are about 10 to 15 percent lower for the distributed drive solution depending on the configuration. In addition, there are the advantages of smaller control cabinets and a closer positioning of the drive technology to the machine, resulting in further savings potential.

What are your plans for the future rollout of the AMP8000 system?

Andreas Golf: The AMP8000 distributed Servo Drive system will be expanded in both the lower and upper ends of the power scale. The system is already suitable for outputs up to 3.5 kW; the currently available flange sizes F4 and F5 will be supplemented by their corresponding counterparts in the flange sizes F3 and F6. The principle of the 600 V DC supply will also apply to these drives and provides machine manufacturers with maximum flexibility. A distribution module optimized for a higher numbers of axes with 10 connections will also be developed.



Andreas Golf during the introduction of the AMP8000 series at SPS IPC Drives 2017: "The AMP8000 system gives machine builders full freedom to choose between conventional or distributed drives without having to modify the machine design."

Further information:
www.beckhoff.com/amp8000