



## AM81xx | Synchronous Servomotors for compact drive technology

The AM8100 servomotors from the AM8000 series are especially designed for EL72xx, EP72xx and EJ72xx servo I/Os. The high dynamics of the servomotors open up a multitude of possible applications: for example in industrial robots for pick-and-place applications, or in general in mechanical engineering, where a compact design and high positioning accuracy are necessary. Like all motors of the AM8xxx family they are available in One Cable Technology (OCT) versions where power and feedback are combined in a single cable.

Homing is no longer necessary thanks to the absolute value encoder integrated in the motor: the position of the drive is saved in the EEPROM, which is ideal for adjustable axes. The encoder data are transmitted entirely digitally to the servo I/Os via the motor cable. The encoder cable can be dispensed with. The full integration of the servo I/Os in the Beckhoff control system facilitates the commissioning of the drive axis. All motors of the AM8xxx family use the electronic type plate, with which the engineering expenditure is additionally reduced by the simple reading of the motor parameters. The Beckhoff TwinCAT automation software enables the convenient parameterisation of the servomotors.

The AM81xx motors can optionally be equipped with a backlash-free permanent magnet holding brake, a sealing ring or a feather key groove. They are equipped with a sturdy rotary resolver encoder and for the purpose of long life have been developed with generously dimensioned bearings for general mechanical engineering. Matching gears and prefabricated connecting cables complete the ultra-compact drive axis.

Technical data	
Motor type	permanent magnet-excited three-phase synchronous motor
Magnet material	neodymium-iron-boron
Insulation class	thermal class F (155 °C)
Design form	flange-mounted according to IM B5, IM V1, IM V3
Protection class	IP 54, IP 65 (shaft seal only for AM812x, AM813x, AM814x)
Cooling	convection, permissible ambient temperature 40 °C
Coating/surface	dark grey powder coating, similar to RAL7016
Temperature sensor	integrated in stator winding
Connection method	round plug connector, swivelling, angled
Life span	L <sub>10h</sub> = 30,000 hrs for ball bearings
Approvals	CE, UL (AM811x: UL in preparation)
Feedback system	resolver (only for AM812x, AM813x, AM814x), OCT

Options	AM81xx
Feather key groove	according to DIN 6885 P1
Holding brake backlash-free	permanent magnet single-surface brake, suitable only as holding brake
Shaft seal	radial shaft seal made of FPM
Feedback system option	absolute encoder multi-turn

Accessories	
AG2250	Planetary gear units for Compact Drive Technology
ZK47x4-04xx, ZK4000-xxxx	Supply cables for Compact Drive Technology