



AM80xx | Synchronous Servomotors

The AM8000 series represents robust, durable and high-performance synchronous servomotors "Made in Germany". The seven flange codes, with up to four overall lengths, cover a wide torque range from 0.2 up to 129 Nm.

The AM8000 motors feature a low rotor moment of inertia and a very high overload capacity. Based on these technical characteristics, the most highly dynamic applications can be realised.

The windings of the AM8000 motors are implemented using salient pole-wound technology, resulting in a high copper space factor. Due to the high slot space factor, high continuous torques can be achieved. The fully potted stator provides for an ideal thermal transition from winding to housing. Another advantage is mechanical protection of the winding wires against vibrations.

Amply sized, sealed grooved ball bearings in conjunction with a sophisticated mechanical design ensure a bearing service life of 30,000 hours. All motors feature an integrated temperature sensor for exact temperature evaluation.

In the forced-cooling version, the power density of the AM8000 motor series can be further increased by means of external axial ventilation. This option is available for the AM806x to AM807x sizes.

The modular design of the AM8000 motors enables rapid implementation of mechanical adjustments. Customer-specific variants are available. The motors offer an electronic identification plate for simple commissioning.

The housing is fully powder-coated so that cutting edges are covered. The acrylic powder coating also offers high resistance against scratching and corrosion. In the basic version, AM8000 motors feature IP 54 protected housings. For harsh environmental conditions, the shaft feed-through can optionally be equipped with an FPM sealing ring (fluoropolymer rubber), so that the whole motor is IP 65 protected.

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)
Cooling	convection, permissible ambient temperature 40 °C, optionally: external axial ventilation
Coating/surface	dark grey powder coating, similar to RAL7016
Temperature sensor	integrated in stator winding
Connection method	round plug connector, swivelling, angled; terminal box according to winding type
Life span	L _{10h} = 30,000 hrs for ball bearings
Approvals	CE, UL
Feedback system	absolute encoder single-turn and multi-turn, OCT, resolver, multi-turn 2-cable standard

Options	AM80xx
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, resolver
Forced cooling option	for AM805x, AM806x, AM807x

*Thanks to the external axial ventilation the servomotor series offer high torques in the forced cooling version even at high speeds. Please see [here](#) for an overview.

Accessories	
AG2300	High-end gear series for servomotors AM8000 and AM8500
AG2210	Planetary gear units for AM8000 and AM8500 servomotors
ZK45xx-8xxx	Supply cables AM8000, AM8500, AM8800