



i AS20xx | Stepper motors

The new AS2000 two-phase stepper motors with a stepper angle of 1.8 degrees shrink the gap to the AM8000 high-performance servomotor. With their flange codes N2 (NEMA23) and N3 (NEMA34), the stepper motors comply with international standards. Users can select from seven models ranging from 0.8 to 8 Nm.

The AS2023 with 2.3 Nm is a logical addition in the medium performance range, because the AS2000 series of stepper motors delivers significantly improved scalability.

The new design of the AS2000 series is more in line with industrial requirements. And with the higher IP 54 protection class, the motors can also be used under harsh environmental conditions. It also features easy cabling thanks to the standardised, integrated M12 high-power screwtype connector for power and the robust M12 connector for the encoder. With its torsion-proof, integrated encoder (1024 inc/rev), the motor is ideal for the Beckhoff-supported vector control of stepper motors. A non-encoder version is available as well. The vector control system minimises resonances and reduces the generation of heat and noise for servo-like operating characteristics.

All motors in the AS2000 series were designed to be used with EtherCAT stepper motor terminals EL7037 (1.5 A) and EL7047 (5 A). Commissioning them in TwinCAT is easy. To simplify the axis layout, the AS2000 stepper motors are integrated into the TC3 Motion Designer for easy dimensioning.

The motors are optionally available with a smooth shaft (flange code N2 only) or with a groove and feather key (flange code N3 only). Shielded motor and encoder cables are also available. They were designed for the stepper motor terminals and come preconfigured for the terminal points. With the low-backlash planetary gear of the AG2250 series in straight or angled versions, a wide range of applications can be accommodated. A new elastic coupling connector for easy machine mounting completes the portfolio.

Technical data	
Motor type	stepper motor
Rated supply voltage	24...50 V DC
Resolution	1.8°/200 full steps
Insulation class	thermal class B (130 °C)
Design form	flange-mounted according to IM B5, IM V1, IM V3
Protection class	IP 54
Cooling	Adequate ventilation for the motors must be assured.
Coating/surface	matt black coating RAL 9005
Connection method	M12 round plug connector
Life span	L _{10h} = 30,000 hrs for ball bearings
Approvals	CE

Options	AS20xx
Feather key groove	according to DIN 6885 P1 (only for AS204x)
Feedback system option	incremental encoder 1,024 inc/rev

Accessories	
AG2250-+PLE60	Planetary gear units for servomotors and stepper motors: flange sizes F2, F3, N2
AG2250-+PLE80	Planetary gear units for AS2000: flange size N3
AG2250-+WPLE60	Angled planetary gear units for servomotors and stepper motors: flange sizes F2, F3, N2
AG2250-+WPLE80	Angled planetary gear units for AS2000: flange size N3
TE5910	TC3 Motion Designer

i Product announcement	estimated market release 4th quarter 2018
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