

Stepper Motors

6,0 mNm

Two phases, 24 steps per revolution

AM1524-ww-ee

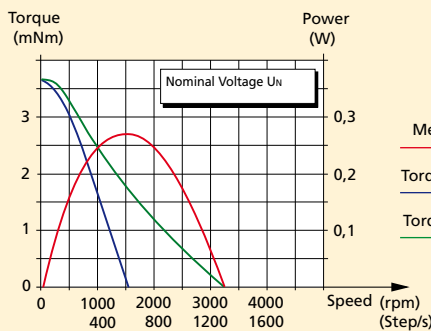
	ww =		V-6-35		V-12-150		A-0,25-12,5		A-0,45-3,6		Drive mode
	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current			
1 Nominal voltage Un	6	–	12	–	3,5	–	2	–	V DC		
2 Nominal current per phase (both phases ON)	–	0,15	–	0,075	–	0,25	–	0,45	A		
3 Phase resistance (at 20°C)		35		150		12,5		3,6	Ω		
4 Phase inductance (1kHz)		15		65		5,5		1,7	mH		
5 Back-EMF amplitude		6		12		3,5		2,0	V/k step/s		
6 Holding torque ¹⁾ (at nominal current in both phases)	6,0								mNm		
7 Holding torque ¹⁾ (at twice the nominal current)	10								mNm		
8 Step angle (full step)	15								degree		
9 Angular accuracy ²⁾	± 10								% of full step		
10 Residual torque	0,9								mNm		
11 Rotor inertia	45								· 10 ⁻⁹ kgm ²		
12 Resonance frequency (at no load)	120								Hz		
13 Electrical time constant	0,4								ms		
14 Ambient temperature range	–35 ... +70								°C		
15 Winding temperature tolerated, max.	130								°C		
16 Thermal resistance winding-ambient air	37								°C/W		
17 Thermal time constant	220								s		
18 Shaft bearings	sintered sleeves bearings (standard)				ball bearings, preloaded (optional)						
19 Shaft load, max.:											
– radial (3 mm from bearing)	0,5				6,0				N		
– axial	0,5				3,0				N		
20 Shaft play, max.:											
– radial (0,2N)	15				12				µm		
– axial (0,2N)	150				–0				µm		
21 Isolation test voltage	200								V DC		
22 Motor dimensions:											
– diameter	15								mm		
– length	16,5								mm		
– shaft diameter	1,5								mm		
23 Weight	12								g		

¹⁾ with bipolar driver

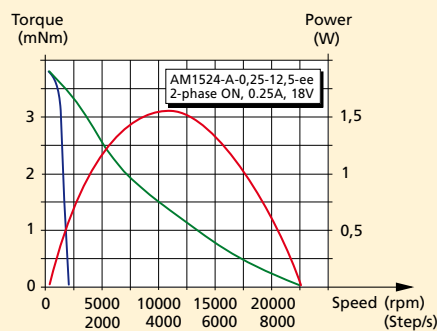
²⁾ 2 phases ON, balanced phase current

³⁾ Curves measured with a load inertia of $10 \cdot 10^{-9}$ kgm²

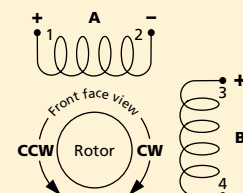
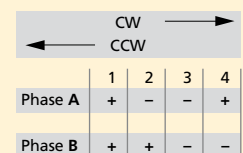
⁴⁾ Testing the motor at lower supply voltages in the current mode will result in a decrease in torque, even with the same current setting.



Voltage mode (V) ³⁾
Driver AD VM M15

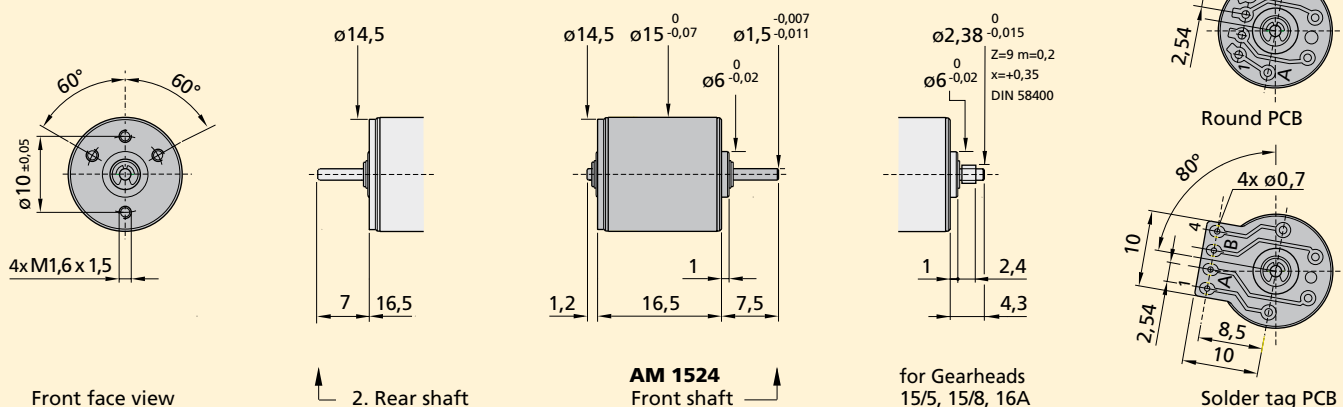


Current mode (A) ^{3) 4)}
Driver AD CM M15

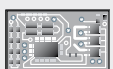





Dimensional drawing

standard
 optional



Combinations

Drive Electronics	Encoders	Stepper Motors	Precision Gearheads
			
AD VL M_S	AE 23B8	AM1524	15A
AD VM M_S			15/5
AD CM M_S			15/8
			16A
			16/7

Ordering information

Example: **AM1524-2R-V-24-590-57**

Motor type	Bearings (rr) Sleeve bearings are standard	Winding (ww)	Motor execution (ee)		
			Only front output shaft	With double output shaft	Front output shaft
AM1524	- (sleeve bearings)	-V-3-10 ¹⁾		-54 ²⁾ (-04)	Plain shaft, L=7,5 mm ⁵⁾
	-1R* (1 ball bearing)	-V-6-35	-55 (-05)		Plain shaft, L=7,5 mm ⁵⁾
	-2R (2 ball bearings)	-V-12-150		-56 ³⁾ (-06)	Pinion 15/5, 15/8, 16A
		-V-24-590 ¹⁾	-57 (-07)		Pinion 15/5, 15/8, 16A
	*Mounted on front output	-A-0,25-12,5	-70 (-72)		Plain shaft, L=4,3 mm ⁶⁾
		-A-0,45-3,6		-71 ⁴⁾ (-73)	Plain shaft, L=4,3 mm ⁶⁾

() Designation for motors with solder pads

¹⁾ Non-standard windings, for data please inquire with your point of sales.

Designations for assembly of encoder AE23B8:

²⁾ -04-0904,

³⁾ -06-0904,

⁴⁾ -73-0904

⁵⁾ Designations for assembly with gearhead 16/7

⁶⁾ Designations for assembly with gearhead 15A