

Stepper Motors

6,0 mNm

Two phase, 24 steps per revolution
PRECiStep® Technology

AM1524-ww-ee

	ww =		A-0,45-3,6		A-0,25-12,5		V-6-35		V-12-150		Drive mode
	Current	Voltage	Current	Voltage	Current	Voltage	Current	Voltage			
1 Nominal current per phase (both phases ON) ¹⁾	0,45	–	0,25	–	0,15	–	0,075	–	A		
2 Nominal voltage per phase (both phases ON) ¹⁾	–	2	–	3,5	–	6	–	12	V DC		
3 Phase resistance (at 20°C)		3,6		12,5		35		138	Ω		
4 Phase inductance (1kHz)		1,9		6,3		16,5		70,6	mH		
5 Back-EMF amplitude		2,4		4,4		7,2		14,7	V/k step/s		
6 Holding torque (at nominal current in both phases)		6,0							mNm		
7 Holding torque (at twice the nominal current)		10							mNm		
8 Step angle (full step)		15							degree		
9 Angular accuracy ¹⁾		± 10							% of full step		
10 Residual torque, max.		0,9							mNm		
11 Rotor inertia		45							·10 ⁻⁹ kgm ²		
12 Resonance frequency (at no load)		120							Hz		
13 Electrical time constant		0,5							ms		
14 Ambient temperature range		–35 ... +70							°C		
15 Winding temperature tolerated, max.		130							°C		
16 Thermal resistance	<i>R_{th1} / R_{th2}</i>	12,9 / 31,6							°C/W		
17 Thermal time constant	<i>τ_{w1} / τ_{w2}</i>	6 / 350							s		
18 Shaft bearings		sintered sleeve bearings (standard)				ball bearings, preloaded (optional)					
19 Shaft load, max.:											
– radial (3 mm from bearing)		0,5				6,0			N		
– axial		0,5				2,0			N		
20 Shaft play, max.:											
– radial (0,2N)		15				12			μm		
– axial (0,2N)		150				–0			μm		
21 Mass		12							g		

¹⁾ Relevant for 2 phases ON only. On PWM drivers or chopper (current mode), the current is set to the nominal value and the supply voltage is typically 3 to 5x higher than the nominal voltage.

²⁾ Curves measured with a load inertia of 50 · 10⁻⁹ kgm², in half-step mode for the “1 x nominal voltage” curve, in 1/4 micro-stepping mode for the other curves.

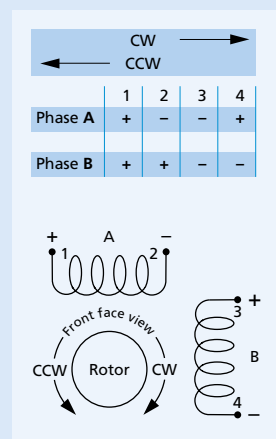
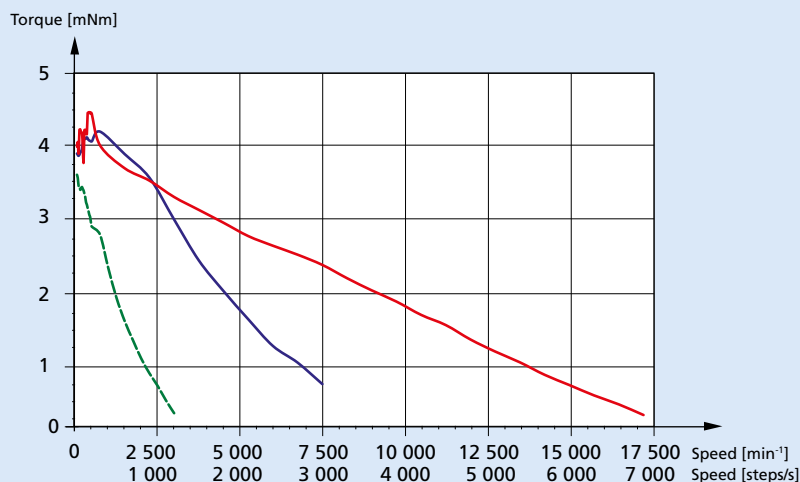
Driver settings ^{1) 2)}

5x nominal voltage *

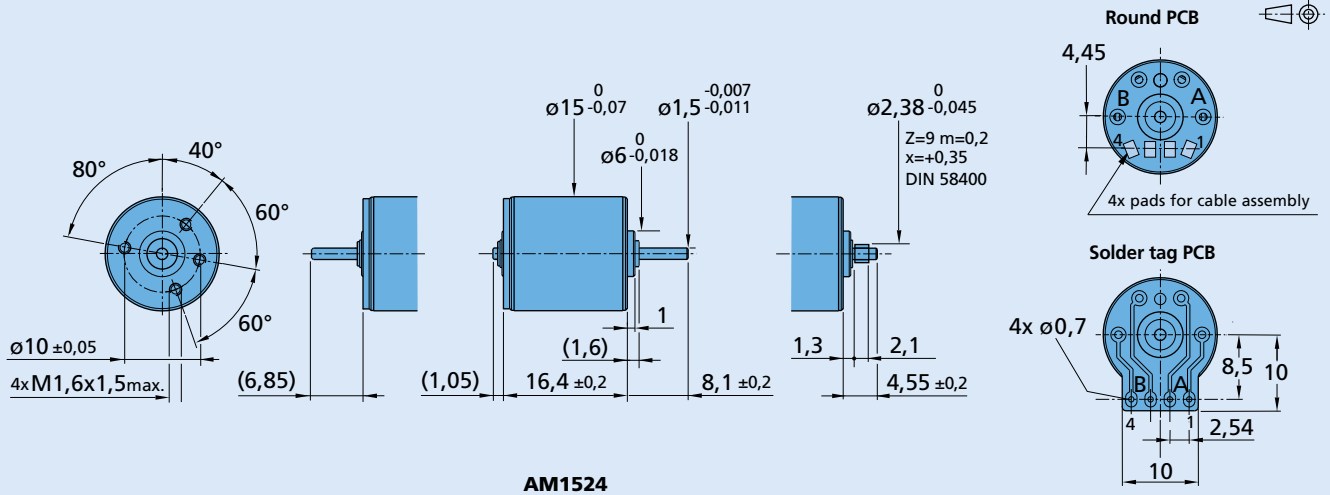
2.5x nominal voltage *

1 x nominal voltage

* Current limited to its nominal value



Dimensional drawing



Combinations

Drive Electronics	Encoders	Cables	Gearheads / Lead screws
MCST3601	Available on request	List available on request	15A 15/5(S) 15/8* 15/10 16/7 17/1 Lead screws M2 - M3

* Zero Backlash Gearheads

Ordering information

Example: **AM1524-2R-V-6-35-57**

Motor type	Bearings (rr)	Winding (wv)	Motor execution (ee)		
AM = Motor design 15 = Motor diameter (mm) 24 = Steps per revolution	Special lubricant options available		Only front output shaft	With double output shaft	Front output shaft
AM1524	- (sleeve bearings) -2R (2 ball bearings)	-V-6-35 -V-12-150 -A-0,25-12,5 -A-0,45-3,6	-55 (Round PCB) -57 (Round PCB) -70 (Round PCB) -83 (Round PCB) -05 (Solder tag PCB) -07 (Solder tag PCB) -72 (Solder tag PCB) -23 (Solder tag PCB)	-54 (Round PCB) -56 (Round PCB) -71 (Round PCB) -82 (Round PCB) -04 (Solder tag PCB) -06 (Solder tag PCB) -73 (Solder tag PCB) -22 (Solder tag PCB) -04-0904 -06-0904 -73-0904	Plain shaft, L=8,1 mm for 15/10,16/7, 17/1, M3 Pinion 15/5(S), 15/8 Plain shaft, L=4,3 mm for gearhead 15A Plain shaft for lead screw M2 Plain shaft, L=8,1 mm for 15/10,16/7, 17/1, M3 Pinion 15/5(S), 15/8 Plain shaft, L=4,3 mm for gearhead 15A Plain shaft for lead screw M2 Idem -04 & for encoder Idem -06 & for encoder Idem -73 & for encoder