

Stepper Motors

22 mNm

Two phase, 24 steps per revolution
PRECiStep® Technology

AM2224-R3-ww-ee

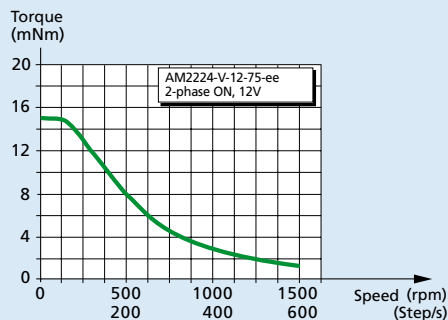
	ww =		AV-0,9		AV-4,8		AV-18		V-12-75		Drive mode
	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current			
1 Nominal voltage per phase (both phases ON) ¹⁾	1,4	–	3	–	6	–	12	–	V DC		
2 Nominal current per phase (both phases ON)	–	1,0	–	0,5	–	0,25	–	0,125	A		
3 Phase resistance (at 20°C)		0,9		4,8		18		75	Ω		
4 Phase inductance (1kHz)		0,9		4,3		16,3		65,6	mH		
5 Back-EMF amplitude		3,8		8,3		16,3		32,7	V/k step/s		
6 Holding torque (at nominal current in both phases)		22							mNm		
7 Holding torque (at twice the nominal current)		37							mNm		
8 Step angle (full step)		15							degree		
9 Angular accuracy ²⁾		± 10							% of full step		
10 Residual torque, max.		2							mNm		
11 Rotor inertia		253							·10 ⁻⁹ kgm ²		
12 Resonance frequency (at no load)		100							Hz		
13 Electrical time constant		0,92							ms		
14 Ambient temperature range		-35 ... +70							°C		
15 Winding temperature tolerated, max.		130							°C		
16 Thermal resistance winding-ambient air		28							°C/W		
17 Thermal time constant		600							s		
18 Shaft bearings		ball bearings, preloaded (standard with 3 mm shaft)									
19 Shaft load, max.:											
– radial (3 mm from bearing)		20,0							N		
– axial		4,0							N		
20 Shaft play, max.:											
– radial (0,2N)		15							µm		
– axial (0,2N)		~0							µm		
21 Isolation test voltage		200							V DC		
22 Weight		50,5							g		

¹⁾ Nominal voltage specified for voltage mode operation only

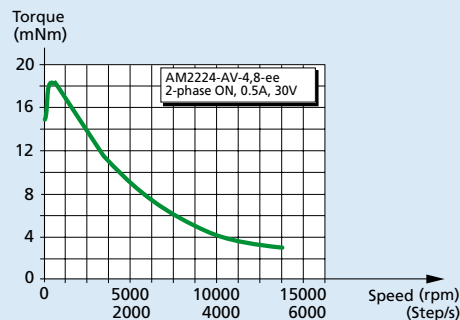
²⁾ 2 phases ON, balanced phase currents

³⁾ Curves measured with a load inertia of 8 · 10⁻⁹ kgm²

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



Voltage mode (V) ³⁾
Driver AD VM M15



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

	← CW				→ CCW			
Phase A	1	2	3	4				
	+	-	-	+				
Phase B	1	2	3	4				
	+	+	-	-				

