

Stepper Motors

26 mNm

Two phases, 24 steps per revolution

AM2224-ww-ee

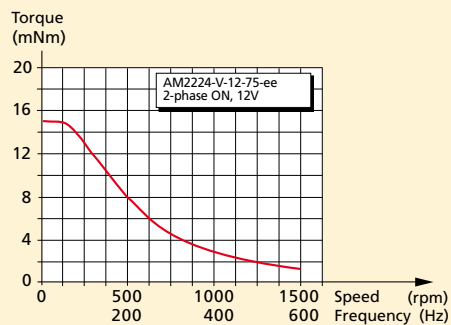
	ww =		AV-0,9		AV-4,8		AV-18		V-12-75		Drive mode
	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current	
1 Nominal voltage Un	1,4	–	3	–	6	–	12	–	V DC		V DC
2 Nominal current per phase (both phases ON)	–	1,0	–	0,5	–	0,25	–	0,125	A		A
3 Phase resistance (at 20°C)		0,9		18		56		75			Ω
4 Phase inductance (1kHz)		1,2		5,2		16		61			mH
5 Back-EMF amplitude		4,1		8,3		16,7		33			V/k step/s
6 Holding torque ¹⁾ (at nominal current in both phases)		26									mNm
7 Holding torque ¹⁾ (at twice the nominal current)		45									mNm
8 Step angle (full step)		15									degree
9 Angular accuracy ²⁾		± 10									% of full step
10 Residual torque		2									mNm
11 Rotor inertia		228									· 10 ⁻⁹ kgm ²
12 Resonance frequency (at no load)		100									Hz
13 Electrical time constant		1,7									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		sintered sleeves bearings (standard with 2 mm shaft)				ball bearings, preloaded (optional)					
19 Shaft load, max.:											
– radial (3 mm from bearing)		1,5				8,0					N
– axial		0,5				3,0					N
20 Shaft play, max.:											
– radial (0,2N)		30				15					µm
– axial (0,2N)		200				–0					µm
21 Isolation test voltage		200									V DC
22 Motor dimensions:											
– diameter		22									mm
– length		27,5									mm
– shaft diameter		2									mm
23 Weight		43									g

1) with bipolar driver

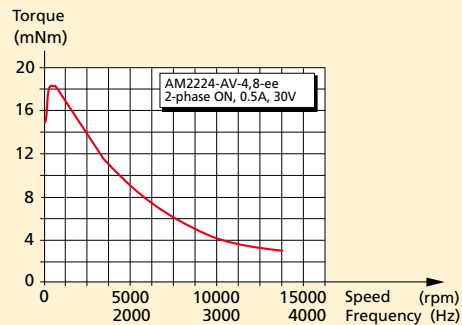
2) 2 phases ON, balanced phase current

3) Curves measured with a load inertia of $3 \cdot 10^{-7}$ kgm²

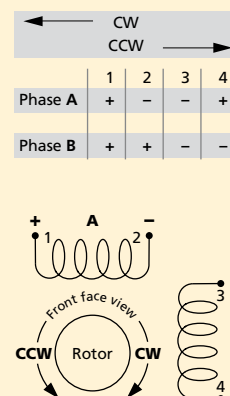
4) Testing the motor at lower supply voltages in the current mode will result in a decrease in torque, even with the same current setting.



Voltage mode (V) ³⁾
Driver AD VM M15

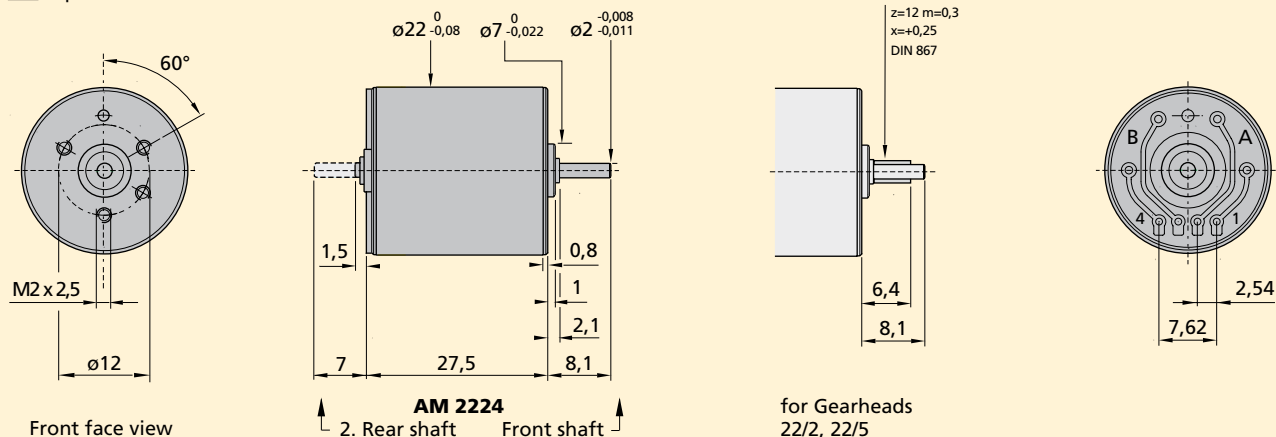


Current mode (A) ^{3) 4)}
Driver AD CM M15

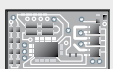
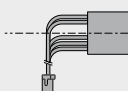
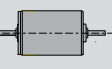
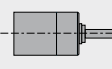


Dimensional drawing

standard
 optional



Combinations

Drive Electronics	Encoders	Stepper Motors	Precision Gearheads
			
AD VM M_S	IE2	AM2224	22E
AD CM M_S			22/2
			22/5*
			23/1
			* Zero Backlash Gearheads

Ordering information

Example: **AM2224-2R-AV-18-10**

Motor type	Bearings (rr)	Winding (ww)	Motor execution (ee)		
			Only front output shaft	With double output shaft	Front output shaft
AM = ARSAPE Motor 22 = Motor diameter (mm) 24 = Steps per revolution	Standard, sintered sleeve bearings (no indication)				
AM2224	- (sleeve bearings)	-AV-0,9	-10	-11	Plain shaft, L=8,1 mm ²⁾
	-2R (2 ball bearings)	-AV-4,8	-12	-13	Plain shaft, L=8,1 mm ³⁾
		-AV-18	-14	-15	Pinion 22/2, 22/5
		-V-12-75			
		-V-24-590¹⁾			

- 1) Non-standard windings, for data please inquire with your point of sales.
- 2) Designations for assembly with gearhead 23/1
- 3) Designations for assembly with gearhead 22E (shaft $\phi 1,5$ mm)