

Stepper Motors

22 mNm

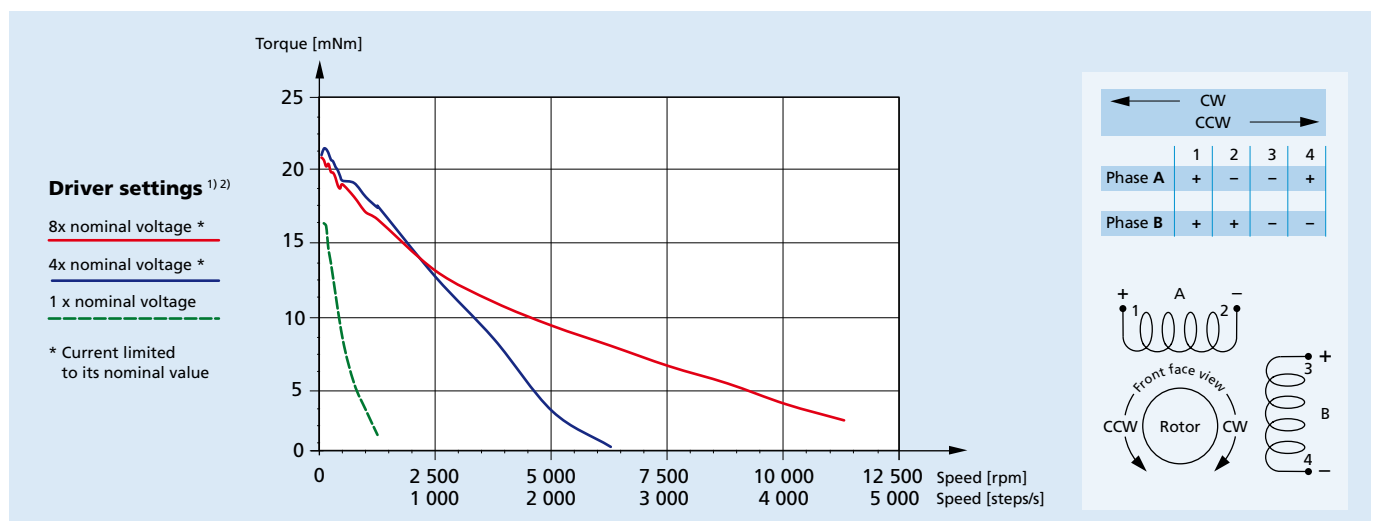
Two phase, 24 steps per revolution
PREClstep® Technology

AM2224-R3-ww-ee

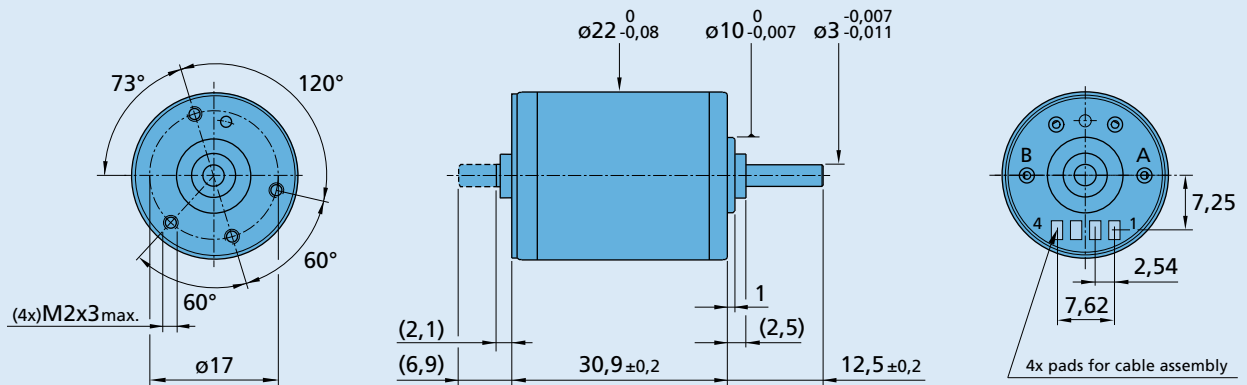
	ww =		AV-0,9		AV-4,8		AV-18		V-12-75		Drive mode
	Current	Voltage	Current	Voltage	Current	Voltage	Current	Voltage			
1 Nominal current per phase (both phases ON) ¹⁾	1,0	–	0,5	–	0,25	–	0,125	–	A		
2 Nominal voltage per phase (both phases ON) ¹⁾	–	1,4	–	3	–	6	–	12	V DC		
3 Phase resistance (at 20°C)		0,9		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 ¹⁾	± 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⁾ Relevant for 2 phases ON only. On PWM drivers with 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 600 · 10⁻⁹ kgm², in half-step mode for the “1 x nominal voltage” curve, in 1/4 micro-stepping mode for the other curves.

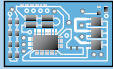
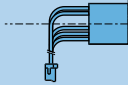

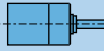


Dimensional drawing



AM2224-R3

Combinations

Drive Electronics	Encoders	Kabel	Gearheads / Lead screws
 Available on request	 PE22-120	 List available on request	 Lead screws M3

Ordering information

Example: **AM2224-R3-AV-18-31**

Motor type	Bearings (rr)	Winding (wv)	Motor execution (ee)		
AM = Motor design 22 = Motor diameter (mm) 24 = Steps per revolution	Special lubricant options available		Only front output shaft	With double output shaft	Front output shaft
AM2224	-R3 (2 ball bearings)	-AV-0,9 -AV-4,8 -AV-18 -V-12-75	-30 -85	-31 -84 -36 -86	Plain shaft Plain shaft for lead screw M3 Plain shaft for encoder PE22-120 Plain shaft for lead screw M3, PE22-120