

Stepper Motors

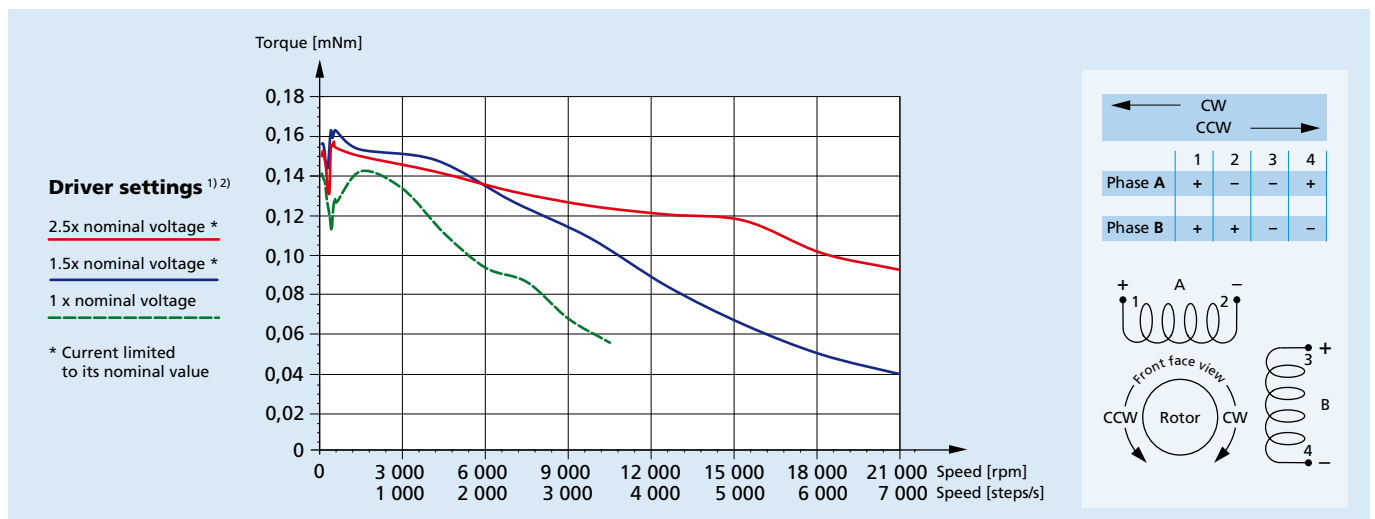
0,2 mNm

Two phase, 20 steps per revolution
PRECIstep® Technology

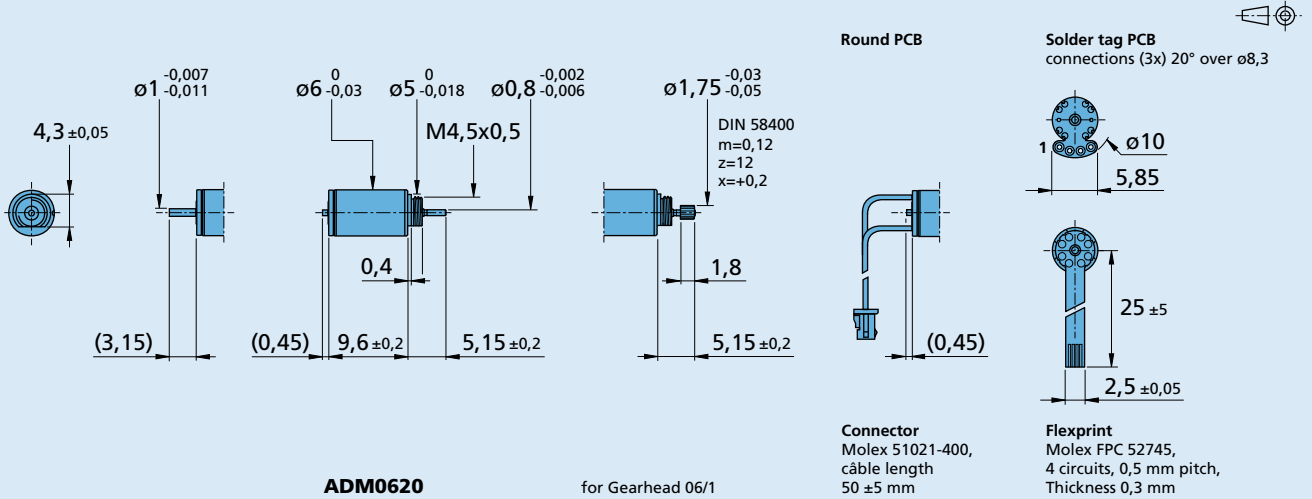
ADM0620-2R-ww-ee

		V2		V3		Drive mode
		Current	Voltage	Current	Voltage	
1	Nominal current per phase (both phases ON) ¹⁾	0,13	–	0,075	–	A
2	Nominal voltage per phase (both phases ON) ¹⁾	–	2	–	3	V DC
3	Phase resistance (at 20°C)	12,4		30,6		Ω
4	Phase inductance (1kHz)	1,2		3,0		mH
5	Back-EMF amplitude	0,33		0,6		V/k step/s
6	Holding torque (at nominal current in both phases)	0,2				mNm
7	Holding torque (at twice the nominal current)	0,28				mNm
8	Step angle (full step)	18				degree
9	Angular accuracy ¹⁾	± 5				% of full step
10	Residual torque, max.	0,06				mNm
11	Rotor inertia	0,7				·10 ⁻⁹ kgm ²
12	Resonance frequency (at no load)	170				Hz
13	Electrical time constant	0,09				ms
14	Ambient temperature range	–35 ... +70				°C
15	Winding temperature tolerated, max.	130				°C
16	Thermal resistance winding-ambient air	165				°C/W
17	Thermal time constant	120				s
18	Shaft bearings	ball bearings, preloaded (standard)				
19	Shaft load, max.:					
	– radial (3 mm from bearing)	0,3				N
	– axial	0,5				N
20	Shaft play, max.:					
	– radial (0,2N)	20				µm
	– axial (0,2N)	50				µm
21	Isolation test voltage	200				V DC
22	Weight	1,4				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 3 · 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



Combinations

Drive Electronics	Encoders	Cables	Gearheads / Lead screws
Available on request		List available on request	06/1 Lead screws M1,2 - M1,6

Ordering information

Example: **ADM0620-2R-V2-01**

Motor type	Bearings (rr)	Winding (ww)	Motor execution (ee)		
ADM = Motor design 06 = Motor diameter (mm) 20 = Steps per revolution	Special lubricant options available		Only front output shaft	With double output shaft	Front output shaft
ADM0620	-2R (2 ball bearings)	-V2 -V3	-11 (Solder tag PCB) -15 (Solder tag PCB) -26 (Solder tag PCB) -28 (Solder tag PCB) -43 (Flexprint) -47 (Flexprint) -67 (Flexprint) -69 (Flexprint) -01 (Round PCB & cable) -05 (Round PCB & cable) -21 (Round PCB & cable) -23 (Round PCB & cable)	-10 (Solder tag PCB) -16 (Solder tag PCB) -25 (Solder tag PCB) -27 (Solder tag PCB) -42 (Flexprint) -48 (Flexprint) -66 (Flexprint) -68 (Flexprint)	Plain shaft Pinion 06/1 Shaft for lead screw M1,2 Shaft for lead screw M1,6 Plain Shaft Pinion 06/1 Shaft for lead screw M1,2 Shaft for lead screw M1,6 Plain Shaft Pinion 06/1 Shaft for lead screw M1,2 Shaft for lead screw M1,6