

# Stepper Motors

0,2 mNm

Two phase, 20 steps per revolution  
PRECiStep® Technology

## ADM0620-2R-ww-ee

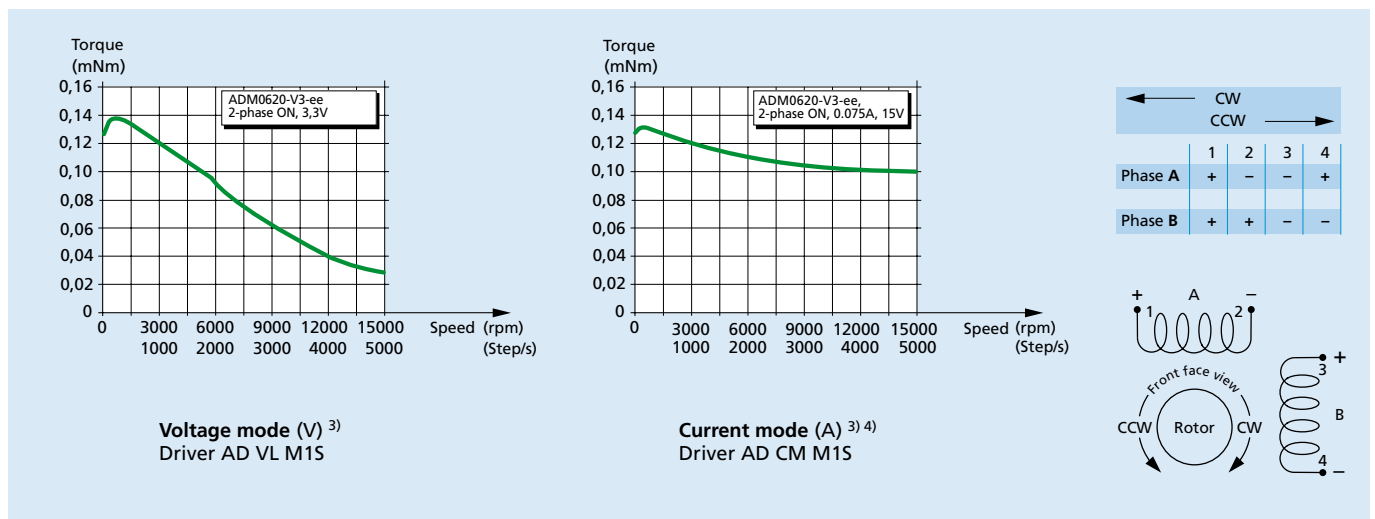
	ww =	V2		V3		V6		Drive mode
		Voltage	Current	Voltage	Current	Voltage	Current	
1 Nominal voltage		2	–	3	–	6	–	V DC
2 Nominal current per phase (both phases ON)		–	0,13	–	0,075	–	0,04	A
3 Phase resistance (at 20°C)			12,4		30		120	Ω
4 Phase inductance (1kHz)			1,2		3,0		10,5	mH
5 Back-EMF amplitude			0,33		0,6		1,1	V/k step/s
6 Holding torque <sup>1)</sup> (at nominal current in both phases)	0,2							mNm
7 Holding torque <sup>1)</sup> (at twice the nominal current)	0,28							mNm
8 Step angle (full step)	18							degree
9 Angular accuracy <sup>2)</sup>	± 5							% of full step
10 Residual torque	0,04							mNm
11 Rotor inertia	0,7							·10 <sup>-9</sup> kgm <sup>2</sup>
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

<sup>1)</sup> with bipolar driver

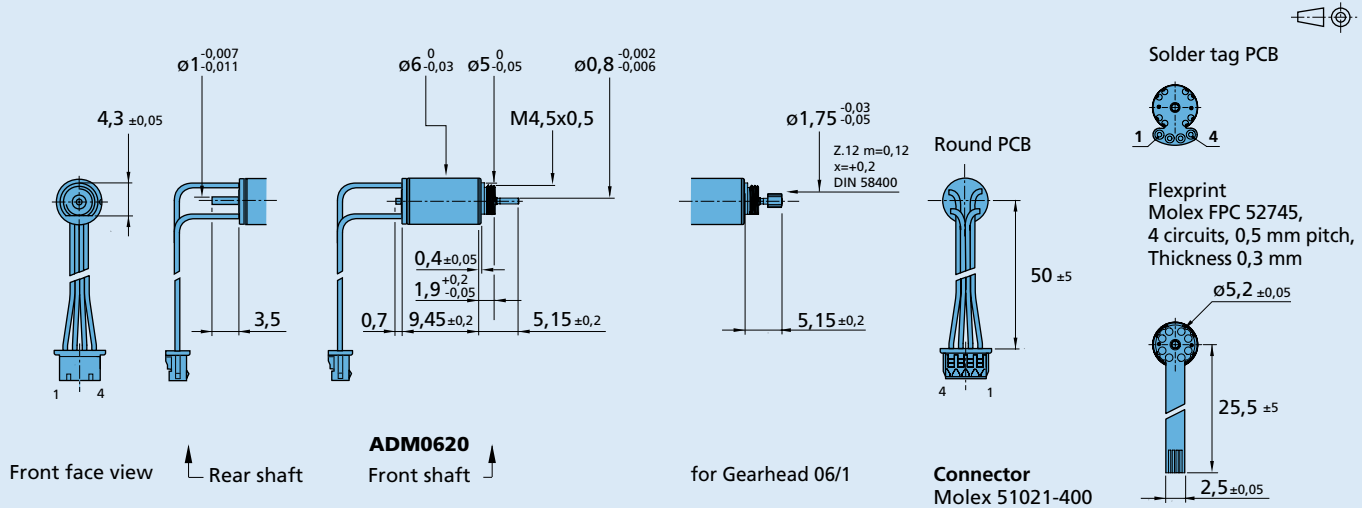
<sup>2)</sup> 2 phases ON, balanced phase currents

<sup>3)</sup> Curves measured with a load inertia of 8 · 10<sup>-9</sup> kgm<sup>2</sup>

<sup>4)</sup> 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



### Dimensional drawing



### Combinations

Drive Electronics	Encoders	Stepper Motors	Gearheads / Lead screws
 AD VL M_S AD CM M_S		 ADM0620	 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 <b>ADM0620</b>	Special lubricant options available <b>-2R</b> (2 ball bearings)	<b>-V2</b> <b>-V3</b> <b>-V6</b>	Only front output shaft	With double output shaft	Front output shaft
			<b>-01</b> (Round PCB)	<b>-00</b> (Round PCB)	Plain shaft
			<b>-05</b> (Round PCB)	<b>-06</b> (Round PCB)	Pinion 06/1
			<b>-21</b> (Round PCB)	<b>-20</b> (Round PCB)	Shaft for lead screw M1,2
			<b>-23</b> (Round PCB)	<b>-22</b> (Round PCB)	Shaft for lead screw M1,6
			<b>-11</b> (Solder tag PCB)	<b>-10</b> (Solder tag PCB)	Plain shaft
			<b>-15</b> (Solder tag PCB)	<b>-16</b> (Solder tag PCB)	Pinion 06/1
			<b>-26</b> (Solder tag PCB)	<b>-25</b> (Solder tag PCB)	Shaft for lead screw M1,2
			<b>-28</b> (Solder tag PCB)	<b>-27</b> (Solder tag PCB)	Shaft for lead screw M1,6
			<b>-43</b> (Flexprint)	<b>-42</b> (Flexprint)	Plain shaft
			<b>-47</b> (Flexprint)	<b>-48</b> (Flexprint)	Pinion 06/1
			<b>-67</b> (Flexprint)	<b>-66</b> (Flexprint)	Shaft for lead screw M1,2
			<b>-69</b> (Flexprint)	<b>-68</b> (Flexprint)	Shaft for lead screw M1,6