

Stepper Motors

0,2 mNm

Two phase, 20 steps per revolution
PRECIstep® Technology

ADM0620-2R-ww-ee

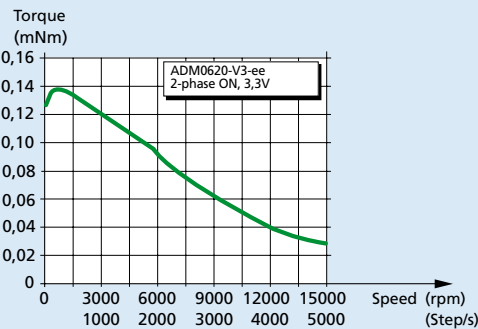
	ww =	V2		V3		V6		Drive mode
		Voltage	Current	Voltage	Current	Voltage	Current	
1 Nominal voltage per phase (both phases ON) ¹⁾		2	–	3	–	6	–	V DC
2 Nominal current per phase (both phases ON)		–	0,13	–	0,075	–	0,04	A
3 Phase resistance (at 20°C)			12,4		30,6		114	Ω
4 Phase inductance (1kHz)			1,2		3,0		10,5	mH
5 Back-EMF amplitude			0,33		0,6		1,1	V/k step/s
6 Holding torque (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 ²⁾	± 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⁾ Nominal voltage specified for voltage mode operation only

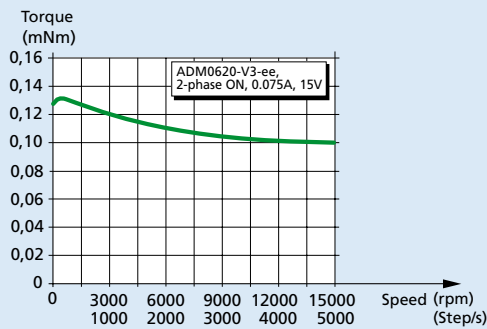
²⁾ 2 phases ON, balanced phase currents

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

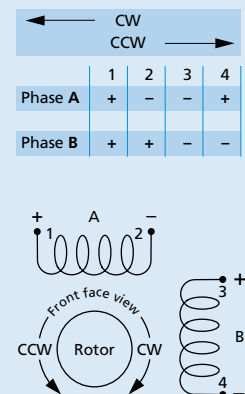
⁴⁾ Testing the motor at lower supply voltages in current mode will result in a decrease in torque at higher speed, even with the same current setting



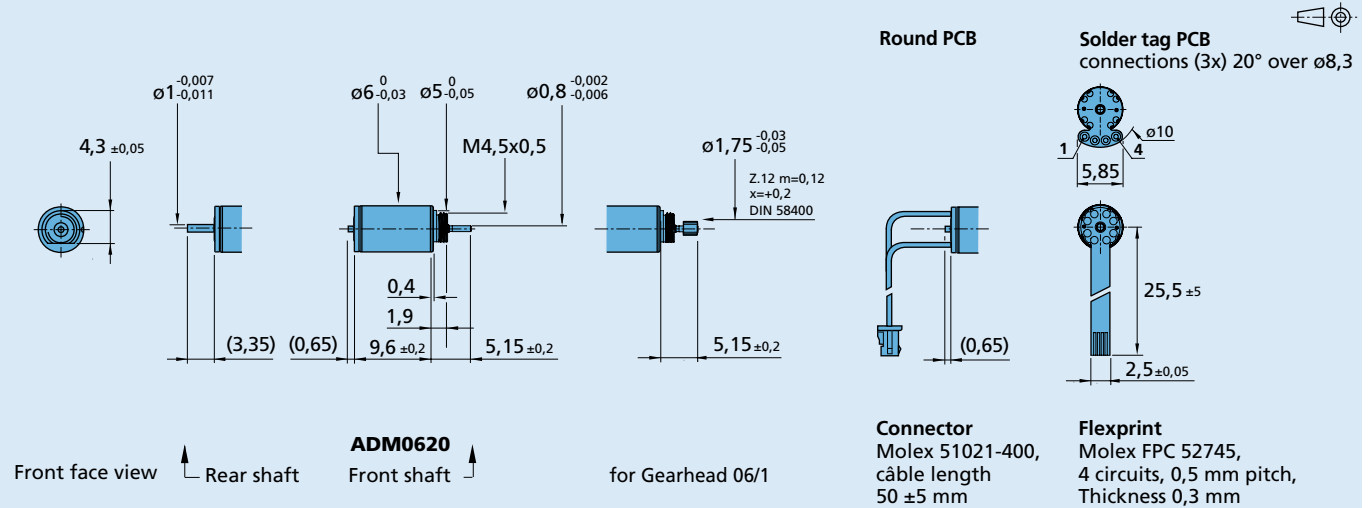
Voltage mode (V) ³⁾
Driver AD VL M15



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



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 ADM0620	Special lubricant options available -2R (2 ball bearings)	-V2 -V3 -V6	Only front output shaft	With double output shaft	Front output shaft
			-11 (Solder tag PCB)	-10 (Solder tag PCB)	Plain shaft
			-15 (Solder tag PCB)	-16 (Solder tag PCB)	Pinion 06/1
			-26 (Solder tag PCB)	-25 (Solder tag PCB)	Shaft for lead screw M1,2
			-28 (Solder tag PCB)	-27 (Solder tag PCB)	Shaft for lead screw M1,6
			-43 (Flexprint)	-42 (Flexprint)	Plain Shaft
			-47 (Flexprint)	-48 (Flexprint)	Pinion 06/1
			-67 (Flexprint)	-66 (Flexprint)	Shaft for lead screw M1,2
			-69 (Flexprint)	-68 (Flexprint)	Shaft for lead screw M1,6
			-01 (Round PCB)		Plain Shaft
			-05 (Round PCB)		Pinion 06/1
			-21 (Round PCB)		Shaft for lead screw M1,2
			-23 (Round PCB)		Shaft for lead screw M1,6