

Stepper Motors

0,2 mNm

Two phase, 20 steps per revolution

ADM0620-2R-ww-ee

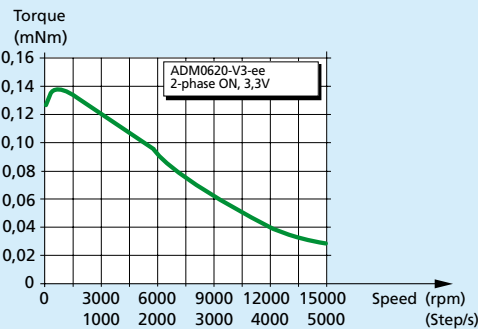
| ww = | | V3 | | V6 | | Drive mode |
|------|--|-------------------------------------|---------|---------|---------|------------------------------------|
| | | Voltage | Current | Voltage | Current | |
| 1 | Nominal voltage | 3 | – | 6 | – | V DC |
| 2 | Nominal current per phase (both phases ON) | – | 0,075 | – | 0,04 | A |
| 3 | Phase resistance (at 20°C) | 30 | | 120 | | Ω |
| 4 | Phase inductance (1kHz) | 3,5 | | 9,9 | | mH |
| 5 | Back-EMF amplitude | 0,5 | | 0,9 | | V/k step/s |
| 6 | Holding torque ¹⁾ (at nominal current in both phases) | 0,2 | | | | mNm |
| 7 | Holding torque ¹⁾ (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 | 0,04 | | | | mNm |
| 11 | Rotor inertia | 0,7 | | | | ·10 ⁻⁹ kgm ² |
| 12 | Resonance frequency (at no load) | 170 | | | | Hz |
| 13 | Electrical time constant | 0,10 | | | | 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 | Motor dimensions: | | | | | |
| | – diameter | 6 | | | | mm |
| | – length | 9,5 | | | | mm |
| | – shaft diameter | 0,8 | | | | mm |
| 23 | Weight | 1,4 | | | | g |

¹⁾ with bipolar driver

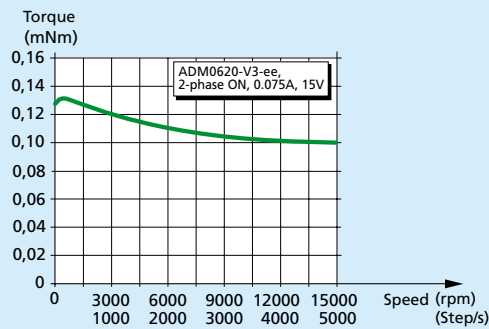
²⁾ 2 phases ON, balanced phase currents

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

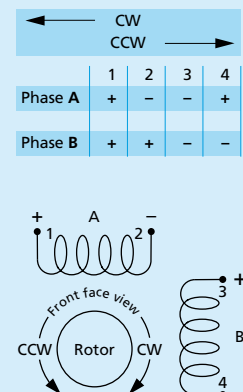
⁴⁾ Testing the motor at lower supply voltages in current mode will result in a decrease in torque at higher speed, even with the same current setting



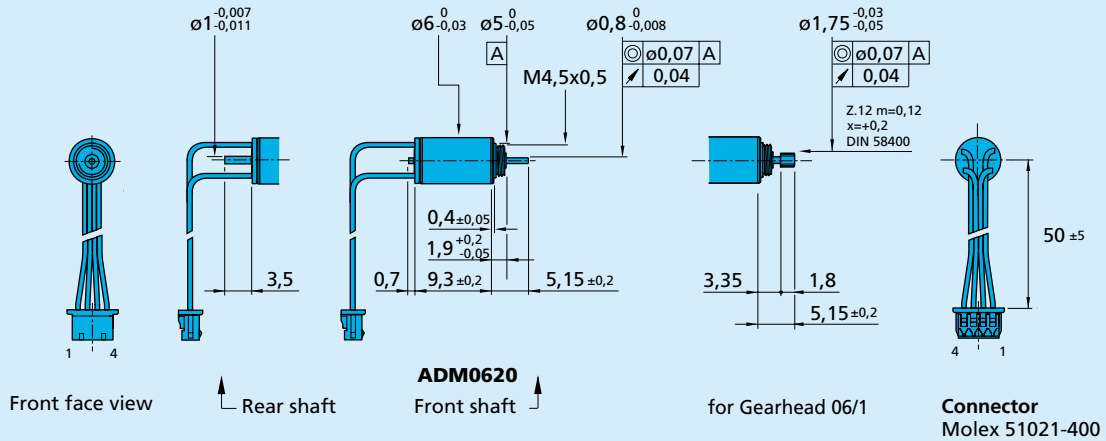
Voltage mode (V) ³⁾
Driver AD VL M1S



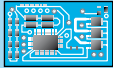
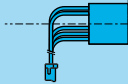

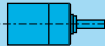
Current mode (A) ^{3) 4)}
Driver AD CM M1S



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 Lead screws M1,6 |
| | | | |
| | | | |
| | | | |

Ordering information

Example: **ADM0620-2R-V3-05**

| Motor type ADM = Motor design 06 = Motor diameter (mm) 20 = Steps per revolution | Bearings (rr) Special lubricant options available | Winding (wvw) | Motor execution (ee) | | |
|---|--|--------------------------|-------------------------|--------------------------|---------------------------|
| | | | Only front output shaft | With double output shaft | Front output shaft |
| ADM0620 | -2R (2 ball bearings) | -V2 ¹⁾ | -01 | -00 | Plain shaft |
| | | -V3 | -05 | -06 | Pinion 06/1 |
| | | -V6 | -21 | -20 | Plain shaft ²⁾ |
| | | | -23 | -22 | Plain shaft ³⁾ |
| | | | | | |
| | | | | | |
| | | | | | |

1) Non-standard windings, for data please inquire with your point of sales

2) Prepared for assembly of lead screws size M1,2

3) Idem for size M1,6

Specifications subject to change without notice.