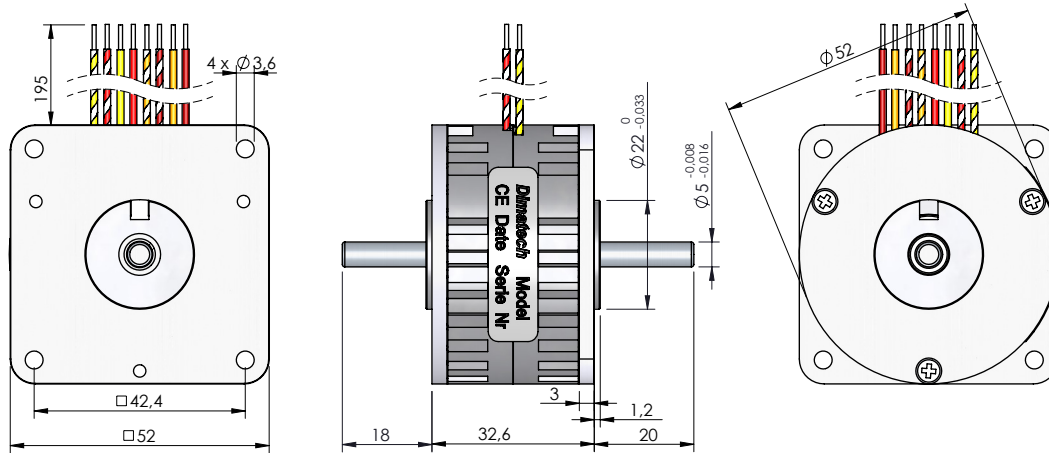
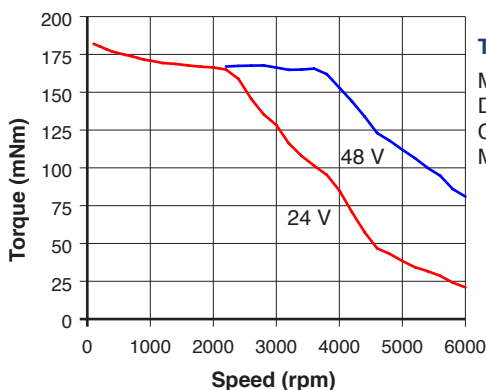


2-phase stepper motor, 100 steps per revolution, microstepping



| | | | WINDING | | | | |
|------------|------------------------------------|------------------------------------|----------|--------|----------|--------|------------|
| | | | A | | B | | |
| Connection | | | parallel | serial | parallel | serial | |
| 1 | Phase resistance | ohm | ± 14% | 0.35 | 1.4 | 2.2 | 8.8 |
| 2 | Phase inductance | mH | ± 20% | 0.7 | 2.8 | 5 | 20 |
| 3 | Nominal current (1 phase ON) | A | typical | 5.3 | 2.6 | 2 | 1 |
| 4 | Boosted current (1 phase ON) | A | typical | 12.2 | 6.1 | 4.6 | 2.3 |
| 5 | Induced voltage at 600 rpm | V | ± 10% | 2.15 | 4.3 | 5.65 | 11.35 |
| 6 | Torque constant | mNm/A | ± 10% | 34.1 | 68.2 | 90.25 | 180.45 |
| 7 | Static torque | mNm | ± 10% | | | | 180 |
| 8 | Boosted static torque | mNm | typical | | | | 400 |
| 9 | Reluctant torque | mNm | typical | | | | 10 |
| 10 | Friction torque | mNm | max | | | | 5 |
| 11 | Thermal resistance (coil-air) | °C/W | typical | | | | 7.3 |
| 12 | Thermal time constant | min | typical | | | | 18 |
| 13 | Max temperature for coils | °C | max | | | | +100 |
| 14 | Recom. ambient temperature range | °C | typical | | | | -20 to +50 |
| 15 | Number of pole pairs | - | - | | | | 25 |
| 16 | Phase shift | degree | ± 5 | | | | 90 |
| 17 | Phase fluctuation | degree | max | | | | 4 |
| 18 | Maximum speed | rpm | max | | | | 5000 |
| 19 | Rotor inertia | kgm ² · e ⁻⁷ | typical | | | | 9.4 |
| 20 | Weight | g | typical | | | | 250 |
| 21 | Electrical time constant | ms | typical | | | | 2 |
| 22 | Max angular acceleration (boosted) | rad/s ² | typical | | | | 400000 |
| 23 | Insulation voltage | V | typical | | | | 500 |



Test conditions:

Motor: DM51 coil A
 Driver: IDS640
 Current: 5.3 A
 Mode: micro-steps