

MicroMo[®] MOTORS

PM DC Motors Series GNM 21

- Fits our Gearhead Series G1.1, G4, G4A, and G5
- Available with Optical Encoder (96 - 1024 CPR)
- Available with Driver Board SR 63.05
- Ball Bearings Standard

Continuous Duty Ratings:⁽¹⁾

Speeds up to 6,000 rpm
 Torque up to 2.70 oz-in
 Output Power up to 12 Watts

Electrical Specifications:

| For Motor Type GNM | @22°C (72°F) | | | |
|--|--------------|-------|-------|-------|
| | 2130 | 2130 | 2145 | 2145 |
| Nominal Supply Voltage (Volts DC) | 12 | 24 | 12 | 24 |
| Armature Resistance (Ohms) ±10% | 2.1 | 8.2 | 1.4 | 5.5 |
| Maximum Output Power (Watts) | 11 | 11.7 | 19.3 | 19.2 |
| Maximum Efficiency (%) | 40 | 41 | 51 | 50 |
| No Load Speed (rpm) ± ~7% | 6,960 | 7,103 | 7,354 | 7,263 |
| No Load Current (mA) +10% -25% | 670 | 339 | 660 | 325 |
| Stall Torque (oz-in) | 8.63 | 8.92 | 14.2 | 14.3 |
| Friction Torque (at no load speed)(oz-in) | 1.32 | 1.32 | 1.32 | 1.32 |
| Velocity Constant (rpm/Volt) | 685 | 347 | 675 | 333 |
| Back EMF Constant (mV/rpm) | 1.46 | 2.88 | 1.48 | 3.00 |
| Torque Constant (oz-in/A) | 1.97 | 3.89 | 2.00 | 4.05 |
| Maximum Peak Current (Amps) ⁽²⁾ | 12.8 | 6.4 | 18.5 | 9 |
| Armature Inductance (mH) | 1.5 | 4.8 | .85 | 3.3 |

Mechanical Specifications:

| | | | | |
|--|--------------------------------|------|------|------|
| Mechanical Time Constant (ms) | 35.5 | 35.6 | 30.2 | 29.7 |
| Armature Inertia (x10 ⁻⁴ oz-in-sec ²) | 4.53 | 4.53 | 6.1 | 6.1 |
| Thermal Resistances (°C/W) | | | | |
| Rotor to Ambient | 6.6 | 6.6 | 6.4 | 6.4 |
| Thermal Time Constant (minutes) | 15 | 15 | 15 | 15 |
| Motor Weight (oz) | 9.7 | 9.7 | 12.3 | 12.3 |
| Maximum Ambient Temperature | 40°C (104°F) All Types | | | |
| Motor Operating Temperature Range | -20°C to 100°C (-4°F to 212°F) | | | |

NOTE: All motor specifications at DC voltage with ripple voltage not exceeding 5%. For greater ripple voltage values, derate specifications by 30%.

(1)Ratings are presented independent of each other.

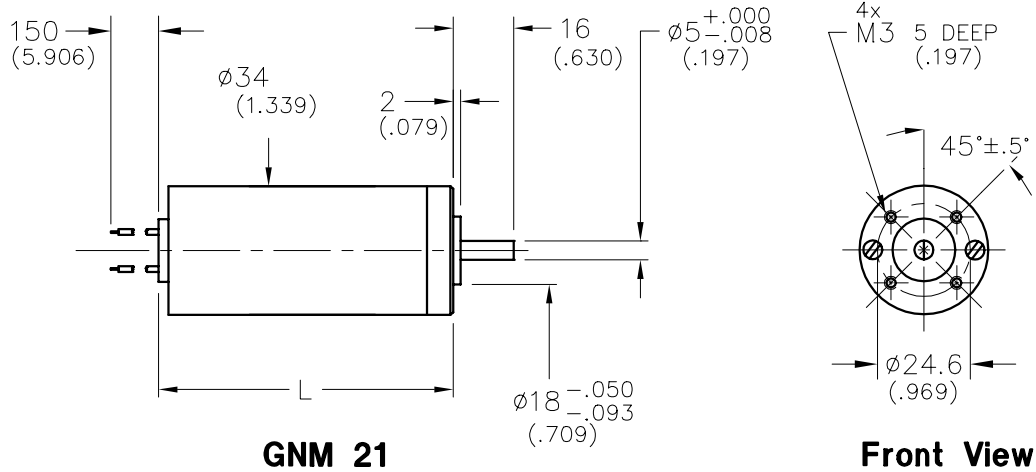
(2)Rated at 40°C. Exceeding this value may cause field demagnetization. For lower temperatures, derate value at 0.5% / °C.

—Specifications Subject to Change—

MOTORS

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Dimensional Outlines:



Dimensions are given in mm (in)
 Dimensions with no tolerance indicated are as follows:

| For Dimensions: | Tolerance |
|-------------------------------|------------------------|
| Less than or equal to 6 mm | ± 0.1 mm (.0039in) |
| Less than or equal to 30 mm | ± 0.2 mm (.0079in) |
| Less than or equal to 120 mm | ± 0.3 mm (.0118in) |
| Less than or equal to 400mm | ± 0.5 mm (.0197in) |
| Less than or equal to 1000 mm | ± 0.8 mm (.0315in) |

| MODEL | DIM L |
|----------------|------------|
| GNM2130 | 78 (3.071) |
| GNM2145 | 94 (3.701) |

Ordering Information:

