



| Electrical Data | **** | 210E | 208F | 205E | |
|---|-----------------------|--------------------------------|-------------|-------------|-------------------------|
| 1 Nominal Voltage | V | 3 | 6 | 12 | Volt |
| 2 No-Load Speed | n_0 | 7,280 | 9,000 | 8,050 | rpm |
| 3 No-Load Current | I_0 | 14.0 | 12.0 | 5.0 | mA |
| 4 Terminal Resistance | R | 7.4 | 20.6 | 106.0 | Ω |
| 5 Output Power | P_{2max} | 1.2 | 1.1 | 1.1 | W |
| 6 Stall Torque | mNm | 1.54 (0.22) | 1.78 (0.26) | 1.54 (0.22) | mNm (oz-in) |
| 7 Efficiency | η_{max} | 66 | 64 | 62 | % |
| 8 Max continuous speed | $n_{e max}$ | 12,000 | 12,000 | 12,000 | rpm |
| 9 Max continuous torque | $M_{e max}$ | 1.51 (0.21) | 1.45 (0.21) | 1.41 (0.2) | mNm (oz-in) |
| 10 Max continuous current | $I_{e max}$ | 0.41 | 0.25 | 0.11 | A |
| 11 Back-EMF Constant | k_E | 0.40 | 0.64 | 1.42 | mV/rpm |
| 12 Torque Constant | k_M | 3.80 | 6.10 | 13.60 | mNm/A |
| 13 Motor Regulation | R/k^2 | 512.0 | 550.0 | 575.0 | $10^3/Nms$ |
| 14 Friction Torque | T_F | 0.07 (0.01) | 0.07 (0.01) | 0.07 (0.01) | mNm (oz-in) |
| 15 Rotor Inductance | L | 0.09 | 0.25 | 0.95 | mH |
| 16 Mechanical Time Constant | τ_m | 9.7 | 12.0 | 9.2 | ms |
| 17 Rotor Inertia | J | 0.19 | 0.21 | 0.16 | g.cm ² |
| 18 Thermal Resistance (rotor/body) | R_{th1} / R_{th2} | 14/66 | 14/66 | 14/66 | $^{\circ}C/W$ |
| 19 Thermal Time Constant (rotor/stator) | τ_{w1}/τ_{w2} | 5/150 | 5/150 | 5/150 | $^{\circ}C/W$ |
| 20 Operating Temperature Range: | motor | -30°C to 85°C (-22°F to 185°F) | | | $^{\circ}C (^{\circ}F)$ |
| | rotor | 100°C (212°F) | | | $^{\circ}C (^{\circ}F)$ |
| 21 Shaft Load max.: | | With sleeve bearings | | | |
| at 3,000 rpm (5mm from bearing) | -radial | 1.5 (5.4) | | | N (oz) |
| at 3,000 rpm | -axial | 150 (539.5) | | | N (oz) |
| 22 Shaft play: | -radial | <0.03 (0.0012) | | | mm (inch) |
| | -axial | 0.15 (0.0059) | | | mm (inch) |
| 23 Weight | g | 13.5 (0.48) | | | g (oz) |

| Execution | | |
|-----------|--------------|--------------|
| Gearbox | Single Shaft | MR2 |
| R10 | Upon Request | Upon Request |
| R13 | Upon Request | Upon Request |

