



25GST2R82 \*\*\*\* .1

| Electrical Data                         | ****                  | 219P                           | 230E        | 216P        | 216E        |                         |
|---|-----------------------|--------------------------------|-------------|-------------|-------------|-------------------------|
| 1 Nominal Voltage                       | V                     | 18                             | 18          | 24          | 35          | Volt                    |
| 2 No-Load Speed                         | $n_0$                 | 11,125                         | 11,450      | 10,320      | 7,850       | rpm                     |
| 3 No-Load Current                       | $I_0$                 | 110.0                          | 110.0       | 70.0        | 40.0        | mA                      |
| 4 Terminal Resistance                   | R                     | 1.6                            | 1.3         | 3.3         | 12.5        | $\Omega$                |
| 5 Output Power                          | $P_{2max}$            | 23.8                           | 26.0        | 24.0        | 23.3        | W                       |
| 6 Stall Torque                          | mNm                   | 172 (24.36)                    | 206 (29.18) | 160 (22.66) | 118 (16.72) | mNm (oz-in)             |
| 7 Efficiency                            | $\eta_{max}$          | 81                             | 83          | 81          | 78          | %                       |
| 8 Max continuous speed                  | $n_{e max}$           | 12,000                         | 12,000      | 12,000      | 12,000      | rpm                     |
| 9 Max continuous torque                 | $M_{e max}$           | 30 (4.68)                      | 33 (4.68)   | 30 (4.25)   | 30 (4.25)   | mNm (oz-in)             |
| 10 Max continuous current               | $I_{e max}$           | 2.10                           | 2.30        | 1.45        | 0.75        | A                       |
| 11 Back-EMF Constant                    | $k_E$                 | 1.60                           | 1.56        | 2.30        | 4.40        | mV/rpm                  |
| 12 Torque Constant                      | $k_M$                 | 15.30                          | 14.90       | 22.00       | 42.00       | mNm/A                   |
| 13 Motor Regulation                     | $R/k^2$               | 6.9                            | 5.9         | 6.8         | 7.10        | $10^3/Nms$              |
| 14 Friction Torque                      | $T_F$                 | 1.68 (0.24)                    | 1.64 (0.24) | 1.54 (0.22) | 1.68 (0.24) | mNm (oz-in)             |
| 15 Rotor Inductance                     | L                     | 0.08                           | 0.10        | 0.10        | 0.80        | mH                      |
| 16 Mechanical Time Constant             | $\tau_m$              | 6.9                            | 5.9         | 6.8         | 7.1         | ms                      |
| 17 Rotor Inertia                        | J                     | 10.00                          | 10.00       | 10.00       | 10.00       | $g.cm^2$                |
| 18 Thermal Resistance (rotor/body)      | $R_{th1} / R_{th2}$   | 6/13                           | 6/13        | 6/13        | 6/13        | $^{\circ}C/W$           |
| 19 Thermal Time Constant (rotor/stator) | $\tau_{w1}/\tau_{w2}$ | 10/450                         | 10/450      | 10/450      | 10/450      | $^{\circ}C/W$           |
| 20 Operating Temperature Range:         | motor                 | -30°C to 85°C (-22°F to 185°F) |             |             |             | $^{\circ}C (^{\circ}F)$ |
|   | rotor                 | 155°C (311°F)                  |             |             |             | $^{\circ}C (^{\circ}F)$ |
| 21 Shaft Load max.:                     |                       | With ball bearings             |             |             |             |                         |
| at 3,000 rpm (5mm from bearing)         | -radial               | 12.0 (43.2)                    |             |             |             | N (oz)                  |
| at 3,000 rpm                            | -axial                | 680 (2,445.9)                  |             |             |             | N (oz)                  |
| 22 Shaft play:                          | -radial               | <0.03 (0.0012)                 |             |             |             | mm (inch)               |
|   | -axial                | 0.15 (0.0059)                  |             |             |             | mm (inch)               |
| 23 Weight                               | g                     | 111 (3.92)                     |             |             |             | g (oz)                  |

| Execution |              |    |            |            |
|-----------|--------------|----|------------|------------|
| Gearbox   | Single Shaft | E9 | HEDS       | MR2        |
| R32       | 1            | 2  | 4          | Contact Us |
| M22       | 5            | 11 | Contact Us | Contact Us |

