

TORQUE MOTOR

TMM0175-050

| PERFORMANCE | | Winding codes | 3TAS | 3UBS |
|-------------|-----------------------------------|---------------|---|---|
| | | UNIT | FREE AIR CONVECTION (with glued stator) | FREE AIR CONVECTION (with glued stator) |
| Tp | Peak torque | Nm | 113 | 113 |
| Tc | Continuous torque | Nm | 23.6 | 23.9 |
| Ts | Stall torque | Nm | 17.9 | 18.1 |
| Kt | Torque constant | Nm/Arms | 5.96 | 2.41 |
| Ku | Back EMF constant (*) | Vrms/(rad/s) | 3.45 | 1.39 |
| Km | Motor constant | Nm/√W | 1.99 | 2.01 |
| R20 | Electrical resistance at 20°C (*) | Ohm | 6.00 | 0.961 |
| L1 | Electrical inductance (*) | mH | 37.0 | 6.05 |
| Ip | Peak current | Arms | 27.1 | 66.9 |
| Ic | Continuous current | Arms | 4.22 | 10.5 |
| Is | Stall current | Arms | 3.19 | 7.98 |
| Pc | Max. continuous power dissipation | W | 226 | 226 |

| SPECIFICATIONS | | UNIT | | |
|----------------|--------------------------------------|-------------------|---------|---------|
| Udc | Nominal input voltage | VDC | 600 | 600 |
| τth | Thermal time constant | s | 1860 | 1860 |
| Rth | Thermal resistance | K/W | 0.466 | 0.466 |
| 2p | Number of poles | - | 22 | 22 |
| J | Rotor inertia | kg.m ² | 0.00454 | 0.00454 |
| Mr | Rotor mass | kg | 1.66 | 1.66 |
| Ms | Stator mass | kg | 5.46 | 5.48 |
| Td | Max. detent torque (average to peak) | Nm | 0.95 | 0.95 |
| ns | Stall speed | rpm | 0.029 | 0.029 |

Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
 Hypothesis and tolerances are in ETEL's Handbook. Stator connected to a total surface of 0.08 m² and rotor to a total surface of 0.037 m²

Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

