

TORQUE MOTOR

TMM0210-100

| | | Winding codes | - 3TBN | 3UBS |
|-----|-----------------------------------|---------------|---|---|
| | PERFORMANCE | UNIT | FREE AIR CONVECTION (with glued stator) | FREE AIR CONVECTION (with glued stator) |
| Тр | Peak torque | Nm | 445 | 445 |
| Tc | Continuous torque | Nm | 93.5 | 89.1 |
| Ts | Stall torque | Nm | 71.0 | 67.6 |
| Kt | Torque constant | Nm/Arms | 11.2 | 8.41 |
| Ku | Back EMF constant (*) | Vrms/(rad/s) | 6.49 | 4.86 |
| Km | Motor constant | Nm/√W | 5.54 | 5.27 |
| R20 | Electrical resistance at 20°C (*) | Ohm | 2.73 | 1.70 |
| L1 | Electrical inductance (*) | mH | 15.1 | 8.50 |
| Iр | Peak current | Arms | 56.2 | 74.9 |
| lc | Continuous current | Arms | 8.47 | 10.8 |
| ls | Stall current | Arms | 6.42 | 8.15 |
| Рс | Max. continuous power dissipation | W | 408 | 408 |

| | SPECIFICATIONS | UNIT | | |
|-----|--------------------------------------|-------------------|--------|--------|
| Udc | Nominal input voltage | VDC | 600 | 600 |
| τth | Thermal time constant | s | 1440 | 1440 |
| Rth | Thermal resistance | K/W | 0.241 | 0.241 |
| 2p | Number of poles | - | 44 | 44 |
| J | Rotor inertia | kg.m ² | 0.0299 | 0.0299 |
| Mr | Rotor mass | kg | 5.01 | 5.01 |
| Ms | Stator mass | kg | 8.79 | 8.78 |
| Td | Max. detent torque (average to peak) | Nm | 2.1 | 2.1 |
| ns | Stall speed | rpm | 0.019 | 0.019 |

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 0.20 m² and rotor to a total surface of 0.100 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.

