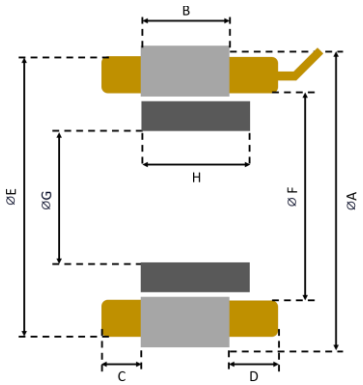
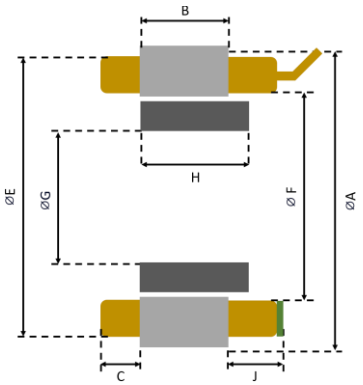
# UT-TRM-230 Technical Information

| | Motor Parameters | Symbols | Units | UT-TML-230-015 | | UT-TMH-230-015 |
|---|---|---|---|---|---|---|
| PERFORMANCE | DC Bus Voltage | $V_{DC}$ | V | 24 | 48 | 310 |
| | Rated Torque | $T_r$ | Nm | 14.35 | | 14.55 |
| | Peak Torque | $T_p$ | Nm | 33 | | 38.25 |
| | Rated Speed | $N_r$ | rpm | 135 | 320 | 1820 |
| | No-Load Speed | $N_{no\text{-}load}$ | rpm | 200 | 400 | 2075 |
| | Torque Constant | $K_t$ | Nm/A | 1.36 | | 1.71 |
| | Voltage Constant | $K_v$ | V/rpm | 0.117 | | 0.149 |
| | Max. Cogging Torque | $T_{cog}$ | % | <1 | | |
| | Torque Ripple | $T_{ripple}$ | % | <1 | | |
| ELECTRICAL | Number of Pole | 2p | -- | 32 | | |
| | Rated Current | $I_r$ | $A_{rms}$ | 10.6 | | 8.5 |
| | Peak Current | $I_p$ | $A_{rms}$ | 26.5 | | 25.5 |
| | Line Resistance | $R_{LL}$@25°C | Ohm | 0.5 (±20%) | | 0.82 (±20%) |
| | Line Inductance | $L_{LL}$@60Hz | mH | 2.0 (±30%) | | 3.2 (±30%) |
| MECHANICAL & THERMAL | Stator Weight | $W_s$ | kg | 1.94 | | 1.94 |
| | Rotor Weight | $W_r$ | kg | 1.12 | | 1.12 |
| | Total Weight | $W_{total}$ | kg | 3.06 | | 3.06 |
| | Mech. Time Constant | $K_{mech}$ | ms | 2.51 | | 2.58 |
| | Thermal Resistance (2) | $R_{th}$ | °C/W | 0.61 | | 0.49 |
| | Inertia | J | $kg.m^2$ | 7.643E-3 | | |
| | Motor Constant | $K_m$ | Nm/√W | 1.01 | 0.65 | 0.27 |
| | Rotor ID | | mm | 148 | | |
| | Stator OD | | mm | 230 | | |

1. All performance and electrical specifications are obtained at 25°C ambient and may change ±10%. 2. Housed version of motor mounted to 340 mm sq. x 15 mm aluminum heat sink (maximum winding temperature is 120°C). 3. Higher torque and speed values as well as dimensions on request.

# UT-TM(L/H)-230 Outline Drawing




Hall Effect Sensor Option

| Model | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm) | J (mm) |
|---|---|---|---|---|---|---|---|---|---|
| UT-TRM-230-015 | 230 | 15 | 11 | 13 | 223 | 185 | 148 | 17.6 | 16 |

Notes:

MOTOR LEADS:
UT-TM(L/H)-230-015: #11 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.

THERMISTOR LEADS:
#26 AWG Teflon® insulated, 500 mm (optional) length, 2-Brown or Blue

SENSOR LEADS:
#23 AWG Teflon® insulated, 500 mm (optional) length, 1-Blue, 1-Green, 1-Brown, 1-White, 1-Yellow.

# UT-TM(L/H)-230 Torque-Speed Curves

Tr: Rated Torque
Tp: Peak Torque