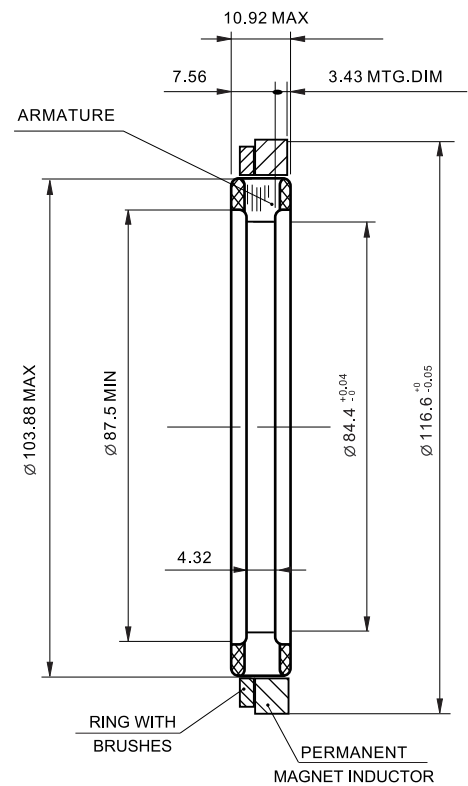
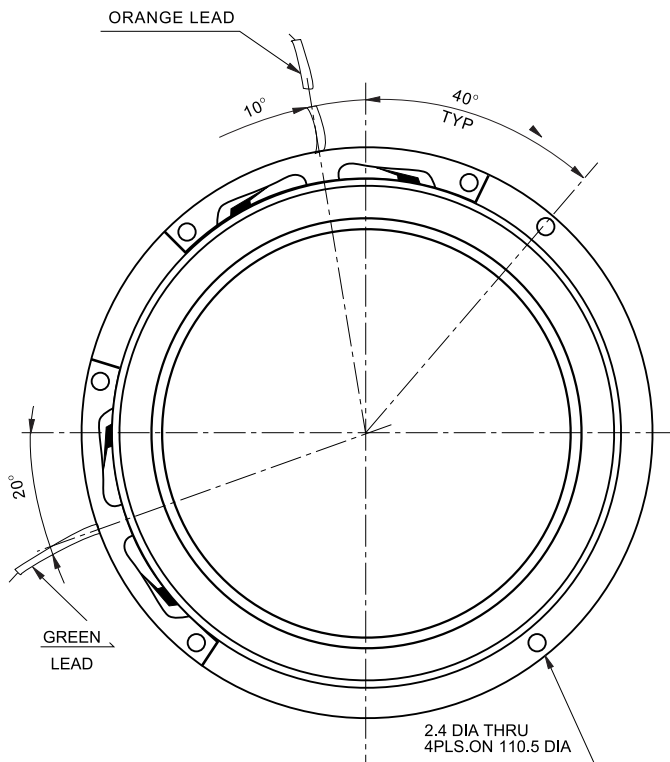


mtc MTM-116-11B

DC Torque Motor

The MTM-116-11B is a direct-drive DC torque motor. The MTM-116-11B is a permanent rare earth magnet, with continuous rotation and armature excited. The MTM-116-11B have usage where very high torque to power, volume and weight ratios are needed. These applications include missile and aircraft actuators, diagnostic medical instrumentation, ground and airborne radar antennas.



Specification

| Parameter | Unit | Value |
|--|--------------------|------------------|
| Peak Torque (T_P) | N*m | 0.99 |
| No load speed (wNL) | rad/sec | 80 |
| Total breakaway torque (T_F) | N*m | $4.24 * 10^{-2}$ |
| Ripple torque (T_R) | %(avg.to pk.) | 5 |
| Temperature rise | °C/Watts | 3 |
| Max. allowable winding temperature | °C | 150 |
| Moment of inertia (J_M) | gr*cm ² | 3250 |
| Weight | gr | 275 |
| Damping factor at 25°C (F_O) | N*m/rad/sec | $1.2 * 10^{-2}$ |
| Elect. time constant at 25°C (T_E) | sec | $2 * 10^{-4}$ |

Winding Constant

| Parameter | Unit | Value | Tolerance |
|------------------------------|--------------|-------|-----------|
| Resistance at 25°C (R_M) | Ohm | 6.1 | ± 12.5% |
| Torque sensitivity (K_T) | N*m | 0.266 | ± 10% |
| Back EMF constant (K_B) | Volt/rad/sec | 0.3 | ± 10% |
| Inductance (L_M) | mHy | 0.9 | ± 30% |