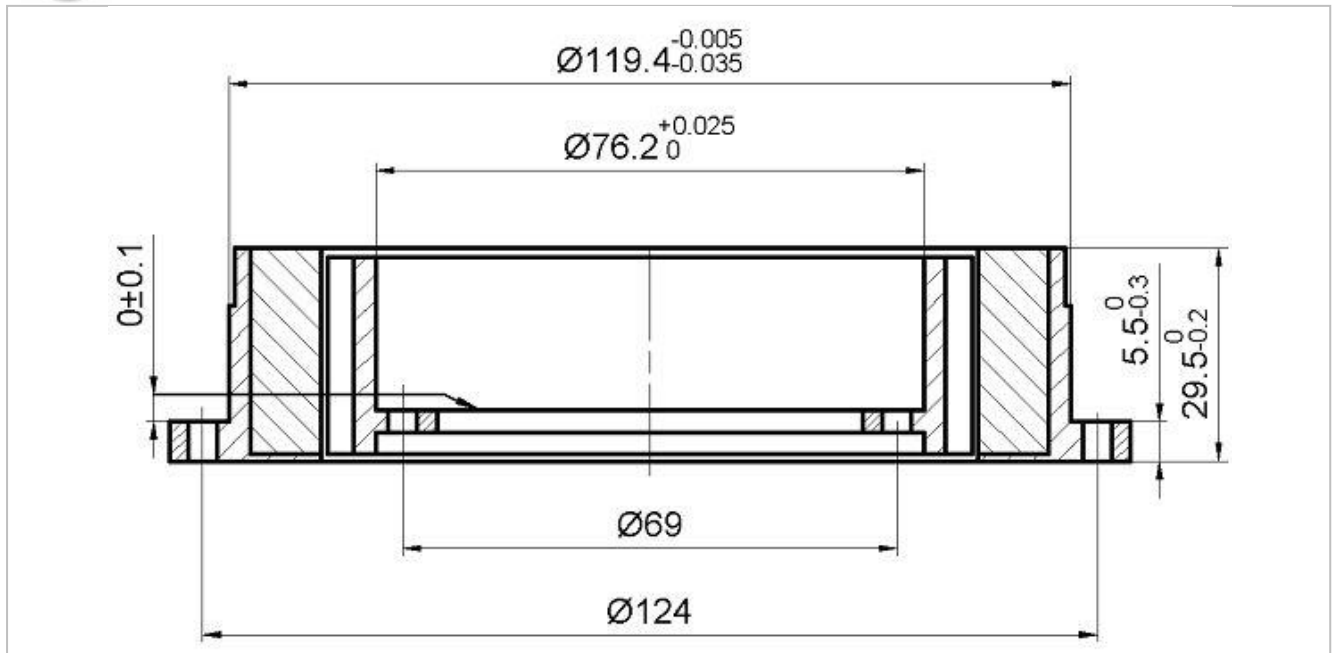




# DC Brushless Torque Motor type : TQR-47/8-1.2

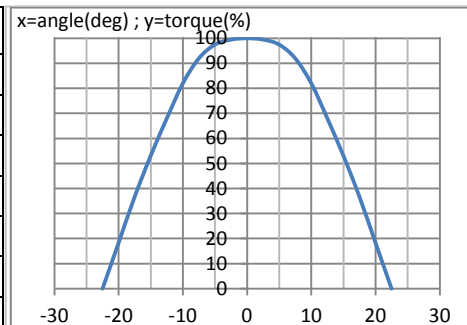


## Performance Data

| Parameter                     | Symbol | Units             | Value     |
|-------------------------------|--------|-------------------|-----------|
| Peak Torque, stalled @Vp      | Tp     | Nm                | 2.5       |
| Power Input @Tp               | P      | W                 | 61.6      |
| Motor Constant                | Km     | Nm/ $\sqrt{W}$    | 0.318     |
| Electrical Time Constant      | Te     | ms                | 2.1       |
| Rotor Inertia                 | Jm     | Kg m <sup>2</sup> | TBD       |
| Angular Excursion             |        | deg               | ±22.5     |
| Total Break Away Torque       | Tf     | mNm               | 21.2(max) |
| Maximum Allowable Temperature | Temp.  | °C (at winding)   | 155       |
| Number of poles               |        |                   | 8         |
| Weight                        | WT     | g                 | 1100      |

## Winding Constants

| Parameter          | Symbol | Units       | Tol.    | Value |
|--------------------|--------|-------------|---------|-------|
| D.C. Resistance    | R      | Ω           | ±12.5%  | 6.5   |
| Inductance         | L      | mH          | ±30%    | 13.6  |
| Torque Sensitivity | Kt     | Nm/A        | ±10%    | 0.812 |
| Back EMF Constant  | Kb     | V/(rad/sec) | ±10%    | 0.812 |
| Peak Voltage @ Tp  | Vp     | V           | Nominal | 20    |
| Peak Current @ Tp  | Ip     | A           | Nominal | 3.08  |



Leads AWG 24 teflon coated; 300 mm minimum length.

Direction of rotation viewed from lead side, CW when a positive voltage is applied to the red lead relative to the black.

Insulation resistance @ 500 V D.C., min 100 MΩ.

Dielectric withstanding voltage - withstand at 500 V rms; 50 Hz ; between winding and housing.

All measurements are made at 25 °C ambient temperature.

Mounting dimensions and color of wires can be changed in conformity with customer requirement.

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