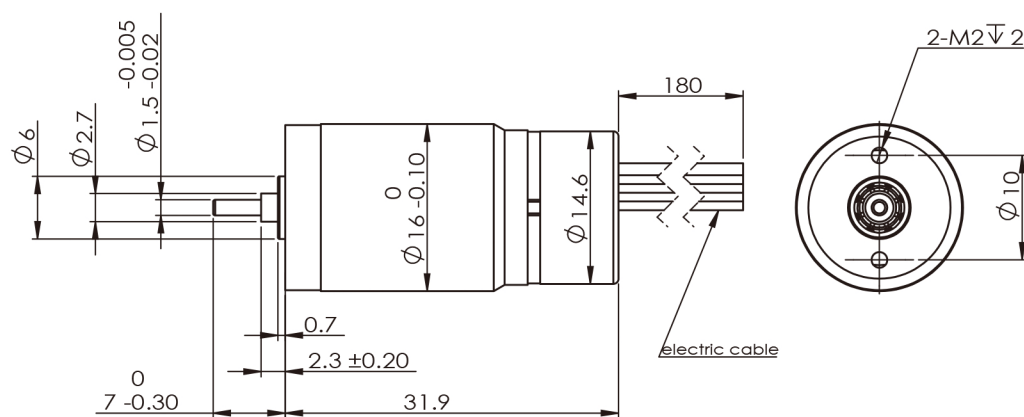




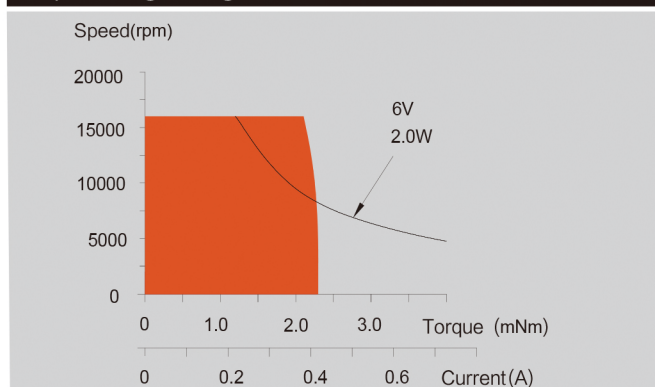
## Motor Data

| 电机型号      | Motor model           |                  |                       | SR163206B | SR163209B | SR163212B | SR163215B | SR163218B | SR163224B |
|-----------|-----------------------|------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 额定电压    | Nominal voltage       | V                | V                     | 6         | 9         | 12        | 15        | 18        | 24        |
| 2 空载转速    | No load speed         | rpm              | Wnl                   | 11000     | 12300     | 14500     | 12500     | 14100     | 15200     |
| 3 空载电流    | No load current       | mA               | InI                   | 41        | 34        | 40        | 30        | 22        | 20        |
| 4 额定转速    | Nominal speed         | rpm              | Wc                    | 6700      | 7580      | 10900     | 9000      | 9740      | 13000     |
| 5 额定转矩    | Nominal torque        | mNm              | Tc                    | 1.5       | 1.5       | 1.5       | 2.15      | 1.5       | 1.5       |
| 6 额定电流    | Nominal current       | A                | Ic                    | 0.31      | 0.23      | 0.2       | 0.2       | 0.13      | 0.1       |
| 7 输出功率    | Output power          | W                | Pc                    | 1.06      | 1.19      | 1.73      | 2.05      | 1.53      | 2.05      |
| 8 堵转扭矩    | Stall torque          | mNm              | Tmax                  | 3.55      | 4.5       | 5.26      | 7         | 5.1       | 8.9       |
| 9 堵转电流    | Stall current         | A                | Imax                  | 0.72      | 0.7       | 0.71      | 0.64      | 0.45      | 0.61      |
| 10 最大效率   | Max. efficiency       | %                | $\eta_{max}$          | 71        | 75        | 71        | 70        | 77        | 83        |
| 11 线间电阻   | Terminal resistance   | $\Omega$         | Rt                    | 8.3       | 12.8      | 17        | 23.4      | 39.6      | 39.3      |
| 12 力矩系数   | Torque constant       | mNm / A          | Kt                    | 4.91      | 6.43      | 7.46      | 10.92     | 11.23     | 14.58     |
| 13 速度常数   | Speed constant        | rpm / V          | Kn                    | 1943      | 1485      | 1281      | 874       | 851       | 655       |
| 14 速度扭矩比  | Speed torque gradient | rpm / mNm        | $\Delta n / \Delta T$ | 2842      | 2720      | 2340      | 1587      | 2763      | 1421      |
| 15 线间电感   | Terminal inductance   | mH               | L                     | 0.17      | 0.23      | 0.28      | 0.75      | 0.898     | 0.9       |
| 16 转子转动惯量 | Rotor inertia         | gcm <sup>2</sup> | J                     | 0.65      | 0.64      | 0.62      | 0.62      | 0.61      | 0.6       |

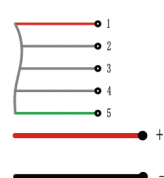
## Specifications

|                                    |            |             |
|------------------------------------|------------|-------------|
| 1 ambient temperature              | Ta         | -20~+65°C   |
| 2 Max.winding temperature          | Tcoilmax   | +85°C       |
| 3 Max.speed                        | Nmax       | 16000rpm    |
| 4 axial play                       | $\Delta t$ | 0.05~0.15mm |
| 5 number of pole pairs             | p          | 1           |
| 6 number of commutator segments    |            | 5           |
| 7 weight of motor                  | Wt         | 26g         |
| 8 Max.axial load(dynamic)          |            | 0.8N        |
| 9 Max.force for press fits(static) |            | 15N         |
| 10 Max.radial load,4mm from flange |            | 1.5N        |

## Operating Range



## Terminal definitions



Red 1 Motor +  
2 +5V  
3 GND  
4 Channel Z  
5 Channel B  
Black 5 Channel A  
Motor -

Magnet Encoder  
3 Channel  
1000CPT