



独立线性度高、寿命长 Improved linearity, long life
轴套安装 Sleeve installation
应用于军事、航空、工业等领域 Used in military, aviation, industrial and other fields

WD20A 型精密导电塑料电位器 (角位移传感器)

WD20A Precision conductive plastic potentiometer (Angular position sensor)

■适用标准 Applicable Specifications

GJB 1865-1994 非线性精密电位器总规范
Q/RU 514-2015 WD20A 型精密导电塑料电位器详细规范

■电特性 Electrical Characteristics

标称阻值范围 Range of nominal resistance	10kΩ (可提供特殊阻值)
阻值允许偏差 Resistance tolerance	±10%
绝缘电阻 Insulation resistance	$R_i \geq 1G\Omega$ (500Vdc)
独立线性度 Independent linearity	$\leq \pm 0.3\%$
输出平滑性 Output smoothness	$< 0.1\%$
介质耐电压 Dielectric withstand voltage	500VAC, 1min
有效电行程 Effective electrical travel	$340^\circ \pm 3^\circ$ (可提供特殊有效电行程)

■环境特性 Environmental Characteristics

额定功率 Power rating	0.5W@70°C, 0W@125°C
温度范围 Temperature range	-65°C~125°C
耐湿 Moisture proof	30°C~60°C, RH:95%, 24h, 10cycles; $\Delta R \leq \pm 10\%R$, $R_i \geq 10M\Omega$, $\Delta(U_{12}/U_{13}) \leq \pm 2\%(U_{12}/U_{13})$
额定功率 Power rating	0.5W@70°C, 0W@125°C
温度冲击 Thermal shock	-65°C~125°C, 5次循环; $\Delta R \leq \pm 5\%R$
低温工作 Low temperature operation	-65°C, 4h (0.5W, 4min); $\Delta R \leq \pm 5\%R$, $\Delta(U_{12}/U_{13}) \leq \pm 2\%$
低温贮存 Low temperature exposure	-65°C, 24h; $\Delta R \leq \pm 5\%R$
高温贮存 High temperature exposure	85°C, 48h; $\Delta R \leq \pm 5\%R$
冲击 Shock	峰值55g, 半正弦波, 11ms, 6个方向各3次; 无大于0.1ms的瞬时电气间断, $\Delta R \leq \pm 5\%R$
振动 Vibration	20Hz~2000Hz, 0.16g ² /Hz, 轴向和径向各5min; 无大于0.1ms的瞬时电气间断, $\Delta R \leq \pm 5\%R$
高温工作 High temperature operating	85°C, 4h (0.5W, 45min); $\Delta R \leq \pm 5\%R$, $\Delta(U_{12}/U_{13}) \leq \pm 2\%$
旋转负荷寿命 Rotational load life	GJB 1865-1994中4.6.21.1, 100万圈; 独立线性度 $\leq \pm 0.45\%$, 输出平滑性 $\leq 0.15\%$, $\Delta R \leq \pm 10\%R$
耐湿 Moisture proof	30°C~60°C, RH: 95%, 24h, 10个循环; $\Delta R \leq \pm 10\%R$, $R_i \geq 10M\Omega$, $\Delta(U_{12}/U_{13}) \leq \pm 2\%$

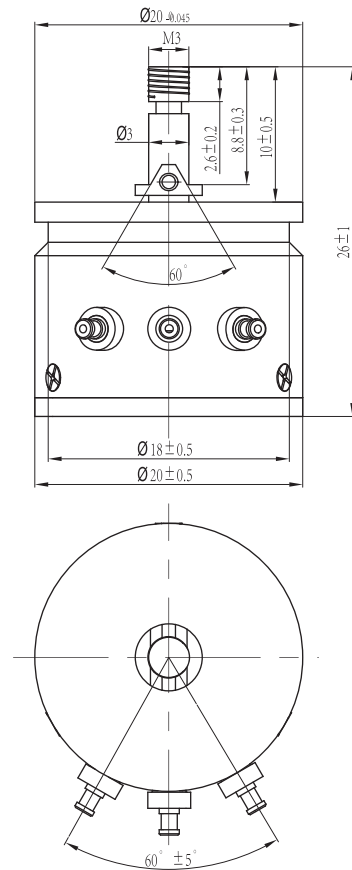
■物理特性 Physical Characteristics

启动力矩 Starting torque	$\leq 3mN \cdot m$
轴端间隙 Axial clearance	$\leq 0.127mm$
重量 Weight	$\leq 15g$
标志 Mark	型号、标称阻值、阻值允许偏差、独立线性度、引出端标识、产品编号 Type, Nominal resistance, Resistance tolerance, Independent linearity, Terminal identifier, Product serial number
标准包装 Standard package	1pcs/box

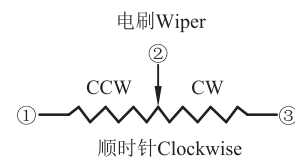
■订货指南 Ordering Information

WD20A-10kΩ-K-±0.3%-340
型号Type-标称阻值Nominal resistance-允许偏差Tolerance-独立线性度Linearity-有效电行程Effective electrical travel

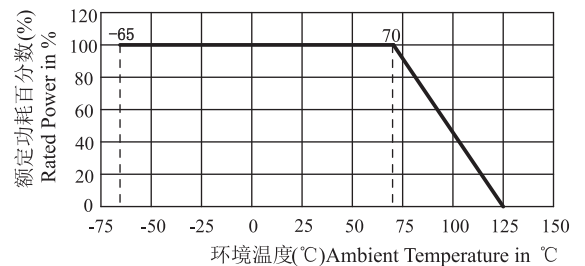
■外形尺寸图 Dimensions



■电路图 Circuit Diagram



■降功耗曲线 Derating



位移传感器