

## HPK800/1000-D01型 / HPK800/1000-D01 series

### 应用 Application

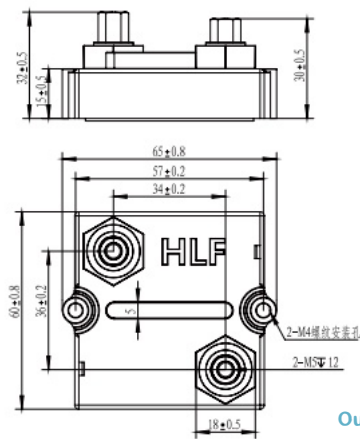
— HPK800/1000型通用大功率电阻器（合金箔，无感设计）。可应用于发电、特高压直流输电、变频器变速驱动、电力机车、船舶驱动等电工设备领域。

HPK800/1000 type universal high-power resistor (thick film, non-inductive design). It can be applied to electric power generation, ultra-high voltage direct current transmission, variable frequency drive systems, electric locomotives, ship drives, and other electrical equipment fields.



### 产品特点 Product features

- 底板中心温度 $\leq 85^{\circ}\text{C}$ 时，额定功率800/1000W
- When the temperature at the center of the base plate is  $\leq 85^{\circ}\text{C}$ , the rated power is 800/1000W
- 特殊设计的外型结构，芯片固定与内壳内，并用高耐压硅橡胶灌封，内壳和外壳之间用弹簧联接，外壳用两个M4螺丝固定安装在散热器表面，能保证散热片附着压力在120N到160N之间。
- The specially designed external structure features a chip fixed inside the inner shell, which is encapsulated with high-voltage-resistant silicone rubber. The inner shell and outer shell are connected by springs, and the outer shell is fixed to the surface of the heat sink with two M4 screws, ensuring that the attachment pressure of the heat sink is between 120N and 160N.
- 原材料通过了UL94-V0
- The raw material has passed UL94-V0 certification



外型尺寸图  
Outline drawing

### 订货示例 Order Example

— 型号-阻值-精度-引出端结构-引出端螺母  
Model - Resistance - Accuracy - Terminal Structure - Terminal Nut  
HPK800-440R-2%-(1/2)-M5

### Electrical specifications

阻值范围 Resistance range: 0.1~10M $\Omega$   
阻值精度 Resistance accuracy:  $\pm 2\%$ (G),  $\pm 3\%$ (F),  $\pm 5\%$ (J),  $\pm 10\%$ (K)  
温度系数 Temperature coefficient:  $\pm 50\text{ppm}/^{\circ}\text{C}$ ~ $\pm 120\text{ppm}/^{\circ}\text{C}$  ( $25^{\circ}\text{C}$ ~ $105^{\circ}\text{C}$ ), 其它温度系数要求可协商订货  
soil  $\pm 50\text{ppm}/^{\circ}\text{C}$ ~ $\pm 120\text{ppm}/^{\circ}\text{C}$  ( $25^{\circ}\text{C}$ ~ $105^{\circ}\text{C}$ ), other temperature coefficient requirements can be negotiated during ordering  
额定功率 Rated power:  $85^{\circ}\text{C}$ 额定功率HPK800为800W, HPK1000为1000W, 最大工作电压不超过5,000VDC.  
HPK800 is 800W, HPK1000 is 1000W at  $85^{\circ}\text{C}$ , with a maximum operating voltage not exceeding 5,000VDC.  
短时间过负荷 Short-term overload: HPK800为1200W, HPK1000为1500W,  $70^{\circ}\text{C}$ , 10秒,  $\text{AR} \leq \pm (0.4\%R + 0.001\Omega)$   
HPK800 is 1200W, HPK1000 is 1500W,  $70^{\circ}\text{C}$ , 10 seconds,  $\text{AR} \leq \pm (0.4\%R + 0.001\Omega)$   
绝缘层耐压 Insulation withstand voltage: 6KVrms, 50Hz, 1min  
绝缘阻值 Insulation resistance: 1000V, 最小10G $\Omega$   
爬电距离 Creepage distance: 最小42mm  
空间距离 Spatial distance: 最小14mm  
电感 Inductance:  $\leq 400\text{nH}$   
分布电容 Distributed capacitance (Mass):  $\leq 110\text{pF}$   
耐湿特性 Moisture resistance: 56天/ $40^{\circ}\text{C}$ ,  $\text{RH} \geq 95\%$ ,  $\text{AR} \leq \pm (0.25\%R + 0.001\Omega)$ 。56 days/ $40^{\circ}\text{C}$ ,  $\text{RH} \geq 95\%$ ,  $\text{AR} \leq \pm (0.25\%R + 0.001\Omega)$   
温度循环 Temperature cycling:  $-55^{\circ}\text{C}$ ~ $+125^{\circ}\text{C}$  (各0.5h), 5个周期,  $\text{AR} \leq \pm (0.2\%R + 0.001\Omega)$   
 $55^{\circ}\text{C}$ ~ $+125^{\circ}\text{C}$  (each for 0.5h), 5 cycles,  $\text{AR} \leq \pm (0.2\%R + 0.001\Omega)$   
高频振动 High-frequency vibration: MIL-Std-202, 方法204, 条件D,  $\text{AR} \leq \pm (0.2\%R + 0.001\Omega)$   
M L-Std-202, Method 204, Condition D,  $\text{AR} \leq \pm (0.2\%R + 0.001\Omega)$   
功率耐久性 Power durability: 额定功率1,000h, 底板温度 $85^{\circ}\text{C}$ ,  $\text{AR} \leq \pm (0.4\%R + 0.001\Omega)$   
rated power for 1,000 hours, base plate temperature at  $85^{\circ}\text{C}$ ,  $\text{AR} \leq \pm (0.4\%R + 0.001\Omega)$   
工作温度范围 Operating temperature range:  $-55^{\circ}\text{C}$ ~ $+155^{\circ}\text{C}$   
引出端安装 Lead-out terminal installation: M5/M4螺丝, 最大扭矩2.0Nm。M5/M4 screws, with a maximum torque of 2.0 Nm.

降功率曲线 (热阻)  
Power reduction curve  
(thermal resistance):  
11.43W/K (0.09K/W)

