



HD53 系列继电器 Series Relay

FEATURES 特点

- 60A 触点切换能力
- 60A contact switching capacity
- 触点间隙 1.80mm 以上
- The contact gap is over 1.80mm
- 适用于太阳能光伏逆变器
- Suitable for solar photovoltaic inverters
- 整机可施加保持电压，节省能耗
- The whole machine can apply holding voltage to save energy consumption
- 可提供符合 IEC60335-1 标准产品
- Products in accordance to IEC60335-1 standards



CONTACT RATING 接点参数

Contact Form 接点形式	1A SPST-NO
Max. Switching Power 最大切换功率	12500VA
Max. Switching Voltage 最大切换电压	277VAC
Max. Switching Current 最大切换电流	60A
Min. Switching Current/Voltage 最小切换电流/电压	100mA 5VDC
Rating Load(Resistive)额定负载 (阻性)	NO: 43A/50A/60A 250VAC
Contact Material 接点材质	Ag Alloy 银合金

CHARACTERISTICS 性能参数

Electrical Life 电气寿命	普通型: 3×10^4 50A 277/250VAC 通 20A 载流 50A 断 20A 250/277VAC 高感度型: 1×10^4 50A 277/250VAC 通 20A 载流 50A 断 20A 250/277VAC	
Mechanical Life 机械寿命	1×10^6	
Insulation Resistance 绝缘阻抗	Min. 1000M Ω 500VDC	
Contact Resistance(Initial) 接触电阻	$\leq 20m\Omega$ (6VDC 20A)	
Operate Time 动作时间	$\leq 15ms$	
Release Time 开放时间	$\leq 10ms$	
Initial Dielectric Strength 耐压	between open contacts 开放接点间: 50/60Hz 2500VAC 1min. (标准型) between open contacts 开放接点间: 50/60Hz 1500VAC 1min. (高感型) between contacts and coil 线圈接点间: 50/60Hz 2500AC/4000VAC 1min.	
Vibration Resistance 耐振动	Malfunction: 误动作:	10 ~ 55Hz Double Amplitude 双振幅 1.5mm
	Damage limits: 耐久:	10 ~ 55Hz Double Amplitude 双振幅 1.5mm
Shock Resistance 耐冲击	Malfunction: 误动作:	10G
	Damage limits: 耐久:	100G
Ambient Temperature 环境温度	-40°C ~ +85°C (No freezing 无结冰)	

Ambient Humidity 相对湿度	5% to 85% RH
Unit Weight 单位重量	约 Approx. 38g

ORDERING INFORMATION 型号代码说明

HD53 H-1A-12 D S T F- V XXX	
<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>9</u>	
1. Model Number 型号 2. Coil Sensitivity 线圈感度 Nil = Standard Type 标准型 (abt.2.25W) H = High Sensitivity 高感度型 (abt.1.2W) 3. Contact Arrangement 接点形式 1A = 1 Form A 1 组常开 4. Coil Voltage 线圈电压 5VDC~48VDC 5. Enclosure 密封形式 Nil = Flux Proofed (防助焊剂型) S = Plastic Sealed (密封型)	6. Contact Material 接点材质 T = AgSnO ₂ 7. Type of Insulation 绝缘形式 F = Class F (F 级) 8. between coil contacts (线圈接点间耐压) Nil = 2500VAC V = 4000VAC 9. Special Code 特殊代码 Nil = 50A 43/60 = 43A/60A

COIL RATINGS (at 20°C) 线圈额定值 (在 20°C)

COIL TYPE 线圈形态	Coil Nominal Voltage 线圈额定电压 (V)	Coil Resistance 线圈阻抗 ($\Omega \pm 10\%$)	Pick-Up Voltage 动作电压(V) (Max)	Drop-Out Voltage 开放电压(V) (Min)	Nominal Current 额定电流 (mA)
DC Standard Coil 直流标准型线圈 (2.25W)	5	11.1	3.75	0.25	450
	12	64	9.00	0.60	187.5
	24	256	18.00	1.20	93.8
	48	1024	36.00	2.40	46.9
DC High Sensitivity Coil 直流高感度线圈 (1.2W)	5	20.8	3.75	0.25	240
	12	120	9.00	0.60	100
	24	480	18.00	1.20	50
	48	1920	36.00	2.40	25

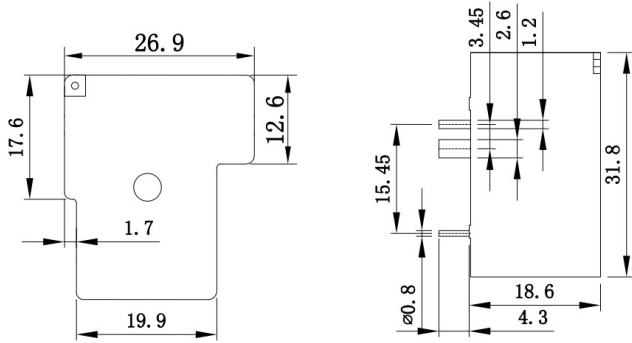
* Max Continuous Voltage at 20°C: 110% of Coil Normall Voltage.

最大使用电压在 20°C :线圈额定电压的 110%

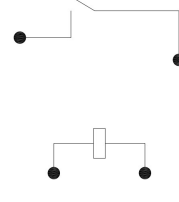
OUTLINE DIMENSIONS 外部尺寸

UNIT: mm(inch) 单位: 毫米(英寸)

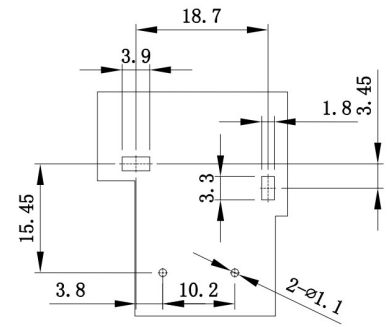
Dimensions 尺寸



Internal Connections 接线图
(Bottom View 底视图)



Drilling Plan 孔位图
(Bottom View 底视图)

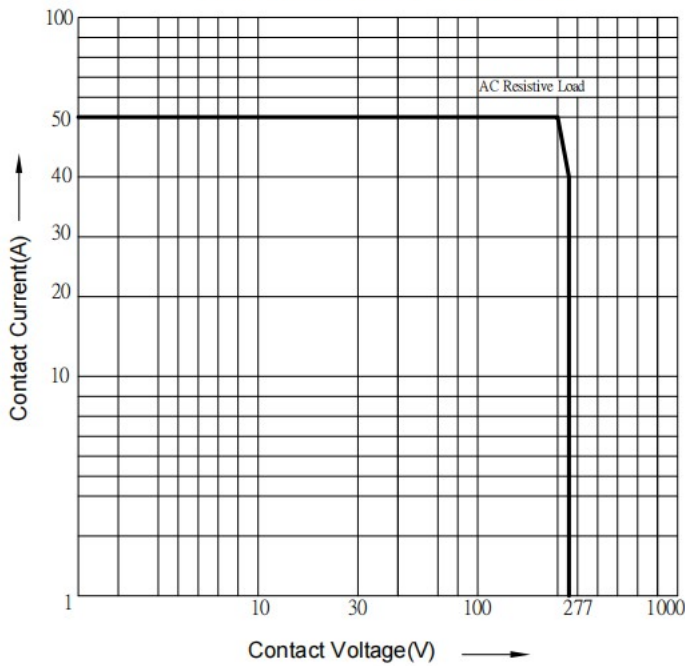


REMARK: Dimensions $\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.2\text{mm}$

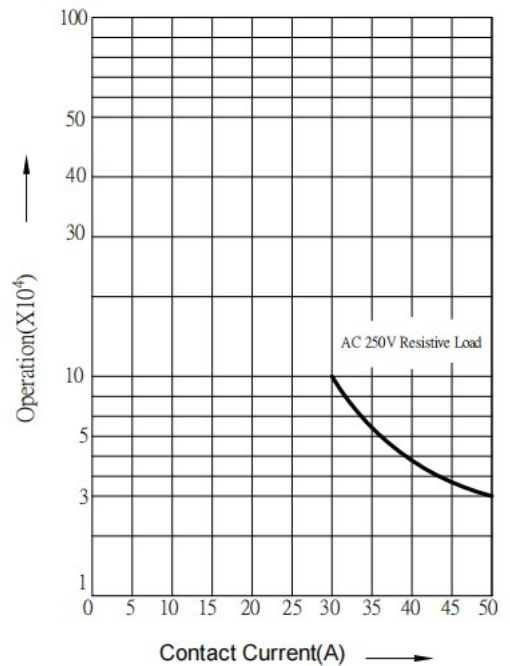
备注: 外部尺寸公差: $\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, 印刷电路板孔 $+0.2\text{mm}$

HD53 Reference Data 参考资料

Maximum Switching Power



Life Curves



SAFETY 安规名称	Coil Voltage 线圈电压	Contact Rated 接点额定值
<p style="text-align: center;">UL UL NO.:E169563</p>	<p style="text-align: center;">DC:3~48V</p>	<p>标准型: 50/43A 277/250VAC 通 20A 载流 43A/50A/60A 断 20A 250/277VAC 60A 277/250VAC 灵敏型 50/43A 277/250VAC 通 20A 载流 43A/50A/60A 断 20A 250/277VAC</p>