SPECIFICATION

Type: HRS4-S-DC24V(C) Relay

1. 线圈参数
COIL DATA

1.1	额定电压 Nominal Voltage	24VDC.
1.2	线圈电阻 Coil Resistance	1280Ω ±10% at 23℃.
1.3	额定电流 Nominal Current	17.5mA ±10% at 23℃.
1.4	吸合电压 Operating Voltage	16.8VDC Max.
1.5	释放电压 Release Voltage	2.4VDC Min.
1.6	最大线圈电压 Maximum Coil Voltage	31.2VDC(110% of nominal voltage)
1.7	额定功耗 Nominal Operating Power	450mW

2. 触点参数
CONTACT DATA

2.1	触点形式 Contact form	1 Form C-SPDT
2.2	触点材质 Contact material	Ag Alloy
2.3	触点负载 Contact rating	Resistive：NO:10A 250VAC/24VDC NC:6A 250VAC/24VDC
2.4	最大切换电压 Max. switching voltage	28VDC / 250VAC
2.5	最大切换电流 Max. switching current	15A
2.6	最大切换功率 Max. switching power	2500VA, 280W
2.7	接触电阻 (初始值) Contact resistance (Initial)	Max.100mΩ at 6VDC 1A
2.8	电气耐久性 Electrical Durability	常温下 100,000 次 (1800 ops/h) 试验后,介质耐压值应不小于初始值的 75%。 100,000 operations at rate load (1800 ops/hour) After test, the dielectric strength shall be not less than 75% of initial value
2.9	机械耐久性 Mechanical Durability	空载条件下 10,000,000 次(18,000 ops/h) 10,000,000 operations at no load (18,000 ops/hour)

3. 一般性能
GENERAL DATA

3.1	绝缘电阻 Insulation Resistance	Min.1000MΩ at 500VDC
3.2	介质耐压(漏电流: 1mA) Dielectric Strength(Leakage current: 1mA)	
	(1) 触点间 Between contacts	750VAC, 1 min , 50/60Hz
	(2) 触点与线圈间 Between Coil and Contact	1500VAC, 1 min , 50/60Hz
3.3	吸合时间 Operate Time	Max. 10 ms.
3.4	释放时间 Release Time	Max. 5 ms.
3.5	工作温度 Operating temperature	-40 to +85℃
3.6	储存条件 Storage conditions	
	(1) 储存温度 Storage Temperature	-40 to +85℃
	(2) 环境 Environments	贮存于无腐蚀性气体的场所，如硫化氢气体或有盐份的空气中。 贮存于产品不受阳光直射的场所，不受雨淋的场所。 Store in locations where the product is not exposed to corrosive gas such as hydrogen sulfide gas or salty air. Store in locations where the product is not exposed to the direct ray of the sun and rain, snow.
3.7	温升 Temperature Rise 线圈 Coil	在 85℃环境温度下，触点施加 10A 负载，线圈用 110%额定电压进行激励，用电阻法测线圈温升应不超过 70K。 70k max. by resistance method when 110% of rated voltage to relay coil and 10A current to contact at 85℃.
3.8	端子强度 Terminal Strength 拉力和推力 Tensile and pushing	继电器结构和性能应无任何异常当用1kg的拉力和推力推拉继电器端子各10s。 To be free from any abnormality in both the construction and characteristics after pushing and pulling the relay terminal 2mm from the body with 1kg for terminals for 10sec .
3.9	可焊性 Solderability	在锡温为 260±5℃的锡炉中浸渍 5±1s，端子应有 95%区域被锡覆盖。 Solder should be finished 95% on dipped surface. Soldering bath of melted solder at 260±5℃ for 5±1 sec.
3.10	耐焊接热 Resistance to soldering heat	在锡温为 260±5℃的锡炉中浸渍 10±1s 后将继电器在常温常湿下恢复 1.5 小时，继电器结构和性能应无任何异常。

		如果是手工焊锡，必须在 350±10℃的锡温下浸渍 3.5±0.5s 。 接触电阻应小于 100mΩ 。 To be free from any abnormality in both the construction and characteristics after the terminals are dipped into the soldering bath 260±5℃ for 10±1 seconds and then recover the relay in a room temperature and humidity for 2 hours. However, in the case of hand solder, it must be soldered within 3.5±0.5 seconds at 350±10℃ Contact resistance shall be less than 100mΩ .
3.11	耐寒冷 Cold Resistance	继电器在-40±3℃温度下放置 2 小时后将其在常温常湿下恢复 1.5 小时，继电器结构和性能应无任何异常。 接触电阻应小于 100mΩ。 To be free from any abnormality in both the construction and characteristics after the relay is left in a temperature of -40±3℃ for 2 hours and then recover it in room temperature and humidity for 1～2h. However, contact resistance shall be less than 100mΩ.
3.12	耐干热 Dry Heat Resistance	继电器在 85±2℃温度下放置 16 小时后将其在常温常湿下恢复 1.5 小时，继电器结构和性能应无任何异常。 接触电阻应小于 100mΩ。 To be free from any abnormality in both the construction and characteristics after the relay is left in a temperature of 85±2℃ for 16 hours and then recover it in room temperature and humidity for 1～2h. However, contact resistance shall be less than 100mΩ.
3.13	耐湿热 Moisture Resistance	继电器在 90-95% RH 湿度，40±2℃温度下放置 48 小时后将其在常温常湿下恢复 1.5 小时，继电器结构和性能应无任何异常。 绝缘电阻应不小于 100 MΩ，接触电阻应小于 100mΩ 。 To be free from any abnormality in both the construction and characteristics after the relay is left in a humidity of 90-95% RH , a temperature of 40±2℃ for 48 hours and then recover it in room temperature and humidity for 1～2h. However, the insulation resistance must be 100M ohms Min and contact resistance shall be less than 100mΩ .
3.14	振动 Vibration	
3.14.1	强度 Mechanical durability	继电器在 1.5 mm 双振幅，10～55～10Hz 的频率下每个方向（X、Y、Z）振动 2h， 共 6h，继电器结构和性能应无任何异常。 To be free from any abnormality in both the construction and characteristics after the relay is subjected to double amplitude 1.5mm, frequency of 10～55～10Hz in each

direction for 2hs, total 6 hours.

3.14.2	稳定性(激励) Malfunction durability (energized)	触点打开时间不超过 100μs 或更长时间当继电器在 1.5 mm 双振幅，10～55～10Hz 的频率下每个方向（X、Y、Z）经受 5 分钟的振动， 共 30 分钟。 Contact must not open for 100μs or longer after the relay is subjected to a double amplitude 1.5mm, frequency of 10～55～10Hz in each direction for 5 min, total 30 min.
3.15	冲击	
3.15.1	强度 Mechanical durability	继电器在 1,000m/s^2 加速度，时间为 6ms 的条件下每个方向（X、Y、Z）经受 3 次冲击，共 18 次冲击，继电器结构和性能应无任何异常。 To be free from any abnormality in both the construction and characteristics after the relay is subjected to a shock of 1,000m/s^2, 6ms in each direction for 3 times, total 18 shocks.
3.15.2	稳定性(激励) Malfunction durability (energized)	触点打开时间不超过 1ms 或更长时间当继电器在 100m/s^2 加速度，时间为 11ms 的条件下每个方向（X、Y、Z）经受 3 次冲击，共 18 次冲击。 Contact must not open for 1ms or longer after the relay is subjected to a shock of 100m/s^2, 11ms in each direction for 3 times, total 18 shocks.

4 命名 Nomenclature:

HRS4 – S – DC24V Ⓒ

a b c d

a：继电器系列号 Relay Series.

b：Enclosure

S: Plastic Sealed Type

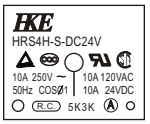
c：Coil Voltage DC24V

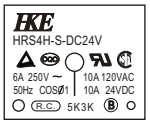
d：Contact Configuration

Ⓒ stands for Change-over contact form

5	印字 Marking	
	印字图号 Drawing No	Y-HRS4-N16-00
	外壳颜色 Case Color	黑色 Black
	印字类型 Marking Type	激光印字 Laser marking
6	外形尺寸，安装脚位，接线图 Outline Dimensions, circuits and wiring	图号. HKE4.520.022
7	安全认证 Safety Approval	UL NO.E164730 CSA NO.1063016（LR 109368） TUV NO. 50116136 CQC08002027614

Y-HRS4-N16-00





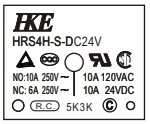
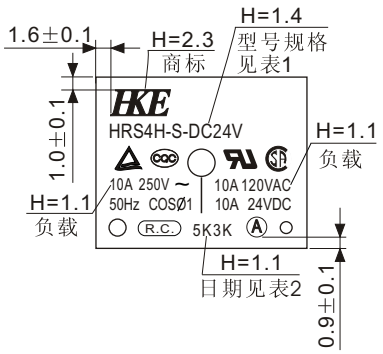
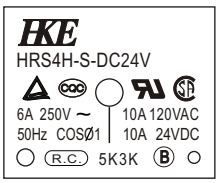


图1 1:1





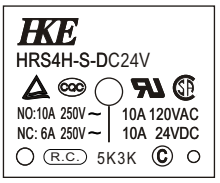


图2 1.5:1

表 1

HRS4	H	S	DC24V
型号	线圈功率 Nil：0.45W H：0.36W	塑封型	线圈电压 DC3V、DC5V、DC6V DC9V、DC12V、DC24V DC48V

表 2

5	K	3	K
年份	月份： A:JAN E:MAY I:SEP B:FEB F:JUN J:OCT C:MAR G:JUL K:NOV D:APR H:AUG L:DEC	星期： 1:FIRST WEEK 2:SECOND WEEK 3:THIRD WEEK 4:FOURTH WEEK	MAKER

技术要求：
1.未注公差按±0.2,以上单位为mm；
2.线条、字迹应清晰、美观；

媒体编号

旧底图总号

底图总号

标记	数量	更改单号	签名	日期
设计				
审核				
工艺				
标准化				
批准				

HRS4外壳(环保)
标志图
HRS4 Marking

Y-HRS4-N16-00

阶段	标记	质量	比例

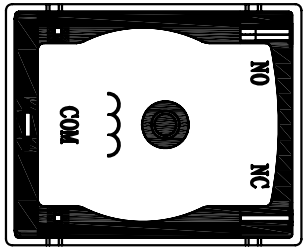
日期 签名

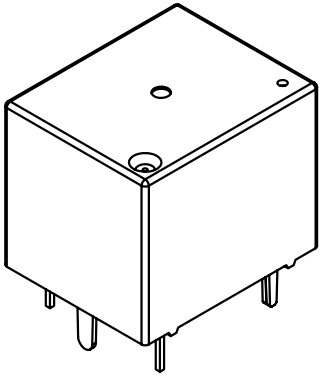
第 张 共 张

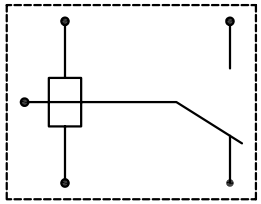
HKE
浙江汇港电器有限公司

格式（1） 制图： 描图： 幅面：A4

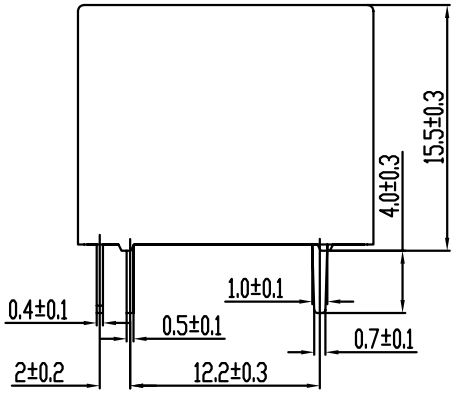
HKE4.523.022

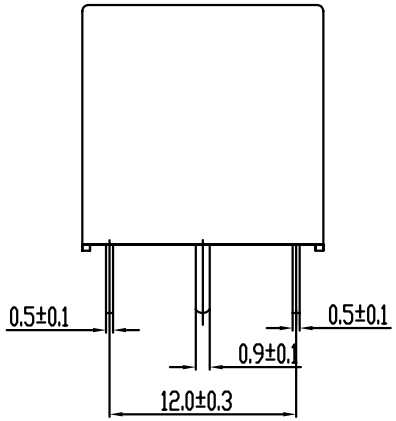


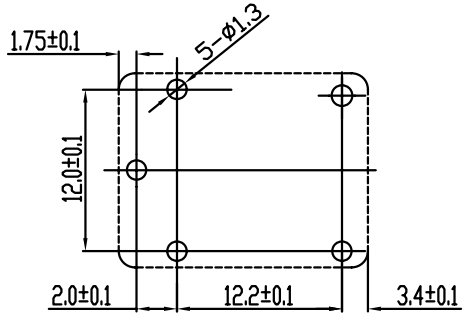




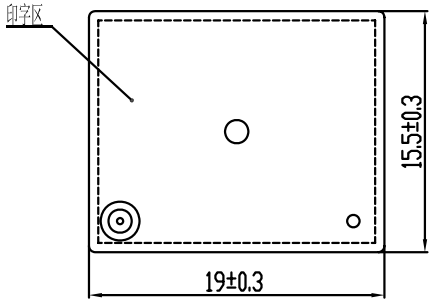
底部接线图







线路板开孔图



产品编号
HRS4-C
旧底图总号
底图总号
日期 / 签名

标记	数量	更改单号	签名	日期
设 计				
审 核				
工 艺				
标准化				
批 准				

HRS4-C型 外形图
Outline for C Type

HKE
浙江汇港电器有限公司

阶段 标记	质量	比例
		5:1
共 1 页	第 1 页	

HKE4.520.022

格式（2） 幅面：A3 版本号：00