

# SPECIFICATION

## Type: HRS4H-S-DC3V Relay (C Type)

### 1. 线圈参数

1.1 额定电压	3VDC.
1.2 线圈电阻	25 $\Omega$ $\pm$ 10% at 23 $^{\circ}$ C.
1.3 额定电流	120mA $\pm$ 10% at 23 $^{\circ}$ C.
1.4 吸合电压	2.1VDC Max.
1.5 释放电压	0.3VDC Min.
1.6 最大线圈电压	3.9VDC(130%额定电压)
1.7 额定功耗	360mW

### 2. 触点参数

2.1 触点形式	1 Form C-转换型
2.2 触点材质	Ag Alloy
2.3 触点负载	Resistive: NO:10A 250VAC/24VDC NC:6A 250VAC/24VDC
2.4 最大切换电压	28VDC / 250VAC
2.5 最大切换电流	15A
2.6 最大切换功率	2500VA, 280W
2.7 最小切换电流电压	100mA, 5VDC
2.8 接触电阻 (初始值)	Max.100m $\Omega$ at 6VDC 1A
2.9 电气耐久性	常温下 100,000 次 (1800 次/h) 试验后,介质耐压值应不小于初始值的 75%。
2.10 机械耐久性	空载条件下 10,000,000 次(18,000 ops/h)

### 3. 其他性能

3.1 绝缘电阻	Min.1000M $\Omega$ at 500VDC
3.2 介质耐压(漏电流: 1mA)	
(1) 触点间	750VAC, 1 min , 50/60Hz
(2) 触点与线圈间	1,500VAC, 1 min , 50/60Hz
3.3 吸合时间	Max. 10 ms.
3.4 释放时间	Max. 5 ms.
3.5 工作温度	-40 to +85 $^{\circ}$ C
3.6 储存条件	
(1) 储存温度	-40 to +85 $^{\circ}$ C
(2) 环境	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。

- 3.8 温升  
线圈 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 50K。
- 3.9 端子强度  
拉力和推力 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10s。
- 3.10 可焊性 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。
- 3.11 耐焊接热 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。
- 3.12 寒冷 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。
- 3.13 干热 继电器在 105±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。
- 3.14 耐湿热 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。
- 3.15 振动  
(1) 强度 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
- (2) 稳定性  
(激励) 触点打开时间不超过 1ms 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。
- 3.16 冲击  
(1) 强度 继电器在 1,000m/s<sup>2</sup> 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
- (2) 稳定性  
(激励) 触点打开时间不超过 1ms 或更长时间当继电器在 100m/s<sup>2</sup> 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。

4 命名:

HRS4 H - S - DC3V (C)  
a b c d e

a: 继电器系列号

b: 线圈功耗

H 表示功耗为 360mW

c: 封胶型式

S: 塑封型

d: 线圈电压 DC3V

e: 触点形式

(C) 代表转换型

5 印字

印字图号

Y-HRS4-N42

外壳颜色

黑色

印字类型

激光印字

6 外形尺寸, 安装脚位, 接线图

图号. HKE4.520.022

7 安全认证

UL NO.E164730

CSA NO.1063016 (LR 109368)

TUV NO. 50116136

CQC08002027614

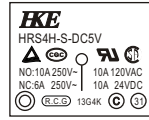


图1 1:1

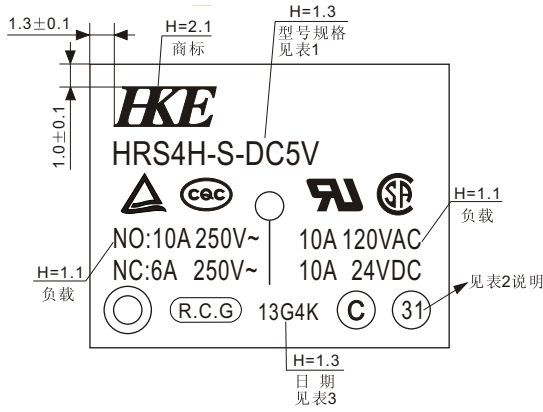


图2 2.5:1

表 1

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

表 2

3	1
3: 三复合触点	1: 生产一部, 2: 生产二部 3: 生产三部, 5: 生产五部 6: 生产六部, 7: 生产七部 8: 生产八部, 9: 生产九部

表 3

13	G	4	K
年份	月份: A:1月 E:5月 I:9月 B:2月 F:6月 J:10月 C:3月 G:7月 K:11月 D:4月 H:8月 L:12月	星期: 1:第1星期 2:第2星期 3:第3星期 4:第4星期	MAKER

技术要求:  
1. 此为三复合触点材质产品的专用印字;  
2. 单线印字, 线条、字迹应清晰、美观。

产品编号

HRS4

旧底图总号

标记	数量	更改单号	签名	日期
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底图总号

设计
审核
工艺

日期 签名

标准化
批准

HRS4外壳标志图  
HRS4 Marking

**HKE**

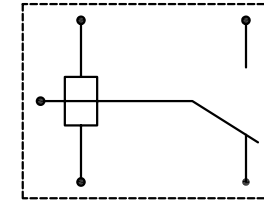
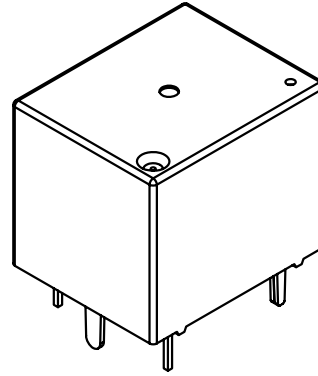
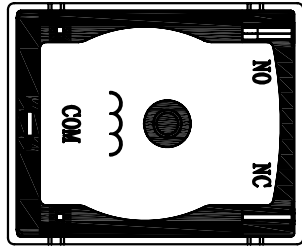
浙江汇港电器有限公司

阶段	标记	质量	比例
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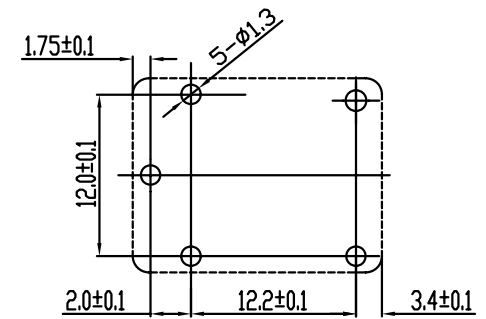
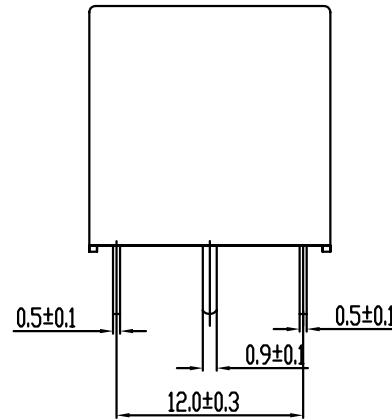
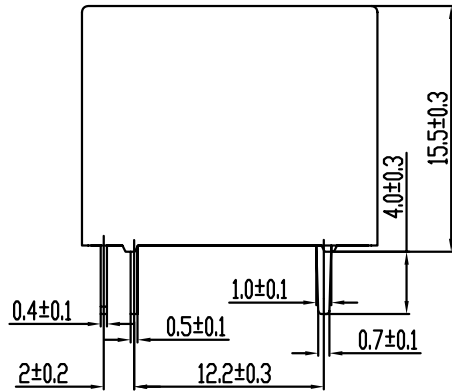
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Y-HRS4-N42

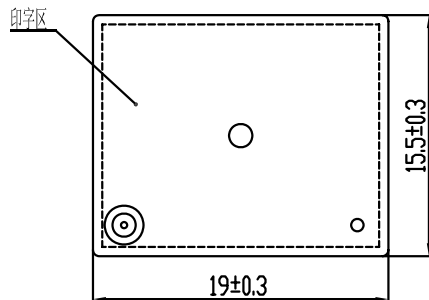
HKE4.520.022



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		<b>HKE</b>		
		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				



# 质量管理体系认证证书

证书编号：00117Q34885R6M/3302

兹证明

浙江汇港电器有限公司

统一社会信用代码/组织机构代码：913302127369759197

中国浙江省宁波市鄞州区云龙镇甲村（架山）162号

建立的质量管理体系符合标准：

ISO9001:2015

通过认证范围如下：

电磁继电器的设计、组装生产

首次发证日期：2008年8月15日 本次发证日期：2017年6月22日 有效期至：2020年7月2日

在一个监督周期后，本证书必须与CQC签发的监督审核合格通知书合并使用方可有效。查询证书有效状态请登陆[www.cqc.com.cn](http://www.cqc.com.cn)。  
本证书信息可在国家认证认可监督管理委员会官方网站（[www.cnca.gov.cn](http://www.cnca.gov.cn)）上查询



中国认可  
国际互认  
管理体系  
MANAGEMENT SYSTEM  
CNAS C001-M

  
Signed by: Wang Kejiao



## 中国质量认证中心

中国·北京·南四环西路188号9区 100070

<http://www.cqc.com.cn>



# 环境管理体系认证证书

证书编号：00115E31618R4M/3302

兹证明

浙江汇港电器有限公司

中国浙江省宁波市鄞州区云龙镇甲村（架山）162号

建立的环境管理体系符合标准：

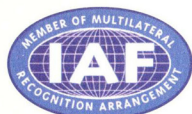
GB/T 24001-2016 / ISO 14001:2015

通过认证范围如下：


电磁继电器的设计、组装生产及相关管理活动

首次发证日期：2003年12月3日 本次发证日期：2017年6月23日 有效期至：2018年6月22日

在一个监督周期后，本证书必须与CQC签发的监督审核合格通知书合并使用方可有效。查询证书有效状态请登陆[www.cqc.com.cn](http://www.cqc.com.cn)。



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国际互认  
管理体系  
MANAGEMENT SYSTEM  
CNAS C001-M

  
Signed by: Wang Kejiao



## 中国质量认证中心

中国·北京·南四环西路188号9区 100070  
<http://www.cqc.com.cn>



# 产品认证证书

证书编号: CQC08002027614

## 申请人名称及地址

浙江汇港电器有限公司  
浙江省宁波市鄞州区云龙镇

## 制造商名称及地址

浙江汇港电器有限公司  
浙江省宁波市鄞州区云龙镇

## 生产企业名称及地址

浙江汇港电器有限公司 (V002493)  
浙江省宁波市鄞州区云龙镇甲村(架山)162号

## 产品名称和系列、规格、型号

继电器

HRS4 系列:触点负载: NO/NC 10A/6A 250VAC (HRS4、HRS4T)、10A 250VAC (HRS4F)、15A 250VAC (HRS4H)、16A 250VAC (HRS4H); 线圈电压: DC3V、DC5V、DC6V、DC9V、DC12V、DC24V、48VDC; 线圈功率: 0.36W (10A、15A、16A 负载)/0.45W (10A 负载); 电气寿命: 2E4 (10A、15A 负载) 周期、3E4 (16A 负载) 周期; 机械寿命: 5E4 周期; 环境温度: -40℃~85℃ (10A 负载)、-40℃~65℃ (15A 负载)、-40℃~40℃ (16A 负载); RT II -40℃~40℃ (16A) RT II

## 产品标准和技术要求

GB/T 21711.1-2008

## 认证模式

产品型式试验+初次工厂检查+获证后监督

上述产品符合CQC11-462155-2010认证规则的要求, 特发此证。

发证日期: 2016年01月06日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书为变更证书, 证书首次颁发日期: 2008年12月12日

主任: \_\_\_\_\_



# 中国质量认证中心

中国·北京·南四环西路188号9区100070

<http://www.cqc.com.cn>

C 0079548





# 产品认证证书

附录:

第 1 页 共 1 页

证书编号: CQC08002027614

纸号: 79548

## 6. 型号命名方法

HRS4  $\frac{X}{1}$   $\frac{X}{2}$   $\frac{X}{3}$  -  $\frac{S}{4}$  -  $\frac{X}{5}$  -  $\frac{X}{6}$

1	产品主型号: HRS4
2	外壳类型: 缺省-低外壳(10A、15A、16A); T-高外壳(10A); F-高耐压(10A)
3	线圈功率: 缺省-0.45W(10A), H-0.36W(10A、15A、16A)
4	封装形式: S-密封胶型
5	线圈电压: DC3V, DC5V, DC6V, DC9V, DC12V, DC24V, DC48V
6	负载标识: A-15A (65°C)、16A (40°C) 负载, 常开型触点形式; 缺省-10A 负载

注: 此附录与证书同时使用时有效。

主任: \_\_\_\_\_



## 中国质量认证中心

中国·北京·南四环西路188号9区100070

<http://www.cqc.com.cn>

# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50116136

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0001

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum	<i>Date of Issue</i> (day/mo/yr)
L.Y.H.	01-ZJ- 15024682 001	15.10.2008	

**Genehmigungsinhaber *License Holder***  
Zhejiang HKE Relay Co., Ltd.  
28 Jiacun Industry Area  
Ningbo, Zhejiang 315135  
P.R. China

**Fertigungsstätte *Manufacturing Plant***  
Zhejiang HKE Relay Co., Ltd.  
28 Jiacun Industry Area  
Ningbo, Zhejiang 315135  
P.R. China

## Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*  
EN 61810-1:2004



**Zertifiziertes Produkt (Geräteidentifikation)**  
*Certified Product (Product Identification)*

**Lizenzentgelte - Einheit**  
*License Fee - Unit*

Relais (Electromechanical Elementary Relays)

Type Designation	: HRS4x-S-y	5
	x,y = (See Appendix 1)	2
Rated Coil Voltage	: DC 3V; 5V; 6V; 9V; 12V; 24V or 48V	
Rated Coil Power	: 0,45W or 0,36W	
Ambient Temperature	: -30°C to +105°C	
Contact Loads	: Make contact 10A 250VAC Break contact 6A 250VAC	
Electrical Endurance	: 50 000	
Mechanical Endurance	: 500 000	
Type of Interruption	: Micro-Disconnection	
Insulation System	between Coil and Contact: Basic Insulation	

Continued on page 0002

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.  
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.  
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.



Zertifizierungsstelle

Dipl.-Ing. G. Reimann

**TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln**  
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com  
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50116136

Blatt *Page*  
0002

Ihr Zeichen *Client Reference*  
L.Y.H.

Unser Zeichen *Our Reference*  
01-ZJ- 15024682 001

Ausstellungsdatum  
15.10.2008

*Date of Issue*  
(day/mo/yr)

**Genehmigungsinhaber *License Holder***  
Zhejiang HKE Relay Co., Ltd.  
28 Jiacun Industry Area  
Ningbo, Zhejiang 315135  
P.R. China

**Fertigungsstätte *Manufacturing Plant***  
Zhejiang HKE Relay Co., Ltd.  
28 Jiacun Industry Area  
Ningbo, Zhejiang 315135  
P.R. China

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*  
EN 61810-1:2004

Zertifiziertes Produkt (Geräteidentifikation)  
*Certified Product (Product Identification)*

Lizenzentgelte - Einheit  
*License Fee - Unit*

Relais (Electromechanical Elementary Relays)

Continuation from page 0001

Endurance test in accordance with clause 17 of IEC 60730-1:

Contact Form	: Make contact	Break contact
Rated Voltage	: 250VAC	250VAC
Rated Current	: 10 (2)A	6 (1)A
Number of Automatic Cycles:	50 000	50 000

The labelling requirements acc. to EU Directive 2001/95  
have to be observed for distribution within the EEA.

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.  
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.  
This certificate is based on our Testing and Certification Regulation. The product  
fulfills above mentioned requirements, the production is subject to surveillance.



Zertifizierungsstelle

Dipl.-Ing. G. Reimann

**TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln**  
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com  
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

# Certificate of Compliance

**Certificate:** 1063016 (LR 109368)

**Master Contract:** 187233

**Project:** 1446788

**Date Issued:** July 10, 2003

**Issued to:** Zhejiang HKE Relay Co., Ltd.  
Jia Cun Industry Area 28  
Ningbo, Zhejiang 315135  
CHINA

*The products listed below are eligible to bear the CSA Mark shown  
with adjacent indicators 'C' and 'US'*



**Issued by:** Sebastian George, P. Eng.

**Signature:**

A handwritten signature in black ink, appearing to read 'Sebastian George', is written over a horizontal line.

## PRODUCTS

CLASS 3211 07 - INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus

CLASS 3211 87 - INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus

- Certified to U.S. Standards

1. Relays, Model HRM, with suffixes, open-type with dust cover, 1-pole, single throw with N.O. contacts, rated 10A, 250V ac, Gen; coils 3 - 48V dc.
2. Relays, Model HRM3, with suffixes, open-type with dust cover, 1-pole, single throw with N.O. contacts, rated 10A, 250V ac, Gen; 10A, 30V dc, Res. coils 3 - 48V dc.
3. Relays, Model HRM4, with suffixes, open-type with dust cover, 2-pole, double throw with N.O. and N.C. contacts, rated 5A, 250V ac, Gen; 5A, 30V dc, Res. coils 3 - 48V dc.
4. Relays, Model HRS3, with suffixes, open-type with dust cover, 1-pole, single throw with N.O. contacts, rated 10A, 28V dc, Res. coils 3 - 24V dc.
5. Relays, Model HRS4, with suffixes, open-type with dust cover, 1-pole, single throw with N.O. contacts, rated 10A, 120V ac, Gen; 10A, 24V dc, Res. coils 3 - 48V dc.

## APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 14	-	Industrial Control Equipment
UL Std No. 508	-	Industrial Control Panels

The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S., respectively. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.



## NRNT2.E164730 Switches, Industrial Control - Component

[Page Bottom](#)

### Switches, Industrial Control - Component

[See General Information for Switches, Industrial Control - Component](#)

**ZHEJIANG HKE RELAY CO LTD**

E164730

28 JIA CUN INDUSTRY AREA

NINGBO, ZHEJIANG 315135 CHINA

**Relays**, Model(s) AC, followed by 3, followed by S, followed by DC, followed by 5V, 6V, 9V, 12V, 18V or 24V, followed by A

**Relays**, Model(s) CMP6-S or F6-S, followed by DC5V, 6V, 9V, 12V, or 24V, may be followed by P

**Relays**, Model(s) CMP7 or CMP8, followed by Nil or S, followed by DC5V, DC6V, DC24V, DC9V, DC12V, DC24V, DC48V, followed by A or C

**Relays**, Model(s) CMP8(AT)-S followed by DC5V, DC6V, DC9V, DC12V, DC24V or DC48V, followed by A

**Relays**, Model(s) HCP, followed by 1, 2 or 3, followed by blank or S, followed by DC, followed by 5V, 6V, 9V, 12V, 18V, 24V, 36V, 48V, followed by A or C, HRA, may be followed by H, may be followed by S, HRB1-S, followed by DC3V, DC5V, DC6V, DC9V, DC12V or DC24V, HRM, may be followed by 1 or 2, may be followed by H, may be followed by S

**Relays**, Model(s) HRM, may be followed by 3, may be followed by H or L, may be followed by S, may be followed by DC3-DC48, may be followed by T.

**Relays**, Model(s) HRM4, may be followed by H, may be followed by S, followed by DC3-DC24 incl

**Relays**, Model(s) HRM4, may be followed by H, may be followed by S, may be followed by DC3 - DC48, followed by SP, HRMF, followed by DC3V, DC5V, DC6V, DC9V, DC12V, DC18V, DC24V or DC48V

**Relays**, Model(s) HRS, may be followed by 3 or 4, may be followed by H, may be followed by A, may be followed by S, followed by DC3-D48 incl

**Relays**, Model(s) HRS1, may be followed by K, may be followed by B or H, may be followed by 3, may be followed by S, followed by DC, followed by XX, where XX is coil voltage, HRS2, may be followed by B or H, may be followed by S

**Relays**, Model(s) HRS2H, followed by S, followed by 3 VDC through 48 VDC, may be followed B, N or T

**Relays**, Model(s) HRS3, may be followed by N, may be followed by H, followed by S, followed by DC3V, DC5V, DC6V, DC9V, DC12V, or DC24V, may be followed by A or C

**Relays**, Model(s) HRS3-S, followed by DC3V, DC5V, DC6V, DC9V, DC12V or DC24V, followed by A or C

**Relays**, Model(s) HRS3T, may be followed by N, may be followed by H, followed by S, followed by DC, followed by 3V, 5V, 6V, 9V, 12V or 24V, followed by A or C

**Relays**, Model(s) HRS4, may be followed by T, may be followed by F, may be followed by H, followed by S, followed by DC, followed by 3V, through 60V may be followed by A

**Relays**, Model(s) HRS4E, followed by by Blank or H; followed by Blank or S; followed by DC3V, DC5V, DC6V, DC9V, DC12V, DC18V, DC24V or DC48V; followed by X or G

**Relays**, Model(s) L7, may be followed by S, followed by DC6V, DC12V, DC24V, DC48V, DC100V, DC110V, AC6V, AC12V, AC24V, AC48V, AC100V, AC120V, AC220V, AC240V, followed by 1A or 2A, followed by 2P or 2Q


**Relays**, Model(s) V6, may be followed by S, followed by DC3V, DC5V, DC6V, DC9V, DC12V, DC18V, DC24V or DC48V

**Relays, open type**, Model(s) AC5, may be followed by N, may be followed by S, followed by DC, followed by 5V, 6V, 9V, 12V, 18V or 24V

**Relays, open type**, Model(s) F5, may be followed by H, followed by DC, followed by 3V, 5V, 6V, 9V, 12V, 18V, 24V or 48V, followed by P1,P2 or P3

**Relays, open type**, Model(s) HCP4, may be followed by S, followed by DC, followed by 5V, 6V, 9V, 12V, 18V, 24V, 36V, or 48V, followed by A or C.

**Relays, open type, for use in industrial application**, Model(s) LH-DC12V-Q-2C

Marking: Company name or tradename "E164730" or trademark  and model designation.  
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