

# 说明书

## 型号: HRS4H-S-DC24V 继电器 (C 型)

### 1. 线圈参数

1.1 额定电压	24VDC
1.2 线圈电阻	1600 $\Omega$ $\pm$ 10% at 23°C
1.3 额定电流	15mA $\pm$ 10% at 23°C
1.4 吸合电压	16.8VDC Max at 23°C
1.5 释放电压	2.4VDC Min at 23°C
1.6 最大线圈电压	31.2VDC(130%额定电压)
1.7 额定功率	360mW

### 2. 触点参数

2.1 触点形式	1 Form C
2.2 触点材料	Ag Alloy
2.3 触点负载	阻性: NO: 10A 250VAC/24VDC NC: 6A 250VAC/24VDC
2.4 最大切换电压	30VDC/250VAC
2.5 最大切换电流	15A
2.6 最大切换功率	2,500VA , 240W
2.7 最小切换电流电压	100mA 5VDC
2.8 接触电阻 (首次)	Max.100m $\Omega$ at 6VDC 1A
2.9 寿命	
(1) 电气寿命	额定负载下 100,000 次 (360 次/小时)
(2) 机械寿命	空载下 10,000,000 次 (18,000 次/小时)

### 3. 性能

3.1 绝缘电阻	Min.1,000M $\Omega$ at 500VDC
3.2 介质耐压(漏电流: 1mA)	
(1) 触点间	750VAC, 1 min , 50/60Hz
(2) 线圈与触点间	1,500VAC, 1 min , 50/60Hz
3.3 吸合时间	Max. 10ms.
3.4 释放时间	Max. 5ms.
3.5 环境温度	-40 to +85°C
3.6 贮存温度	-40 to +85°C

### 3.7 温升

#### 3.7.1 线圈

电阻法，触点施加额定电流10A，110%额定电压激励线圈，温升不超过55k。

### 3.8 冲击

#### 3.8.1 强度

1,000m/s<sup>2</sup>, 6ms, 3 shock (X, Y, Z 每个方向)  
继电器结构无损坏。

#### 3.8.2 稳定性

100m/s<sup>2</sup>, 11ms, 3 shock (X, Y, Z 每个方向)  
继电器外观、性能无异常。

### 3.9 振动

#### 3.9.1 强度

双振幅 1.5mm, 频率 10~55Hz, 2hs。  
继电器结构无损坏。

#### 3.9.2 稳定性

双振幅 1.5mm, 频率 10~55Hz, 5min。  
继电器外观、性能无异常

### 3.10 端子强度

1kg 力推拉继电器引出端 10 秒。

### 3.11 寒冷

-40±2℃, 2 小时  
继电器结构及性能无异常。

### 3.12 干热

85±2℃, 16 小时  
继电器结构及性能无异常。

### 3.13 湿热

40±2℃, 90-95%, 48 小时  
继电器结构及性能无异常。  
绝缘电阻最小 1,000MΩ

### 3.14 可焊性

焊锡应在浸渍表面完成。  
焊锡温度 260℃, 时间 5 秒

### 3.15 耐焊性

当继电器引出端沉浸在 260℃ (时间 10 秒)  
或 350℃ (时间 3 秒) 的锡温中继电器结构  
及性能无异常。

4 命名

HRS4    H    - S -    DC24V  
a            b                                    c

- a: 继电器系列型号
- b: 额定功率:  
H: 360mW
- c: 线圈电压 DC24V

5 印字

具体见附件 Y-HRS4-N13-02

5.1 外壳颜色

黑色

5.2 印字位置

外壳正上方

5.3 印字类型

激光印字

6 外形尺寸

请见附件 HKE4.523.022

7 认证

UL NO.E164730  
TUV NO.R50116136  
CSA NO.1063016 (LR 109368)  
CQC08002027614

Y-HRS4-N13-02

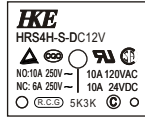
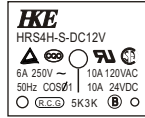
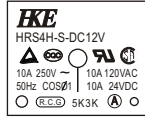


图1 1:1

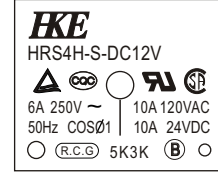
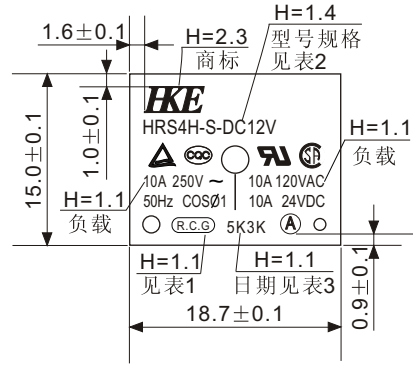


图2 1.5:1

表 1

R.C.G
环保标识, 触点材料为AgCdO

表 2

HRS4	H	S	DC12V
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 3

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

日期 签名

格式(1)

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

制图:

HRS4外壳(环保)  
标志图  
HRS4 Marking

描图:

Y-HRS4-N13-02

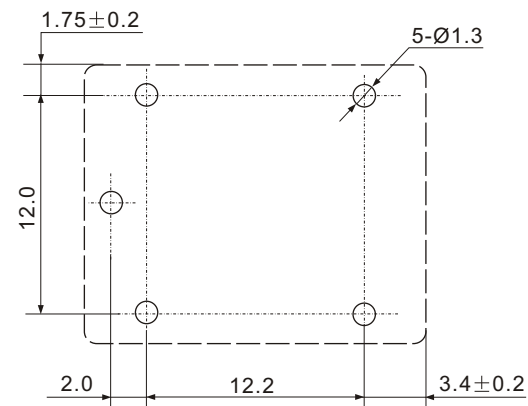
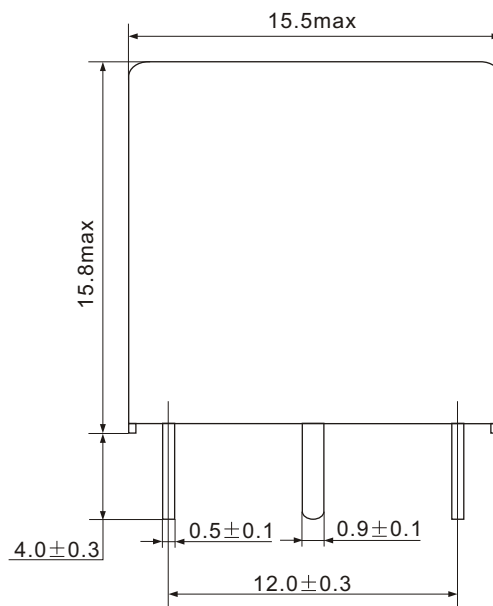
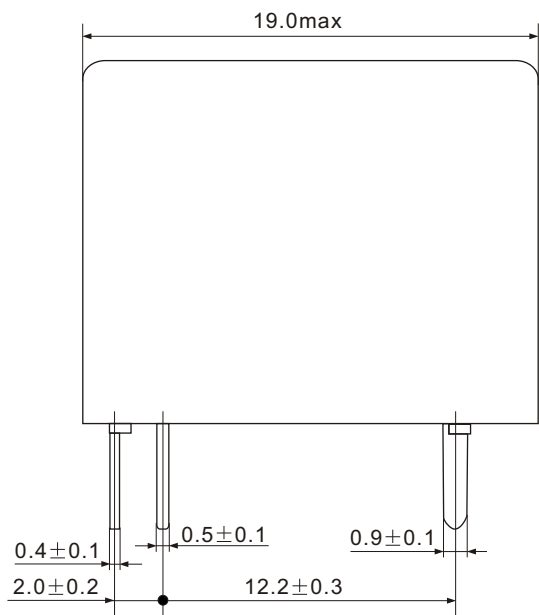
阶段 标记 质量 比例

第 张 共 张

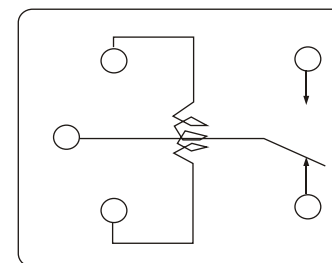
**EKE**

浙江汇港电器有限公司

幅面: A4



安装孔图



接线图

产品编号

HRS4

旧底图总号

底图总号

日期

签名

格式 (1)

制图:

HRS4-C继电器  
HRS4-C Relay

外形Outline

**EKE**

浙江汇港电器有限公司

阶段	标记	质量	比例

第 张	共 张
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HKE4.523.022

描图:

幅面: A4



# 质量管理体系认证证书

证书编号: 00111Q26542R4M/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

建立的质量管理体系符合标准:

**ISO9001:2008**

**GB/T 19001-2008**

通过认证范围如下:

电磁继电器的设计、组装生产和服务

首次发证日期: 2008年8月15日    本次发证日期: 2011年8月9日    有效期至: 2014年8月8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。



*王克娇*

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>

Q 0070390

2009年版

# 环境管理体系认证证书

证书编号：00109E21663R2M/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：

**ISO14001:2004**

**GB/T 24001-2004**

通过认证范围如下：

继电器的开发设计和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：2009年8月25日    有效期至：2012年8月24日

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Signed by: Wang Kejiao



## 中国质量认证中心

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## NRNT2.E164730 Switches, Industrial Control - Component

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### 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.  
Last Updated on 2010-01-10

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# 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', 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.



# 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甲村工业区28号

## 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甲村工业区28号

## 生产厂名称及地址

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工业区28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 线圈电压: 3VDC 5VDC 6VDC 9VDC  
12VDC 24VDC 48VDC 环境温度: -40℃~85℃ 电寿命: 20000周期 机械耐久性:  
50000周期 系列描述见附

## 产品标准和技术要求

GB/T21711.1-2008

## 认证模式

产品型式试验+初次工厂检查+获证后的监督

上述产品符合CQC标志认证实施规则的要求, 特发此证。

本证书的有效性依据发证机构的定期监督获得保持。

主任: \_\_\_\_\_

2008年12月12日



# 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 0007722



# 产品认证证书

附录:

第 1 页 共 1 页

证书编号: CQC08002027614

纸号: 7722

型号命名方法:

HRS4 X X - S - X  
1 2 3 4 5

- 1 产品主型号: HRS4
- 2 外壳类型: 缺省—低外壳; T—高外壳
- 3 线圈功率: 缺省—0.45W; H—0.36W
- 4 封装形式: S—密封型
- 5 线圈电压: DC3V;DC5V;DC6V;DC9V;DC12V;DC24V;DC48V

注: 此附录与证书同时使用时有效。

主任: \_\_\_\_\_



## 中国质量认证中心

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# 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

# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50116136

Blatt *Page*  
0003

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)  
as page 0001

Addition

Type Designation	: HRS4Tx-S-y	2
	x,y = (See Appendix 1.1)	2
Ambient Temperature	: -30°C to +85°C	
Contact Loads	: 10A 250VAC	
	10A 24VDC	
Electrical Endurance	: 10 000	
Mechanical Endurance	: 10 000 000	

Endurance test in accordance with clause 17 of IEC 60730-1:  
Rated Voltage : 250VAC  
Rated Current : 10(2)A  
Number of Automatic Cycles: 10 000

ANLAGE (Appendix): 1.1

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.



4

Zertifizierungsstelle

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

Dipl.-Ing. G. Reimann

Zhejiang HKE Relay Co., Ltd.  
Ms. Lin Yuhong  
-  
28 Jiacun Industry Area  
Ningbo, Zhejiang 315135  
P.R. China

Date : 15.07.2011  
Our ref. : MN 01  
Your ref.: L.Y.H.

**Ref : R TÜV-Mark Approval**

Type of Equipment : Electromechanical Elementary Relays  
Model Designation : See Certificate  
Certificate No. : R 50116136 0004  
Report No. : 15024682 004

Dear Ms. Lin Yuhong,

The above specified technical equipment has been tested and found to be in accordance with the relevant requirements.

Enclosed you will find the certificate of approval.

If cancellation of the certificate is submitted by November 15 in a given year, no fee will be charged for the following year.

We appreciate your kind support and would like to offer our assistance and continuous services in the future.

Please contact our office for approval of your new products.

With kind regards,

Certification Body

  
Dipl.-Ing. F. He

CC: Zhejiang HKE Relay Co., Ltd.

Enclosure



# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50116136

Blatt *Page*  
0004

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

Unser Zeichen *Our Reference*  
01-MN- 15024682 004

Ausstellungsdatum  
15.07.2011

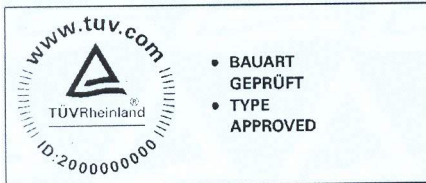
*Date of Issue*  
(day/mo/yr)

**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 61810-1:2008



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

Lizenzentgelte - Einheit  
*License Fee - Unit*

Relais (Electromechanical Elementary Relays)

as page 0001

Change

Test Requirement: See above

Remark:

Appendices 1 and 1.1 issued on 24.04.2009 is replaced by  
appendices 1 and 1.1 issued on 14.07.2011 respectively.



Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.  
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg  
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

Dipl.-Ing. F. He


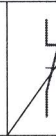
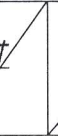
Certificate No. R 50116136 0001-0004      Our Reference 01-MN- 15024682 004      Appendix No. 1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 1 of 4

License holder : **Zhejiang HKE Relay Co., Ltd.**  
 Full address: 28 Jiacun Industry Area, Ningbo, Zhejiang 315135, P.R. China  
 Factory : **Zhejiang HKE Relay Co., Ltd.**  
 Full address: 28 Jiacun Industry Area, Ningbo, Zhejiang 315135, P.R. China

Type or Model Number : **HRS4x-S-y (See TYPE NOMENCLATURE on last page for details.)**  
 Kind of device : **Electromechanical Elementary Relays**

Specification (contact-circuit )			
Contact material	AgSnO2		
Rated contact voltage	250VAC	250VAC	250VAC
Rated contact current	10A	NO:10A NC: 6A	6A
cos φ	1.0	1.0	1.0
L/R	—	—	—
Frequency (Hz)	50		
Schematics for contact loading <small>*according to Tab 12 of EN 61810-1: 2008</small>	Single-pole: a	Change-over: o	Single-pole: b
Kind of contacts			
Number of cycles for electrical endurance / Frequency of operation	50,000 1800 Operating cycles/h		
Number of cycles for mechanical endurance / Frequency of operation	500,000 18000 Operating cycles/h		
Duty factor	50%		
Type of interruption	Micro-disconnection		
Insulation resistance	≥1000MΩ		
<i>* Electrical endurance in accordance with clause 17-endurance of IEC 60730-1.</i>			
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	

TÜV Rheinland Group

License holder

14.07.2011

Marco Ni

Lilian Lin

Zhejiang HKE Relay Co., Ltd.

Date

Signature

Name

Company Stamp and Signature



**TÜVRheinland®**  
DIN CERTCO



**TÜVRheinland®**

Certificate No. R 50116136 0001-0004 Our Reference 01-MN- 15024682 004 Appendix No. 1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 2 of 4

Specification (coil-circuit)							
Rated coil voltage (Rated coil voltage) <input checked="" type="checkbox"/> DC <input type="checkbox"/> AC	3V	5V	6V	9V	12V	24V	48V
Coil resistance (at 23°C) (Ω)	20	55	80	180	320	1280	5120
Rated power	450mW						
Operative range	<input checked="" type="checkbox"/> class 1: 80% to 110% of rated coil voltage <input type="checkbox"/> class 2: 85% to 110% of rated coil voltage <input type="checkbox"/> other:						
Thermal insulation class	F						

Specification (coil-circuit)							
Rated coil voltage (Rated coil voltage) <input checked="" type="checkbox"/> DC <input type="checkbox"/> AC	3V	5V	6V	9V	12V	24V	48V
Coil resistance (at 23°C) (Ω)	25	70	100	225	400	1600	6400
Rated power	360mW						
Operative range	<input checked="" type="checkbox"/> class 1: 80% to 110% of rated coil voltage <input type="checkbox"/> class 2: 85% to 110% of rated coil voltage <input type="checkbox"/> other:						
Thermal insulation class	F						

TÜV Rheinland Group

License holder

14.07.2011

Marco Ni

Lilian Lin

Zhejiang HKE Relay Co., Ltd.

Date

Signature

Name

Company Stamp and Signature



TÜVRheinland®  
DIN CERTCO



TÜVRheinland®

Certificate No. R 50116136 0001-0004 Our Reference 01-MN- 15024682 004 Appendix No. 1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 3 of 4

Specification (general)	
Overvoltage category	II
Pollution degree	2
Test voltages	<i>coil-contact</i> : 1500VAC / 1min <i>contact - contact</i> : --- <i>across open contact</i> : 1000VAC / 1min <i>live parts - outside</i> : ---
Minimum creepage distances	<i>coil-contact</i> : 2.5mm <i>contact - contact</i> : --- <i>across open contact</i> : 1.2mm <i>live parts - outside</i> : ---
Minimum clearances	<i>coil-contact</i> : 2.0mm <i>contact - contact</i> : --- <i>across open contact</i> : 0.3mm <i>live parts - outside</i> : ---
Insulation: <i>U<sub>i</sub> = 250V, OV-cat. II</i> <i>Material gr. III, Poll. deg. 2</i>	<i>coil-contact</i> : <input checked="" type="checkbox"/> basic <input type="checkbox"/> reinforced <input type="checkbox"/> NA <i>contact - contact</i> : <input type="checkbox"/> basic <input type="checkbox"/> reinforced <input checked="" type="checkbox"/> NA <i>across open contact</i> : <input type="checkbox"/> interruption <input checked="" type="checkbox"/> micro <input type="checkbox"/> full <i>live parts - outside</i> : <input type="checkbox"/> basic <input type="checkbox"/> reinforced <input checked="" type="checkbox"/> NA
Ambient temperature	-30°C ~ +105°C
Minimum mounting distance	H: 5mm      V: 5mm
Relay technology category	<input type="checkbox"/> RT 0 <input type="checkbox"/> RT I <input checked="" type="checkbox"/> RT II <input type="checkbox"/> RT III <input type="checkbox"/> RT IV <input type="checkbox"/> RT V

Terminals	
Terminal designation	Movable spring terminal; Stationary spring terminal; Coil terminal
Type of terminals	<input type="checkbox"/> Screw terminals and screwless terminals <input type="checkbox"/> Flat quick-connect terminations <input checked="" type="checkbox"/> Solder terminals Maximum permissible steady-state temperature indicated by manufacturer: 160°C <input type="checkbox"/> Sockets <input type="checkbox"/> Alternative termination types
Material/plating of the terminal	EPCS-S; QSn6.5-0.1(PCu)

TÜV Rheinland Group

License holder

14.07.2011

Marco Ni

Lilian Lin

Zhejiang HKE Relay Co., Ltd.

Date

Signature

Name

Company Stamp and Signature



TÜVRheinland®  
DIN CERTCO



TÜVRheinland®

Certificate No. R 50116136 0001-0004 Our Reference 01-MN- 15024682 004 Appendix No. 1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 4 of 4

Plastic Parts				
Part	Material name	Type designation	RTI (minimum)	Material Group
Case Bobbin	PBT	TV4-260SF	140	IIIa
	PBT	PBT-RG301	130	IIIa
	PBT	D202G30 (Shinkong)	140	IIIa
	PBT	1403 G6 (Nan Ya)	130	IIIa

**TYPE NOMENCLATURE:**

HRS4 x - S - y

a b c

a: Model of relay: HRS4

b: Rated Coil Power: x=Black (0.45W) or H (0.36W)

c: Rated Coil Voltage: y=DC3V; DC5V; DC6V; DC9V; DC12V; DC24V or DC48V

**Remark:**

**First issue:** 06. 10. 2008

This Certificate is based on test report:  
- 15024682 001

**Second issue:** 24. 04. 2009

Add alternate plastic material based on test report:  
- 15024682 002

**Third and latest issue:** 14.07.2011

Standard updated to EN 61810-1:2008  
Add alternate plastic material based on test report  
- 15024682 004

TÜV Rheinland Group

License holder

14.07.2011

Marco N

Lilian Lin

Zhejiang HKE Relay Co., Ltd.

Date

Signature

Name

Company Stamp and Signature



Certificate No. R 50116136 0001-0004    Our Reference 01-MN- 15024682 004    Appendix No. 1.1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 1 of 4

Licenseholder : **Zhejiang HKE Relay Co., Ltd.**  
 Full address: 28 Jiacun Industry Area, Ningbo, Zhejiang 315135, P.R. China  
 Factory : **Zhejiang HKE Relay Co., Ltd.**  
 Full address 28 Jiacun Industry Area, Ningbo, Zhejiang 315135, P.R. China

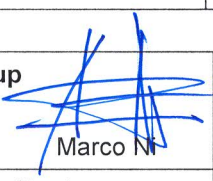
Type or Model Number : **HRS4Tx-S-y (See TYPE NOMENCLATURE on last page for details.)**  
 Kind of device: Electromechanical Elementary Relays

Specification (contact-circuit )		
Contact material	AgSnO2	
Rated contact voltage	250VAC	24VDC
Rated contact current	10A	10A
cos φ	1.0	---
L/R	---	0ms
Frequency (Hz)	50	
Schematics for contact loading <small>*according to Tab 12 of EN 61810-1: 2008</small>	Single-pole: a; Change-over: o; Single-pole: b	
Kind of contacts		
Number of cycles for electrical endurance / Frequency of operation	10,000 1800 Operating cycles/h	
Number of cycles for mechanical endurance / Frequency of operation	10,000,000 18000 Operating cycles/h	
Duty factor	50%	
Type of interruption	Micro-disconnection	
Insulation resistance	≥1000MΩ	
<i>* Electrical endurance in accordance with clause 17-endurance of IEC 60730-1.</i>		
Contact form	Change-over contact	
Rated voltage	250VAC	
Rated current	10(2)A	
Number of automatic cycles	10 000	

TÜV Rheinland Group

14.07.2011

Date

  
 Marco Ni

Signature

License holder

Lilian Lin

Name

**Zhejiang HKE Relay Co., Ltd.**

Company Stamp and Signature



TÜVRheinland®  
DIN CERTCO



TÜVRheinland®

Certificate No. R 50116136 0001-0004 Our Reference 01-MN- 15024682 004 Appendix No. 1.1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 2 of 4


Specification (coil-circuit)							
Rated coil voltage (Rated coil voltage) <input checked="" type="checkbox"/> DC <input type="checkbox"/> AC	3V	5V	6V	9V	12V	24V	48V
Coil resistance (at 23°C) (Ω)	20	55	80	180	320	1280	5120
Rated power	0.45W						
Operative range	<input checked="" type="checkbox"/> class 1: 80% to 110% of rated coil voltage <input type="checkbox"/> class 2: 85% to 110% of rated coil voltage <input type="checkbox"/> other:						

Thermal insulation class	F						
Specification (coil-circuit)							
Rated coil voltage (Rated coil voltage) <input checked="" type="checkbox"/> DC <input type="checkbox"/> AC	3V	5V	6V	9V	12V	24V	48V
Coil resistance (at 23°C) (Ω)	25	70	100	225	400	1600	6400
Rated power	0.36W						
Operative range	<input checked="" type="checkbox"/> class 1: 80% to 110% of rated coil voltage <input type="checkbox"/> class 2: 85% to 110% of rated coil voltage <input type="checkbox"/> other:						
Thermal insulation class	F						

TÜV Rheinland Group

14.07.2011

Date

  
Signature

License holder

Lilian Lin

Name

Zhejiang HKE Relay Co., Ltd.

Company Stamp and Signature



TÜVRheinland®  
DIN CERTCO



TÜVRheinland®

Certificate No. R 50116136 0001-0004 Our Reference 01-MN- 15024682 004 Appendix No. 1.1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 3 of 4


Specification (general)	
Overvoltage category	II
Pollution degree	2
Test voltages	<i>coil-contact</i> : 1800VAC / 1min <i>contact - contact</i> : ---- <i>across open contact</i> : 1000VAC / 1min <i>live parts - outside</i> : ----
Minimum creepage distances	<i>coil-contact</i> : 2.5mm <i>contact - contact</i> : ---- <i>across open contact</i> : 1.5mm <i>live parts - outside</i> : ----
Minimum clearances	<i>coil-contact</i> : 2.0mm <i>contact - contact</i> : ---- <i>across open contact</i> : 0.4mm <i>live parts - outside</i> : ----
Insulation: <i>U<sub>i</sub> = 250V, OV-cat. II</i> <i>Material gr. III, Poll. deg. 2</i>	<i>coil-contact</i> : <input checked="" type="checkbox"/> basic <input type="checkbox"/> reinforced <input type="checkbox"/> NA <i>contact - contact</i> : <input type="checkbox"/> basic <input type="checkbox"/> reinforced <input checked="" type="checkbox"/> NA <i>across open contact</i> : <input type="checkbox"/> interruption <input checked="" type="checkbox"/> micro <input type="checkbox"/> full <i>live parts - outside</i> : <input type="checkbox"/> basic <input type="checkbox"/> reinforced <input checked="" type="checkbox"/> NA
Ambient temperature	-30°C ~ +85°C
Minimum mounting distance	H: 5mm V: 5mm
Relay technology category	<input type="checkbox"/> RT 0 <input type="checkbox"/> RT I <input checked="" type="checkbox"/> RT II <input type="checkbox"/> RT III <input type="checkbox"/> RT IV <input type="checkbox"/> RT V

Terminals	
Terminal designation	Movable spring terminal; Stationary spring terminal; Coil terminal
Type of terminals	<input type="checkbox"/> Screw terminals and screwless terminals <input type="checkbox"/> Flat quick-connect terminations <input checked="" type="checkbox"/> Solder terminals Maximum permissible steady-state temperature indicated by manufacturer: 160°C <input type="checkbox"/> Sockets <input type="checkbox"/> Alternative termination types
Material/plating of the terminal	EPCS-S; H62

TÜV Rheinland Group

License holder

14.07.2011

  
Marco Ni

Lilian Lin

Zhejiang HKE Relay Co., Ltd.

Date

Signature

Name

Company Stamp and Signature





TÜVRheinland®  
DIN CERTCO



TÜVRheinland®

Certificate No. R 50116136 0001-0004 Our Reference 01-MN- 15024682 004 Appendix No. 1.1

**Constructional Data Form (CDF) for Electromechanical Elementary Relays**

Page 4 of 4

Plastic Parts				
Part	Material name	Type designation	RTI (minimum)	Material Group
Case Bobbin	PBT	TV4-260SF	140	IIIa
	PBT	PBT-RG301	130	IIIa
	PBT	D202G30 (Shinkong)	140	IIIa
	PBT	1403 G6 (Nan Ya)	130	IIIa

**TYPE NOMENCLATURE:**

HRS4T x - S - y  
a b c

- a. Model of relay: HRS4T
- b. Rated Coil Power: x=Black (0.45W) or H (0.36W)
- c. Rated Coil Voltage: y=DC3V; DCV5; DC6V; DC9V; DC12V; DC24V or DC48V

**Remark:**

**First issue:** 06. 10. 2008  
This Certificate is based on test report:  
- 15024682 001

**Second issue:** 24. 04. 2009  
Add alternate plastic material base on test report:  
- 15024682 002

**Third and latest issue:** 14.07.2011  
Standard updated to EN 61810-1:2008  
Add alternate plastic material based on test report:  
- 15024682 004

TÜV Rheinland Group

License holder

14.07.2011

Marco Ni

Lilian Lin

Zhejiang HKE Relay Co., Ltd.

Date

Signature

Name

Company Stamp and Signature