

# Zertifikat

# Certificate



Zertifikat Nr. Certificate No.  
R 50143452

Blatt Page  
0001

Ihr Zeichen Client Reference  
C.C.G

Unser Zeichen Our Reference  
01-KSH- 15030123.001

Ausstellungsdatum  
12.02.2009

Date of Issue  
(day/mo/yr)

**Genehmigungsinhaber License Holder**  
Dongguan Sanyou Electrical  
Appliances Co., Ltd.  
Bolan Road, Xitou Industrial Zone  
Houjie Town  
Dongguan City, Guangdong 523952  
P.R. China

**Fertigungsstätte Manufacturing Plant**  
Dongguan Sanyou Electrical  
Appliances Co., Ltd.  
Bolan Road, Xitou Industrial Zone  
Houjie Town  
Dongguan City, Guangdong 523952  
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 : SMI-x-ayzuv-w-t 5  
a,x,y,z,u,v,w,t = See appendix 1 8

Rated Coil Voltage : DC 3V;5V;6V;9V;12V;18V;24V or 48V

Rated Coil Power : 0,54W or 0,72W

Ambient Temperature : -40°C to +85°C

Contact Loads : See appendix 1

Electrical Endurance : 100 000

Mechanical Endurance : 10 000 000

Type of Interruption : Micro-Disconnection

Insulation System between  
Coil and Contact : Reinforced Insulation

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

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



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ANLAGE (Appendix): 1

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

Dipl.-Ing. G. Reimann

**TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln**  
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# Zertifikat

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Zertifikat Nr. Certificate No.  
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Houjie Town  
Dongguan City, Guahgdong 523952  
P.R. China

**Fertigungsstätte Manufacturing Plant**  
Dongguan Sanyou Electrical  
Appliances Co., Ltd.  
Erhuan Road, Xitou Industrial Zone  
Houjie Town  
Dongguan City, Guangdong 523952  
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) <sup>®</sup>

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Addition

Name of Factory : See above

Address of Factory : See above

ANLAGE (Appendix): 1

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Zertifizierungsstelle

Dipl.-Ing. G. Reimann



Certificate No. R50143452 0001-0002 Our Reference 01-KSH-15030123 001 Appendix No. 1

**Constructional Data Form (CDF) All-or-Nothing Electromechanical Relays** Page 1 of 4

License holder : Dongguan Sanyou Electrical Appliances Co., Ltd.  
 Bolan Road, Xitou Industrial Zone, Houjie Town, Dongguan City, Guangdong 523952, P.R. China



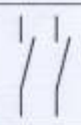
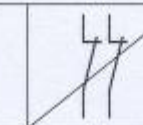
Factory1 : Dongguan Sanyou Electrical Appliances Co., Ltd.  
 (full address) Bolan Road, Xitou Industrial Zone, Houjie Town, Dongguan City, Guangdong 523952, P.R. China

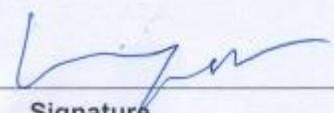
Factory2 : Dongguan Sanyou Electrical Appliances Co., Ltd.  
 (full address) Erhuan Road, Xitou Industrial Zone, Houjie Town, Dongguan City, Guangdong 523952, P.R. China

Type or Model Number: SMI-x-ayzuv-w-t

Kind of device: Electromechanical Elementary Relay

**Specification (contact-circuit )**

|   |   |   |   |   |
|---|---|---|---|---|
| Contact material  | AgSnO <sub>2</sub> or AgCdO   |   |   |   |
| Contact configuration   | 1 make;1 change-over  |   | 2 make; 2 change-over   |   |
| Rated contact voltage   | 250VAC  | 30VDC   | 250VAC  | 24VDC   |
| Rated contact current   | 10A   | 10A   | 5A  | 5A  |
| cos φ   | 1   | ---   | 1   | ---   |
| L/R   | ---   | 0   | ---   | 0   |
| Frequency (Hz)  | 50/60Hz   | ---   | 50/60Hz   | ---   |
| Schematics for contact loading<br><small>*according to Tab 13 of EN 61810-1: 2004</small> | Single-pole: a; o;  |   | Double-pole: c; w   |   |
| Kind of contacts  |  |  |  |  |
| Number of cycles for electrical endurance / Frequency of operation                        | 100,000<br>1200Cycles/h   |   |   |   |
| Number of cycles for mechanical endurance / Frequency of operation                        | 10,000,000<br>18,000Cycles/h  |   |   |   |
| Duty factor   | 50%   |   |   |   |
| Type of interruption  | Micro-disconnection   |   |   |   |
| Insulation resistance   | ≥ 1000 M Ω (500VDC)   |   |   |   |





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**Constructional Data Form (CDF) All-or-Nothing Electromechanical Relays** Page 2 of 4

\* Endurance according to IEC 60730-1 (ratings, number of cycles, frequency of operation)

Above Electrical ratings(10A and 5A, 250VAC, 100,000cycles) is also tested in accordance with clause 17-endurance of IEC 60730-1:1999

**Specification (coil-circuit)**

| Rated coil voltage (Rated coil voltage)                               | 0,72W  |    |    |     |     |     |     |       | 0,54W |    |    |     |     |     |       |       |
|---|--|----|----|-----|-----|-----|-----|-------|-------|----|----|-----|-----|-----|-------|-------|
|   | 3  | 5  | 6  | 9   | 12  | 18  | 24  | 48    | 3     | 5  | 6  | 9   | 12  | 18  | 24    | 48    |
| <input checked="" type="checkbox"/> DC<br><input type="checkbox"/> AC |  |    |    |     |     |     |     |       |       |    |    |     |     |     |       |       |
| Coil resistance (at 20°C) (Ω) ± 10%                                   | 12,5   | 36 | 50 | 112 | 200 | 450 | 820 | 3,300 | 17    | 47 | 68 | 150 | 270 | 600 | 1,100 | 4,400 |
| Frequency for AC (Hz)   | ---  |    |    |     |     |     |     |       |       |    |    |     |     |     |       |       |
| Rated power   | 0,72W; 0,54W   |    |    |     |     |     |     |       |       |    |    |     |     |     |       |       |
| Operative range   | <input checked="" type="checkbox"/> class 1: 80% to 110% of rated coil voltage<br><input type="checkbox"/> class 2: 85% to 110% of rated coil voltage<br><input type="checkbox"/> other: |    |    |     |     |     |     |       |       |    |    |     |     |     |       |       |
| Thermal insulation class  | B  |    |    |     |     |     |     |       |       |    |    |     |     |     |       |       |



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**Specification (general)**

|  |                                 |   |  |
|--|---------------------------------|---|--|
| Overvoltage category   | II                              |   |  |
| Pollution degree   | 2                               |   |  |
| Test voltages  | <i>coil-contact</i>             | : 5,000VAC(50/60Hz) for 1min                |  |
|  | <i>contact - contact</i>        | : 1,500VAC(50/60Hz) for 1min                |  |
|  | <i>across open contact</i>      | : 1,000VAC(50/60Hz) for 1min                |  |
|  | <i>live parts - outside</i>     | : ---                                       |  |
| Minimum creepage distances   | <i>coil-contact</i>             | : 15,0mm                                    |  |
|  | <i>contact - contact</i>        | : 5,0mm                                     |  |
|  | <i>across open contact</i>      | : 3,5mm                                     |  |
|  | <i>live parts - outside</i>     | : ---                                       |  |
| Minimum clearances   | <i>coil-contact</i>             | : 15,0mm                                    |  |
|  | <i>contact - contact</i>        | : 4,5mm                                     |  |
|  | <i>across open contact</i>      | : 0,3mm                                     |  |
|  | <i>live parts - outside</i>     | : ---                                       |  |
| Insulation:<br><i>U<sub>i</sub> = 250V, OV-cat. II</i><br><i>Material gr. IIIa, Poll. deg. 2</i> | <i>coil-contact</i>             | : <input type="checkbox"/> basic            | <input checked="" type="checkbox"/> reinforced <input type="checkbox"/> NA |
|  | <i>contact - contact</i>        | : <input checked="" type="checkbox"/> basic | <input type="checkbox"/> reinforced <input checked="" type="checkbox"/> NA |
|  | <i>across open contact</i>      | : <input checked="" type="checkbox"/> micro | <input type="checkbox"/> full <input type="checkbox"/> NA                  |
|  | <i>live parts - outside</i>     | : <input type="checkbox"/> basic            | <input type="checkbox"/> reinforced <input checked="" type="checkbox"/> NA |
| Ambient temperature  | -40°C ~ +85°C                   |   |  |
| Minimum mounting distance  | H: 3 mm      V: 3 mm            |   |  |
| 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                  | N/A  |
| Type of terminals                     | <input type="checkbox"/> Screw terminals and screwless terminals<br><input type="checkbox"/> Flat quick-connect terminations<br><input checked="" type="checkbox"/> Solder terminals PCB solder pin<br>Maximum permissible steady-state temperature indicated by manufacturer: 160°C<br><input type="checkbox"/> Sockets<br><input type="checkbox"/> Alternative termination types |
| Material/plating of the terminal      | ---  |
| Required preparation of the conductor | ---  |

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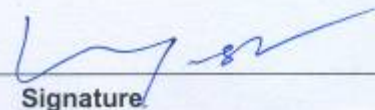
12.12.2008

Kenny Shi

Date

Name

Signature





Certificate No. R50143452 0001-0002 Our Reference 01-KSH-15030123 001 Appendix No. 1

## Constructional Data Form (CDF) All-or-Nothing Electromechanical Relays

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## Plastic Parts

| Part     | Material name | Type designation | RTI (minimum) | Material Group |
|----------|---------------|------------------|---------------|----------------|
| Cover    | PBT           | 1403G6           | 130           | IIIa           |
| Bobbin   | PBT           | 1403G6           | 130           | IIIa           |
| Base     | PBT           | 1403G6           | 130           | IIIa           |
| Push Rod | PBT           | 1403G6           | 130           | IIIa           |

## Type Nomenclature:

SMI-x-ayzuv-w-t

Basic designation: SMI

x stands for sealed type: S means standard sealed type, SH means sealed type washable.

a stands for number of poles: 1 means 1 pole; 2 means 2 pole.

y stands for rated coil voltage(VDC): 03;05;06;09;12;18;24 or 48.

z stands for rated coil power: D means 0,72w; L means 0,54w.

u stands for contact type: M means make contact; blank means change-over contact.

v stands for contact material: blank means AgSnO<sub>2</sub> type; 1 means AgCdO type.

w stands for insulation (system) class: F means class F; B means class B; blank means general type(standard type).

t means special parameter: blank means standard type; letter or number means special requirement which not affect constructions.

TÜV Rheinland Group

12.12.2008

Kenny Shi

Date

Name

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