

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50142422

Blatt *Page*
0001

Ihr Zeichen *Client Reference*
C.C.G

Unser Zeichen *Our Reference*
01-KSH- 15029901 001

Ausstellungsdatum
03.02.2009

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.
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)*

Type Designation : SMA-x-lyDMv-w-t (SANYOU) 5
x,y,v,w,t = See appendix 1 5

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

Rated Coil Power : Abt 0,54W

Ambient Temperature : -30°C to +85°C

Contact Loads : See appendix 1

Electrical Endurance : 100 000

Mechanical Endurance : 1 000 000

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

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. F. He

Zertifikat

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Zertifikat Nr. / Certificate No.
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Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Relais (Electromechanical Elementary Relays) ®

as page 0001

Addition

Name of Factory : See above

Address of Factory : See above



ANLAGE (Appendix): 1

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Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
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Dipl.-Ing. F. He

Certificate No. R50142422 0001-0002 Our Reference 01-KSH-15029901 001 Appendix No. 1

Constructional Data Form (CDF) All-or-Nothing Electromechanical Relays Page 1 of 3

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: SMA-x-1yDMv-w-t

Kind of device: Electromechanical Elementary Relay

Specification (contact-circuit)

Contact material	AgSnO ₂ or AgCdO	
Contact configuration	Make contact	
Rated contact voltage	250VAC	30VDC
Rated contact current	10A	10A
cos φ	1	---
L/R	---	0
Frequency (Hz)	50/60	---
Schematics for contact loading <small>*according to Tab 13 of EN 61810-1: 2004</small>	Single-pole: a	
Kind of contacts		
Number of cycles for electrical endurance / Frequency of operation	100,000 1800Cycles/h	100,000 1800Cycles/h
Number of cycles for mechanical endurance / Frequency of operation	1,000,000 18000Cycles/h	1,000,000 18000Cycles/h
Duty factor	50%	
Type of interruption	Micro-disconnection	
Insulation resistance	≥1,000M Ω (500VDC)	

TÜV Rheinland Group

12.12.2008

Kenny Shi

Date

Name

Signature



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Constructional Data Form (CDF) All-or-Nothing Electromechanical Relays Page 2 of 3

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

Above Electrical rating (10A, 250VAC, 100,000cycles) are also tested in accordance with clause 17-endurance of IEC 60730-1:1999.

Specification (coil-circuit)

Rated coil voltage (Rated coil voltage) <input checked="" type="checkbox"/> DC <input type="checkbox"/> AC	03	05	06	09	12	18	24	48
Coil resistance (at 20°C) (Ω) ± 10%	17	47	68	155	270	600	1,100	4,400
Frequency for AC (Hz)	---							
Rated power	Abt 0,54W							
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	B							

Specification (general)

Overvoltage category	II		
Pollution degree	2		
Test voltages	<i>coil-contact</i>	: 4,000VAC(50/60Hz) for 1min	
	<i>contact - contact</i>	:---	
	<i>across open contact</i>	: 900VAC(50/60Hz) for 1min	
	<i>live parts - outside</i>	:---	
Minimum creepage distances	<i>coil-contact</i>	: 10,0mm	
	<i>contact - contact</i>	:--	
	<i>across open contact</i>	: 5,1mm	
	<i>live parts - outside</i>	:---	
Minimum clearances	<i>coil-contact</i>	: 10,0mm	
	<i>contact - contact</i>	:---	
	<i>across open contact</i>	: 0,3mm	
	<i>live parts - outside</i>	:---	
Insulation: <i>U_i = 250V, OV-cat. II</i> <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 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	-30°C ~ +85°C		

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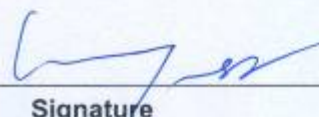
12.12.2008

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Constructional Data Form (CDF) All-or-Nothing Electromechanical Relays Page 3 of 3

Minimum mounting distance	H: 3 mm	V: 3 mm	
Relay technology category	<input type="checkbox"/> RT 0 <input type="checkbox"/> RT III	<input type="checkbox"/> RT I <input type="checkbox"/> RT IV	<input checked="" type="checkbox"/> RT II <input type="checkbox"/> RT V

Terminals

Terminal designation	N/A
Type of terminals	<input type="checkbox"/> Screw terminals and screwless terminals <input type="checkbox"/> Flat quick-connect terminations <input checked="" type="checkbox"/> Solder terminals PCB solder pin 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	62% Copper
Required preparation of the conductor	1

Plastic Parts

Part	Material name	Type designation	RTI (minimum)	Material Group
Cover	PBT	CRN7030	140	IIIa
Bobbin	PBT	CRN7030	140	IIIa
Base	PBT	CRN7030	140	IIIa

Type Nomenclature:

SMA-x-1yDMv-w-t

Basic designation: SMA

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

1 stands for number of poles: 1 pole.

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

D stands for rated coil power: D means 0,54w.

M stands for contact type: M means make contact.

v stands for contact material: blank means AgSnO₂; 1 means AgCdO.

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

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

TÜV Rheinland Group

12.12.2008

Kenny Shi



Date

Name

Signature