

PRODUCT SPECIFICATION



PCB JQC-T73

- 10A switching capability
- Small footprint
- Sealed type available
- Class B/F available
- Conform to RoHS,ELV directive
- Size : 19.2X15.4X15.4mm

ORDERING CODE

JQC - 3FF - S - H 1 2 3	
1. Relay Model JQC-T73 2. S: sealed	3. Z: Form C H: Form A D: Form B

COIL DATA (at 20 °C)

Nominal Voltage (VDC)	3	5	6	9	12	18	24	48	0.36W
Coil Resistance ($\Omega \pm 10\%$)	25	69	100	225	400	900	1600	6400	
Rated Current (mA)	120	71.4	60	40	30	20	15	7.5	
Max Operate Voltage (VDC)	2.25	3.75	4.5	6.75	9	13.5	18	36	
Min Release Voltage (VDC)	0.15	0.25	0.3	0.45	0.6	0.9	1.2	2.4	
Max Applicable Voltage	130% of nominal voltage at 70 °C 170% of nominal voltage at 23 °C								

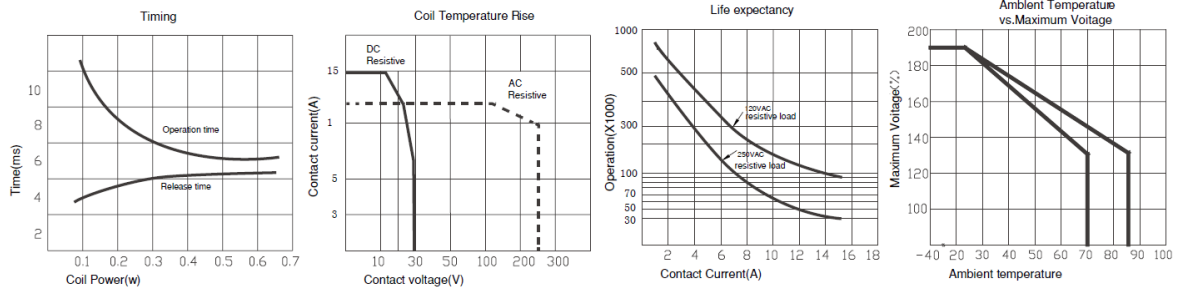
CONTACT DATA

Contact Form	1H/1Z
Contact Material	Silver Alloy
Load	Resistive load (COS Φ = 1)
Contact Ratings	10A 250vac 15A 125vac 10A 28vdc
Minimum load	100mA 5VDC
Max Switching Voltage	250VAC/30VDC
Max Switching Current	15A
Max Switching Power	2770VA/240W
Contact Resistance	100m Ω max at 6VDC 1A
Life Expectancy	Electrical : 100,000 Operations(at30Operations/minute)
	Mechanical : 10,000,000 Operations(at300Operations/minute)

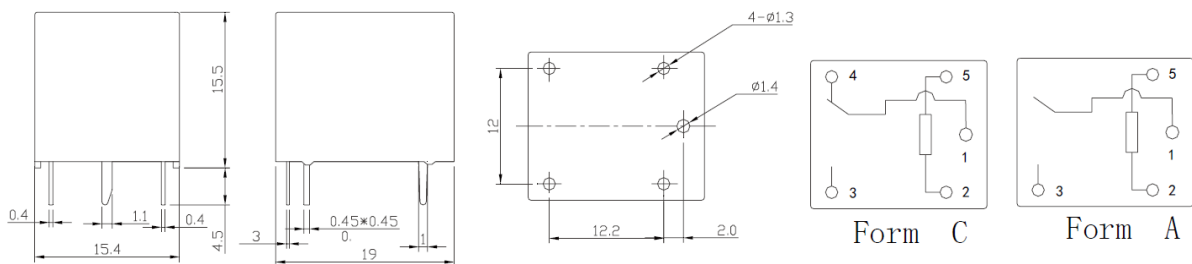
CHARACTERISTICS DATA

Insulation Resistance	100MΩ in at 500VDC
Dielectric Strength Between Open Contacts	750VAC(50/60Hz for one minute)
Between Contacts and coil	1500VAC(50/60Hz for one minute)
Operate Time	10ms
Release Time	5ms
Temperature Range	-40 °C to +85 °C
Shock Resistance	Operating Extremes: 10G
	Damage Limits: 100G
Vibration Resistance	10-55Hz, 1.5mm
Max. switching frequency	Mechanical: 18,000 operations/hr
	Electrical: 1,800 operations/hr
Humidity	40-85%
Weight	Approx 10g
Safety Standard	CQC UL SGS TUV

ENGINEERING DATA



OVERALL AND MOUNTING DIMENSIONS





产品认证证书

证书编号: CQC14002114362

申请人名称及地址

东海县通灵电器有限公司
东海县双店镇工业集中区

制造商名称及地址

东海县通灵电器有限公司
东海县双店镇工业集中区

生产企业名称及地址

东海县通灵电器有限公司 (V020473)
江苏省东海县双店镇工业集中区

产品名称和系列、规格、型号

继电器

JQC-3FF-S*(其中*表示触点型式,取值为H或Z,其中H表示触点形式为常开或常闭型,Z表示触点形式为转换型);触点负载:10A 250VAC;线圈电压:3VDC,5VDC,6VDC,9VDC,12VDC,24VDC,36VDC,48VDC;电气寿命:5E4周期;机械寿命:5E5周期;环境温度:-40℃~75℃

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:2015年07月03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:2014年08月06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 0065175



PRODUCT CERTIFICATE

No.: CQC14002114362

NAME AND ADDRESS OF THE APPLICANT

Donghai County Tongling Electric Appliance Co., Ltd
Industrial concentration Area Shuangdian Twon Donghai County

NAME AND ADDRESS OF THE MANUFACTURER

Donghai County Tongling Electric Appliance Co., Ltd
Industrial concentration Area Shuangdian Twon Donghai County

NAME AND ADDRESS OF THE FACTORY

Xianju County Tengfei Electronics Factory (V020473)
Industrial concentration Area, Shuangdian Town, Donghai County, Lianyungang City, jiangsu

NAME, MODEL AND SPECIFICATION

Relay

JQC-3FF-S*(其中*表示触点型式, 取值为H或Z, 其中H表示触点形式为常开或常闭型, Z表示触点形式为转换型); 触点负载:10A 250VAC; 线圈电压: 3VDC,5VDC,6VDC,9VDC, 12VDC, 24VDC,36VDC,48VDC; 电气寿命: 5E4周期; 机械寿命: 5E5周期; 环境温度: -40℃~75℃

THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

GB/T21711.1-2008

CERTIFICATION MODEL

Type Testing of Product + Initial Factory Inspection + Follow up Factory Inspection

This is to certify that the above mentioned products have met the requirements of certification rules CQC11-462155-2010.

Date of issue: Jul.03,2015

Validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

Date of original certification: Aug.06,2014

President: _____

Wang Kejiao



CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan Xilu, Beijing 100070 P.R.China
<http://www.cqc.com.cn>

C 0065175



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Verification Report No. NGBEC1501201401 Date: 12 May 2015 Page 1 of 10

DONGHAI TONGLING ELECTRIC APPLIANCE CO.,LTD
INDUSTRIAL CLUSTERS, SHUANGDIAN TOWM, DONGHAI COUNTY

Sample Name : Relay
SGS Job No. : NP15-000937 - NB
Tested Basic Model No. : JQC-3FF-S-H
Client Ref. Information : JQC-3FF-S-Z
Date of Sample Received : 21 Apr 2015
Verification Period : 21 Apr 2015 - 11 May 2015
Verification Requested : With reference to RoHS Directive 2011/65/EU recasting 2002/95/EC.
Verification Method : Please refer to next page(s).
Verification Result : Please refer to next page(s).
Verification Conclusion : Based on the verification results of the submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU recasting 2002/95/EC.
Note : The test results are related only to the tested items. The report shall not be reproduced except in full without the written approval of the testing laboratory.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch


Iris Xiao
Approved Signatory



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Ningbo Branch Testing Laboratory

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Verification Method :

1. With reference to IEC 62321-2:2013, review was performed for the samples disjointed from the submitted articles submitted by the Applicant
2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in the report.
 - (1) With reference to IEC 62321-3-1: 2013, screening by EDXRF Spectroscopy
 - (2) Wet Chemical Test Method:
 - a. With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 - b. With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 - c. With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - d. With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.
 - e. With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.



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In accordance with the result of material risk assessment, the following disjointed parts in the submitted sample have been verified.

Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
1	JQC-3FF-S-H-Black plastic shell		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	IN	ND	Comply	
			PBDEs	IN	ND	Comply	
2	JQC-3FF-S-H-Silver metal pin		Pb	BL	---	Comply	21 Apr 2015
			Cd	OL	ND	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	
3	JQC-3FF-S-H-Silver metal piece		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	
4	JQC-3FF-S-H-Copper-colored metal piece		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	

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Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
5	JQC-3FF-S-H-Silver metal bracket		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	
6 -C	JQC-3FF-S-H-Silver metal rivet		Pb	BL	---	Comply	21 Apr 2015 05 May 2015
			Cd	IN	ND	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	
7	JQC-3FF-S-H-Black plastic bracket		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	IN	ND	Comply	
			PBDEs	IN	ND	Comply	
8	JQC-3FF-S-H-Copper-colored metal core		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	



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Part No.	Part Description	BOM No.	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical Testing(2) (mg/kg)	Conclusion on EU RoHS	Sample Submitted / Resubmitted Date
9	JQC-3FF-S-H-Silver metal piece		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	
10	JQC-3FF-S-H-Silver metal contact piece		Pb	BL	---	Comply	21 Apr 2015
			Cd	BL	---	Comply	
			Hg	BL	---	Comply	
			Cr(VI)	BL	---	Comply	
			PBBs	---	---	---	
			PBDEs	---	---	---	



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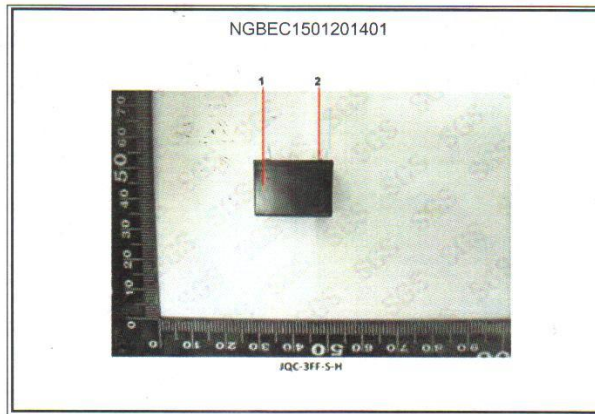
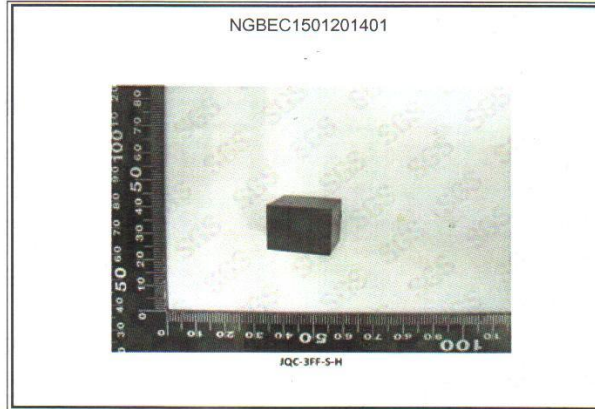
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Sample photo:



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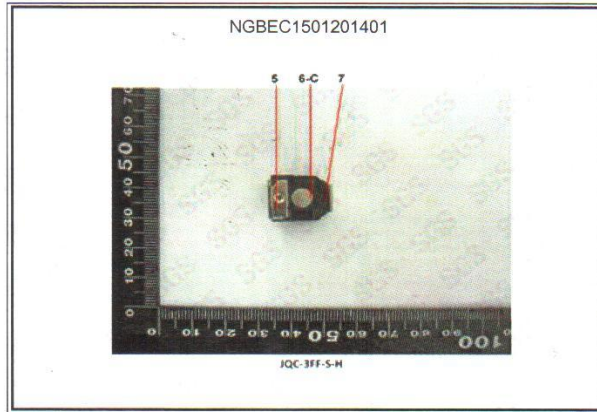
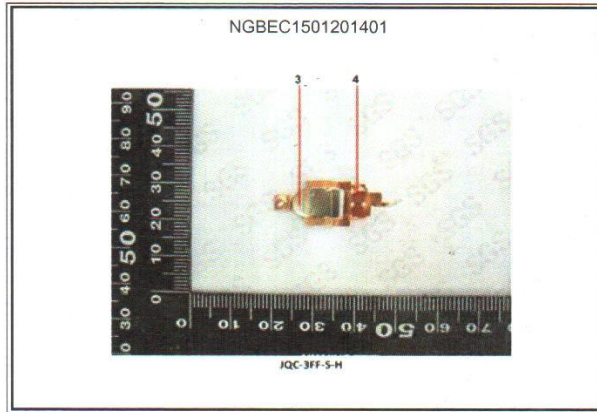
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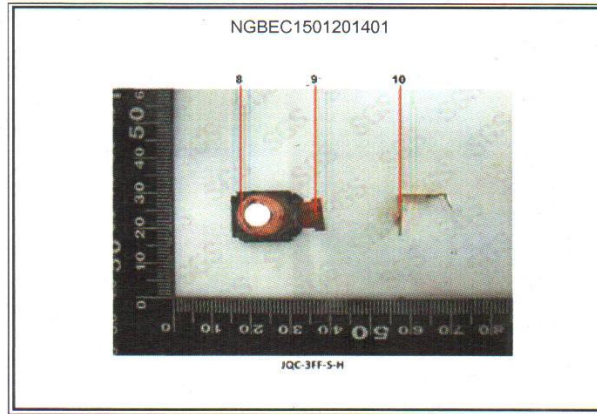
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 Ningbo Branch Inspection Laboratory

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NBCM 0119456

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Member of the SGS Group (SGS SA)

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50316150

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0001

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum	<i>Date of Issue</i>
Q.X.J.	ZC10-YQ- 14716398 001	20.11.2015	(day/mo/yr)

Genehmigungsinhaber <i>License Holder</i>	Fertigungsstätte <i>Manufacturing Plant</i>
Donghai County Tongling Electrical Appliance Co., Ltd. Industrial Clusters, Shuangdian Town Donghai County, Lianyungang City Jiangsu 222331 P.R. China	Donghai County Tongling Electrical Appliance Co., Ltd. Industrial Clusters, Shuangdian Town Donghai County, Lianyungang City Jiangsu 222331 P.R. China

Prüfzeichen *Test Mark* Geprüft nach *Tested acc. to*
EN 61810-1:2008



Zertifiziertes Produkt <i>(Geräteidentifikation)</i>	Lizenzentgelte - Einheit
<i>Certified Product (Product Identification)</i>	<i>License Fee - Unit</i>

Relay (Relay)

Type Designation	: JQC-3FF-S-x Tongling (Logo)	5
	x = H, B, Z	1
Rated Coil Voltage	: DC 3V, 5V, 6V, 9V, 12V, 24V, 48V	
Rated Coil Power	: 0.36W	
Ambient Temperature	: -40°C to +75°C	
Contact Rating	: AC 250V 10A cos phi=1	
Number of Cycles for Electrical Endurance	: 50,000	
Number of Cycles for Mechanical Endurance	: 500,000	

Continued on page 0002

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.

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



Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50316150

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0002

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum	<i>Date of Issue</i> (day/mo/yr)
Q.X.J.	ZC10-YQ- 14716398 001	20.11.2015	

Genehmigungsinhaber <i>License Holder</i>	Fertigungsstätte <i>Manufacturing Plant</i>
Donghai County Tongling Electrical Appliance Co., Ltd. Industrial Clusters, Shuangdian Town Donghai County, Lianyungang City Jiangsu 222331 P.R. China	Donghai County Tongling Electrical Appliance Co., Ltd. Industrial Clusters, Shuangdian Town Donghai County, Lianyungang City Jiangsu 222331 P.R. China

Prüfzeichen *Test Mark* Geprüft nach *Tested acc. to*
EN 61810-1:2008



Zertifiziertes Produkt <i>(Geräteidentifikation)</i>	Lizenzentgelte - Einheit
<i>Certified Product (Product Identification)</i>	<i>License Fee - Unit</i>

Relay (Relay)

Continuation from page 0001

Thermal Insulation Class : F
Type of Interruption : Micro-disconnection
Insulation System between Coil and Contact : Basic Insulation

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

Rated Voltage : 250VAC
Rated Current : 10A
Number of Automatic Cycles : 10,000

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 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.
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 **TÜVRheinland**®
Precisely Right.

Donghai County Tongling Electrical
Appliance Co., Ltd.
Qian Xiaojuan

Date : 20.11.2015
Our ref. : YQ ZC10
Your ref. : Q.X.J.

-
Industrial Clusters, Shuangdian
Town
Donghai County, Lianyungang City
Jiangsu 222331
P.R. China

Ref : R TÜV-Mark Approval

Type of Equipment : Relay
Model Designation : See Certificate
Certificate No. : R 50316150 0001
Report No. : 14716398 001

Dear Qian Xiaojuan,

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

Please find enclosed your certificate as specified above.

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

The certificate is issued with the reservation that the license holder applies all information required in § 6 of the ProdSG related to name and address of the manufacturer or his authorized representative / importer, including their respective contact addresses on the product prior to marketing of the product in the European Economic Area.

With kind regards,

Certification Body


James Li

Enclosure

证书的详细信息请登陆www.tuvdotcom.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询

TÜV Rheinland (China) Ltd.
莱茵检测认证服务(中国)有限公司

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Fax: (8610)6566 6667
e-mail: info@bj.chn.tuv.com
Internet: <http://www.chn.tuv.com>

CERTIFICATE OF COMPLIANCE

Certificate Number 20151207-E478681
Report Reference E478681-20151207
Issue Date 2015-DECEMBER-07

Issued to: Donghai County Tongling Electrical Appliance Co., Ltd
Industrial Clusters, Shuangdian Town, Donghai County
Lianyungang
Jiangsu 222300 CHINA

This is to certify that representative samples of COMPONENT - SWITCHES, INDUSTRIAL CONTROL
Refer addendum page for models

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

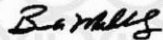
Standard(s) for Safety: UL 508 Industrial Control Equipment
CAN/CSA C22.2 No. 14-13 Industrial Control Equipment

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/about/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number 20151207-E478681
Report Reference E478681-20151207
Issue Date 2015-DECEMBER-07

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Component –INDUSTRIAL CONTROL SWITCHES, Models JQC-3FF-S, followed by H, B or Z, maybe followed by additional suffix letters and/or numbers. Please refer to Nomenclature for more details

NOMENCLATURE:

JQC-3FF S H XXX
I II III V

I. Basic Designation:
JQC-3FF

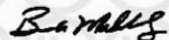
II. Type of Sealing:
S :sealed

III Contact Form:

H - 1 Form A;
B - 1 Form B;
Z - 1 Form C;

VI. Suffix

Special letter or number (Such as Buyer Code, they do not affect the construction and performance)



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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