

# Zertifikat Certificate



Zertifikat Nr. *Certificate No.*  
R 50270956

Blatt *Page*  
0001

Ihr Zeichen *Client Reference*  
SL-4000-1

Unser Zeichen *Our Reference*  
ZJL-YTS- 50000700 001

Ausstellungsdatum  
27.11.2013

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

Genehmigungsinhaber *License Holder*  
Sato Parts Co., Ltd.  
3-3-3 Ebisu  
Shibuya-ku, Tokyo  
150-0013 JAPAN

Fertigungsstätte *Manufacturing Plant*  
Sato Parts Co., Ltd.  
Kasukabe Factory  
8-4 Minami-Sakae-cho  
Kasukabe-shi, Saitama  
344-0057 JAPAN

## Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*  
EN 61984:2009

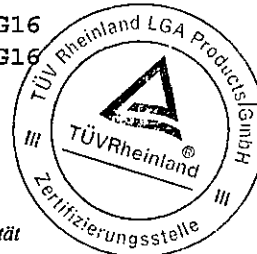


Zertifiziertes Produkt (Geräteidentifikation)  
*Certified Product (Product Identification)*

Lizenzentgelte - Einheit  
*License Fee - Unit*

Connector Connector with screwless terminals

Type Designation:	SL-4000-b-c-d	5
	b = (see Appendix 1)	1
	c = 2 - 15 followed by P	1
	d = (see Appendix 1)	
Number of Poles (c):	2 to 15	
Rated Operational Voltage:	AC/DC 300V	
Rated Operational Current:	5A max. / contact	
Overvoltage Category:	III	
Pollution Degree:	3	
Protection Degree:	IP00 (IP20 mated condition and installed in an enclosure or equipment.)	
Temperature Range:	-20°C to +105°C	
Ambient Temperature at rated current:	max. 80°C	
Creepage Distance:	(see Appendix 1)	
Clearance:	(see Appendix 1)	
Rated Connecting Capacity for flex. wire:	AWG24 - AWG16	
	for rigid wire: AWG26 - AWG16	



Zertifizierungsstelle

ANLAGE (Appendix): 1.0

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

Dipl.-Ing. (FH) M. Geiser

# Zertifikat *Certificate*



Zertifikat Nr. *Certificate No.*  
R 50270956

Blatt *Page*  
0002

Ihr Zeichen *Client Reference*  
SL-4000-1

Unser Zeichen *Our Reference*  
ZJL-YTS- 50000700 001

Ausstellungsdatum  
27.11.2013

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

**Genehmigungsinhaber *License Holder***  
Sato Parts Co., Ltd.  
3-3-3 Ebisu  
Shibuya-ku, Tokyo  
150-0013 JAPAN

**Fertigungsstätte *Manufacturing Plant***  
Niigata Sato Parts Co., Ltd.  
2255-2 Torigoe  
Nagaoka-shi, Niigata  
940-2316 JAPAN

## Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*  
EN 61984:2009



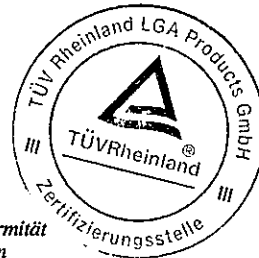
**Zertifiziertes Produkt (Geräteidentifikation)**  
*Certified Product (Product Identification)*

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

Connector Connector with screwless terminals, as page 0001

Addition

Factory: (see above)



Zertifizierungsstelle

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Dipl.-Ing. (FH) M. Geiser

# Zertifikat *Certificate*



Zertifikat Nr. *Certificate No.*  
R 50270956

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0003

Ihr Zeichen *Client Reference*  
FACH-NGT

Unser Zeichen *Our Reference*  
ZJL-MAA- 50000700 002

Ausstellungsdatum  
30.04.2015

*Date of Issue*  
(day/month/year)

## Genehmigungsinhaber *License Holder*

Sato Parts Co., Ltd.  
3-3-3 Ebisu  
Shibuya-ku, Tokyo  
150-0013 JAPAN

## Fertigungsstätte *Manufacturing Plant*

Sato Parts Co., Ltd. Niigata Factory  
2255-2 Torigoe  
Nagaoka-shi, Niigata  
940-2316 JAPAN

## Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*  
EN 61984:2009



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

Lizenzentgelte - Einheit  
*License Fee - Unit*

Connector Connector with screwless terminals, as page 0001

Change

Name of Factory: Niigata Sato Parts Co., Ltd.

changed to: (see above)



Zertifizierungsstelle

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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Fax: (+49/221)8 06 - 39 35 <http://www.tuv.com/safety>

Vilmos Sztaroveczki

# Zertifikat *Certificate*



Zertifikat Nr. *Certificate No.*  
R 50270956

Blatt *Page*  
0004

Ihr Zeichen *Client Reference*  
TUV-ADD-CH

Unser Zeichen *Our Reference*  
ZJL-MAA- 50000700 002

Ausstellungsdatum  
27.09.2016

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

**Genehmigungsinhaber *License Holder***  
Sato Parts Co., Ltd.  
3F Sanyu Bldg. 3-42-1, Hongo  
Bunkyo-ku, Tokyo  
113-0033 Japan

**Fertigungsstätte *Manufacturing Plant***  
Sato Parts Co., Ltd. Niigata Factory  
2255-2 Torigoe  
Nagaoka-shi, Niigata  
940-2316 Japan

## Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*  
EN 61984:2009



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

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

Connector Connector with screwless terminals, as page 0001

Change

Address of  
License Holder: 3-3-3 Ebisu, Shibuya-ku, Tokyo  
150-0013 JAPAN

changed to: (see above)

*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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Fax: (+49/221)8 06 - 39 35 <http://www.tuv.com/safety>



**Zertifizierungsstelle**

**Vilmos Sztaroveczki**

# Zertifikat Certificate



Zertifikat Nr. Certificate No.  
R 50270956

Blatt Page  
0005

Ihr Zeichen Client Reference	Unser Zeichen Our Reference	Ausstellungsdatum	Date of Issue (day/mo/yr)
Factory-Del-Kasukabe	ZJL-MAA- 50000700 002	27.01.2017	

**Genehmigungsinhaber License Holder**  
Sato Parts Co., Ltd.  
3F Sanyu Bldg. 3-42-1, Hongo  
Bunkyo-ku, Tokyo  
113-0033 Japan

**Fertigungsstätte Manufacturing Plant**  
Sato Parts Co., Ltd. Niigata Factory  
2255-2 Torigoe  
Nagaoka-shi, Niigata  
940-2316 Japan

## Prüfzeichen Test Mark

Geprüft nach Tested acc. to  
EN 61984:2009



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

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

Connector Connector with screwless terminals, as page 0001

Change

Factory: Sato Parts Co., Ltd.  
Kasukabe Factory  
8-4 Minami-Sakae-cho  
Kasukabe-shi, Saitama  
344-0057 JAPAN

withdrawn

Remark: Replaces R 50270956 page 0005, dated 17.01.2017.



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**Zertifizierungsstelle**

**Dipl.-Ing. (FH) F. Becker**

**Constructional Data Form for Connector**

Page 1/5

License holder: Sato Parts Co., Ltd.  
 3-3-3 Ebisu, Shibuya-ku, Tokyo 150-0013 Japan  
 Factory: Sato Parts Co., Ltd.  
 (Full address) Kasukabe Factory 8-4 Minami-Sakae-cho, Kasukabe-shi, Saitama 344-0057 Japan  
 Niigata Sato Parts Co., Ltd.  
 2255-2 Torigoe Nagaoka-shi, Niigata 940-2316 Japan  
 Type or Model Number: **SL-4000 series**  
 Kind of device: **Connector (Terminal block with connecting device)**

Specifications	
Type designation	SL- 4000 – (b) – (c) – (d) <i>See the type nomenclature on last page.</i>
Contact material	Pin/male contacts: Copper Alloy / Au & Ni-plating Socket/female clamping contacts: Phosphor bronze (≥ 99% Cu) / Au & Ni-plating
Number of poles	2 - 15
Rated voltage	300V
Rated current	5A max. / contact
Mechanical endurance	100 times
Classification	<input type="checkbox"/> CBC <input checked="" type="checkbox"/> COC (Non CBC) <input type="checkbox"/> other
Number of bendings (non-rewirable terminals only)	N/A
Upper limit temperature	+105°C
Lower limit temperature	-20°C
Reference ambient temperature at rated current	-20°C to +80°C

TÜV Rheinland

 26 November  
 2013

(Date)

(Signature)

Ebisu

(Place)

Sato Parts Co., Ltd.

H.Kinoshita

(Stamp and Signature of Applicant)

26 November 2013

(Date)



**Constructional Data Form for Connector**

Page 2/5

Classification of Connectors <input checked="" type="checkbox"/> COC <input type="checkbox"/> CBC					
Type of connector	Style	Enclosure		Cable Clamp	Function
Connectors: SL-4000 series	<input type="checkbox"/> Free Connector <input checked="" type="checkbox"/> Fixed Connector	<input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Un-enclosed	<input checked="" type="checkbox"/> Hand Back Safety mated <input checked="" type="checkbox"/> Hand Back Safety unmated: applied to the female connectors	<input type="checkbox"/> with <input type="checkbox"/> with additional insulation bushing <input checked="" type="checkbox"/> without	Applicable Cable Size Range: N/A  <input type="checkbox"/> with PE <input type="checkbox"/> without PE
		*1) Protection class mated: <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> Finger Safety mated (after installed with exception of the solder pins of the cases for horizontal installation on PCB.) <input checked="" type="checkbox"/> Finger Safety unmated (applied to the female connectors.) <input checked="" type="checkbox"/> IP20 (mated or the female connectors.)		

Remark: \*1) not applicable to the incorporated type which is intended for use in an equipment/enclosure.

Insulation Coordination	
Overvoltage category	III/ 4.0kVpk
Pollution degree	3
Insulation voltage	300V
Test voltages	Contact – Contact: 2210 Vrms Contacts – Enclosure: 2210 Vrms
Minimum creepage distances (mated)	Live Contact – Live Contact : 6.6 mm (≥ 5.0mm) Live contacts – Case & body (release button) : 11.0 mm (≥ 5.0mm)
Minimum clearance distances (mated)	Live Contact – Live Contact : 6.6 mm (≥ 3.0mm) Live contacts – Case & body (release button) : 11.0 mm (≥ 3.0mm)
Insulation system (IEC 60664-1)	Contact – Contact : <input checked="" type="checkbox"/> basic <input type="checkbox"/> reinforced <input type="checkbox"/> NA Live contacts – Case & body: <input checked="" type="checkbox"/> basic <input type="checkbox"/> reinforced <input type="checkbox"/> NA

TÜV Rheinland

26 November 2013

(Date)

(Signature)

Ebisu

(Place)

Sato Parts Co., Ltd.

H.Kinoshita

(Stamp and Signature of Applicant)

26 November 2013

(Date)





TÜVRheinland®  
DIN CERTCO

Certificate No. R 50270956  
Our reference ZJL-TSM-50000700 001  
Appendix No. 1.0

(To be filled in by TÜV Rheinland)



TÜVRheinland®

Constructional Data Form for Connector

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Specifications of Terminals / Connection_ <input checked="" type="checkbox"/> Rewirable <input type="checkbox"/> Non-rewirable		
Type of terminals	Solder terminals ( <input type="checkbox"/> 0.8mm solder pin) _ IEC/EN 60068-2-20	Screwless terminals_ IEC/EN 60999-1
Terminal designation	--	1, 2, 3 ... 15
Spec. Tightening torque	N/A	
Conductor/plating material of terminals	Copper Alloy / tin-plate on nickel plate	Phosphor bronze (≥ 99% Cu) / tin-plate on nickel plate
Rated cross section of applicable conductor	--	Flexible : 0.2mm <sup>2</sup> -1.25mm <sup>2</sup> (AWG24-AWG16) Rigid : φ0.4mm- φ 1.2mm (AWG26-AWG16)
Type of applicable conductor	--	Flexible or rigid
Required preparation of the conductor	N/A	
Max. Stripping length	--	9mm
Max. Number of conductors per terminal	1	

Insulating Materials						
Part	Type	Manufacturer	RTI	Flammability	Material Group	Approval
Housing / Body	PA66 A30SFN31	LANXESS AG	105	V-0	I	UL E245249
Wire release button	PPE/PS LN60	mitsubishi engineering plastics	65	V-0	I	UL E41179

TÜV Rheinland

26 November 2013

(Date)

(Signature)

Ebisu

(Place)

Sato Parts Co., Ltd.

26 November 2013

(Date)

H.Kinoshita

(Stamp and Signature of Applicant)



**Constructional Data Form for Connector**

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**TYPE NOMENCLATURE:**

SL-4000	-AS	-4P	-z
(a)	(b)	(c)	(d)

(a) - Basic Construction

(b) - Type of Plug side and shape of soldering post.

<b>AS:</b>	Plug side:	Lock lever type
	Soldering post:	None (relay type)
<b>AS2:</b>	Plug side:	Lock lever type
	Soldering post:	None (relay type)
<b>ASV:</b>	Plug side:	Lock lever type
	Soldering post:	None (Relay type with mounting block for vertical fixation)
<b>ASH:</b>	Plug side:	Lock lever type
	Soldering post:	None (Relay type with mounting block for horizontal fixation)
<b>AWSV:</b>	Plug side:	Lock lever type
	Soldering post:	Straight
<b>AWSH:</b>	Plug side:	Lock lever type
	Soldering post:	90°towards back
<b>CWSV:</b>	Plug side:	Half lock type
	Soldering post:	Straight
<b>CWSH:</b>	Plug side:	Half lock type
	Soldering post:	90°towards back
<b>AP:</b>	Plug side:	Lock lever type
	Load side:	Connector,use a part of AS,AS2,ASV,ASH,AWSV or AWSH (Plug)
<b>CP:</b>	Plug side:	Half lock type
	Load side:	Connector,use a part of CWSV or CWSH (Plug)
<b>AJ:</b>	Line side:	Connector
	Soldering post:	None, use a part of AS (receptacle)
<b>AJ2:</b>	Line side:	Connector
	Soldering post:	None, use a part of AS2 (receptacle)
<b>ASJV:</b>	Line side:	Connector
	Soldering post:	None, use a part of ASV (receptacle)
<b>ASJH:</b>	Line side:	Connector
	Soldering post:	None, use a part of ASH (receptacle)
<b>AWJV:</b>	Line side:	Connector
	Load side:	Soldering post,Straight,use a part of AWSV (receptacle)
<b>AWJH:</b>	Line side:	Connector
	Load side:	Soldering post,90°towards back,use a part of AWSH (receptacle)
<b>CWJV:</b>	Line side:	Connector
	Load side:	Soldering post,Straight,use a part of CWSV (receptacle)
<b>CWJH:</b>	Line side:	Connector
	Load side:	Soldering post,90°towards back,use a part of CWSH (receptacle)

(c) - Number of poles

TÜV Rheinland

 26 November  
2013

(Date)

(Signature)

Ebisu

(Place)

Sato Parts Co., Ltd.

H.Kinoshita

(Stamp and Signature of Applicant)

26 November 2013

(Date)





TÜVRheinland®  
DIN CERTCO

Certificate No. R 50270956  
Our reference ZJL-TSM-50000700 001  
Appendix No. 1.0

(To be filled in by TÜV Rheinland)



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**Constructional Data Form for Connector**

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2 thru 15 followed by P

(d) - Color code(Minor suffix)  
May be followed by two digits letters.  
Note:Dashes are optional.

TÜV Rheinland

26 November  
2013

(Date)

(Signature)

Ebisu

(Place)

Sato Parts Co., Ltd.

H.Kinoshita

(Stamp and Signature of Applicant)

26 November 2013

(Date)

# NOTICE OF ALTERATIONS/MODIFICATION (変更通知)

Applicant (申請会社名): Sato Parts Co., Ltd. Date: 2014-05-19  
 Signature(サイン): *B. Kimoshita* Ref. No.: SL-4000-2 Page: 1 of 3  
 Product (製品名): connector with screwless terminals Type designation (型式): SL-4000 series  
 Report No.: 50000700 002 License No.: R 50270956

Methods (Design / Component) Presently Employed (変更前: 現行)	Alteration/Modification to be Introduced (変更後)
<p>Original model/ type : SL-4000 series (all types)</p> <p>Contact plating</p> <ul style="list-style-type: none"> <li>• Nickel-plate</li> <li>• Tin-Plate on Nickel-plate</li> <li>• Gold-plate on Nickel-plate</li> </ul> <p>Wire Terminal with pin contact</p> <p style="text-align: center;">Wire Terminal with action contact</p>	<p>Contact plating</p> <ul style="list-style-type: none"> <li>• Nickel-plate</li> <li>• Gold-plate on Nickel-plate</li> </ul> <p>Wire Terminal with pin contact</p> <p style="text-align: center;">Wire Terminal with action contact</p>

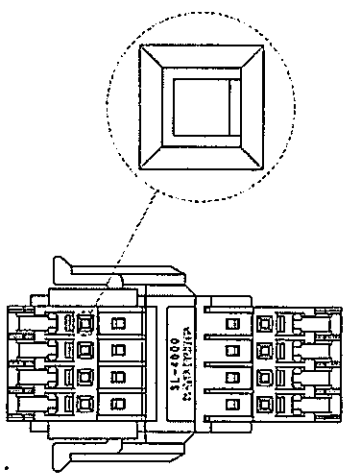
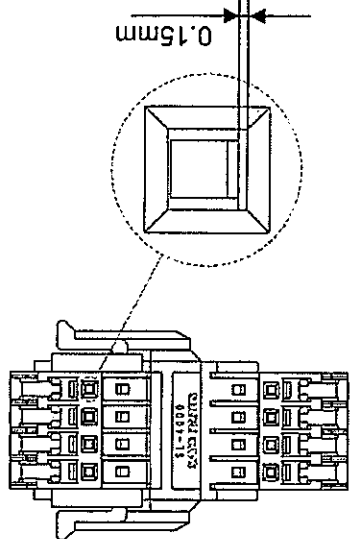
● 記入の仕方: 変更前 (現行) と変更後の対比、違いが明確に理解できる書き方 (英語) をお願いします。  
 特に1次側の変更か2次側の変更かを明記下さい。

**TUV Rheinland Japan**  
 Genehmigt/Approved  
 2014-06-11



Ref. No.: 214050428

# NOTICE OF ALTERATIONS/MODIFICATION (変更通知)

Applicant (申請会社名): Sato Parts Co., Ltd. Date: 2014-05-19  
 Signature(サイン): *H. Kurosawa* Ref. No.: SL-4000-2 Page: 2 of 3  
 Product (製品名): connector with screwless terminals Type designation (型式): SL-4000 series  
 Report No.: 50000700 002 License No.: R 50270956

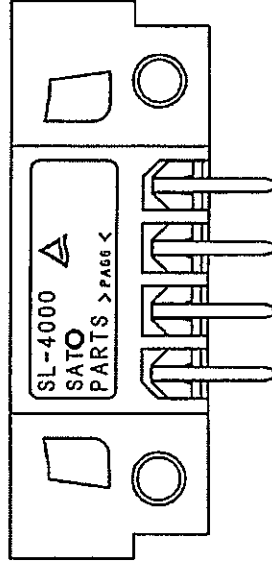
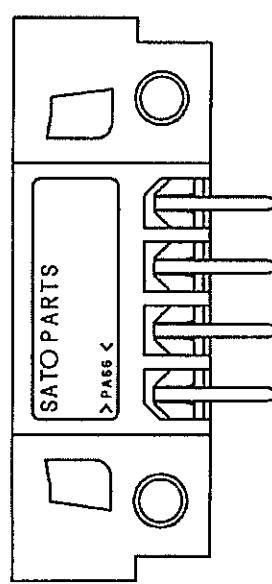
<p>Methods (Design / Component) Presently Employed (変更前: 現行)</p> <p>Original model/ type : SL-4000 series (all types)</p> <p>Body(example:SL-4000-AS-4P)</p> 	<p>Alteration/Modification to be Introduced (変更後)</p> <p>Alterations/ Modification : change of body (Padding 0.15mm)</p> 
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- 記入の仕方: 変更前(現行)と変更後の対比、違いが明確に理解できる書き方(英語)をお願いします。特に1次側の変更か2次側の変更かを明記下さい。



**TUV Rheinland Japan**  
 Genehmigt / Approved  
 2014-06-11  
  
 Ref. No.: 214050428

# NOTICE OF ALTERATIONS/MODIFICATION (変更通知)

Applicant (申請会社名): Sato Parts Co.,Ltd. Date: 2014-05-19  
 Signature(サイン): *H. Kinoshita* Ref. No.: SL-4000-2 Page: Page 3 of 3  
 Product (製品名): connector with screwless terminals Type designation (型式): SL-4000 series  
 Report No.: 50000700 002 License No.: R 50270956

Methods (Design / Component) Presently Employed (変更前 : 現行)	Alteration/Modification to be Introduced (変更後)
<p>Original model/ type : SL-4000-AWJV, SL-4000-AWSV,            SL-4000-AWJH, SL-4000-AWSH,            SL-4000-CWJV, SL-4000-CWSV,            SL-4000-CWJH, SL-4000-CWSH</p> <p>Marking(example:SL-4000-AWJV-4P)</p> 	<p>Alterations/ Modification : change of marking</p> 

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 TUV Rheinland Japan  
 Genehmigt/Approved  
 2014-06-11  
*Zvi*  
 Ref. No.: 214050928