

# Certificate

Manufacturer:

Steca Elektronik GmbH Mammostrasse 1 D-87700 Memmingen Germany

Products: Grid connected photovoltaic (PV) inverter

Models:

StecaGrid 1800, StecaGrid 1800x StecaGrid 2300, StecaGrid 2300x StecaGrid 3010, StecaGrid 3010x StecaGrid 3000 StecaGrid 3600, StecaGrid 3600x StecaGrid 4200, StecaGrid 4200x

The steca Elektronic GmbH hereby declares, that the PV inverters mentioned above fulfil the requirements of

- overvoltage category II (4000 V Impulse withstand voltage ) at the PV input

- overvoltage category III (4000 V Impulse withstand voltage ) at the AC output

according to IEC 62109-1:2011 and IEC 60664-1:2007

Additional surge protection devices may be required depending of the location of the generating unit.

Memmingen, the 17<sup>th</sup> of February 2014

Ralf Griepentrog Head of R& D Department

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 Sparkasse Memmingen-Lindau-Mindelheim
 BLZ 731 500 00
 Kto.-Nr. 380 179 515
 BIC BYLA DE M1 MLM
 IBAN DE29 7315 0000 0380 1795 15

 Commerzbank AG Memmingen
 BLZ 731 800 11
 Kto.-Nr. 7 464 198 00
 BIC ORES DE FF 731
 IBAN DE87 7318 0011 0746 4198 00

 VR-Bank Memmingen 6
 BLZ 731 900 00
 Kto.-Nr. 7 464 198 00
 BIC GENO DE F1 MM1
 IBAN DE92 7319 0000 00516 59
 USD-acc.no. 4010006016-8000051659

 Baden-Württembergische Bank Stuttgart
 BLZ 600 501 01
 Kto.-Nr. 113 97 81
 BIC SOLADEST 600
 IBAN DE93 6005 0101 0001 1397 81

 Bank für Tirol und Vorarlberg AG Memmingen
 BLZ 720 123 00
 Kto.-Nr. 642 583 600
 BIC BTVA DE 61 XXX
 IBAN DE57 7201 2300 0642 5836 00

 Geschäftsführer: Michael Voigtsberger, Peter Voigtsberger
 Sitz der Gesellschaft: Memmingen
 Amtsgericht Memmingen HRB 8226
 USt.-Id.Nr. DE 129 094 841

Certificate of conformity		Nr: 2013 – 1314		
NS protection		Signed copy No. 1		
Manufacturer	Steca Elektronik Gm	Steca Elektronik GmbH		
Type of NS protection	Steca-ENS; integrate	Steca-ENS; integrated NS protection		
Type Power generation unit	StecaGrid 2300x, Ste StecaGrid 3000, Ste	StecaGrid 1800, StecaGrid 1800x, StecaGrid 2300, StecaGrid 2300x, StecaGrid 3010, StecaGrid 3010x, StecaGrid 3000, StecaGrid 3000x, StecaGrid 3600, StecaGrid 3600x, StecaGrid 4200, StecaGrid 4200x		
Network connection rule	VDE-AR-N 4105 "Power generation voltage grid"	"Power generation system connected to the low-		
•	Technical minimum requirements for connection and parallel operation of power generation systems connected to the low-voltage grid			
The network and systems protection mention	ned above meets the requi	rements of VDE-AR-N 4105.		
setting values and trip times (disconnec	tion times):			
voltage drop protection U< Rise-in voltage protection Rise-in voltage protection Frequency decrease prote Frequency increase protect * 10-minute running mean value accord Islanding detection is carried out by mea It is hereby confirmed that – except the DIN V VDE V 0126-1-1:2006-02 +A1:20 have been tested.	U>*: 253 V, < 200 U>>: 264 V, < 200 oction f<: 47,5 Hz, < 2 oction f>: 51,5 Hz, < 2 ing to DIN EN 50160 ans of a frequency shift me above mentioned items - f 011-06	0 ms 0 ms 00 ms 00 ms ethod the specific requirements of		
Memmingen, 19.04.2013 Stee This certificate of conformity shall not be	ca Elektronik GmbH ppa. Ralf Griepentrog e used in parts.	A		
<b>Steca Elektronik GmbH</b> Mammostraße 1 87700 Memmingen		/		
service@stecasolar.com				





# Certificate RCD

The manufacturer:

Steca Elektronik GmbH Mammostrasse 1 D-87700 Memmingen Germany

herby declares, that its photovoltaic inverters for connection to the low voltage grid

StecaGrid 1800, StecaGrid 1800x StecaGrid 2300, StecaGrid 2000x StecaGrid 3010, StecaGrid 3010x StecaGrid 3000 StecaGrid 3600, StecaGrid 3600x StecaGrid 4200, StecaGrid 4200x

do not - in terms of their construction - inject continuous ground fault currents.

According to

IEC 62109-1:2010 (cl. 7.3.8.) IEC 60364-7-712:2002 (cl. 712.413.1.1.1.2.) DIN VDE 0100-712:2006 (cl. 712.413.1.1.1.2.)

there is no requirement that the differential protection installed downstream of the inverter shall be type B in accordance with IEC 60755/A2.

Memmingen, the 21<sup>st</sup> of October 2013

Ralf/Griepentrog

Head of R&D Department

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 IBAN DE27 7318 0011 0746 4198 00

 VR-Bank Memmingen ©
 BLZ 731 900 00
 Kto.-Nr. 7 464 198 00
 BIC DRES DE FF 731
 IBAN DE97 7318 0011 0746 4198 00

 VR-Bank Memmingen ©
 BLZ 731 900 00
 Kto.-Nr. 7 464 198 00
 BIC DRES DE FF 731
 IBAN DE97 7318 0011 0746 4198 00

 VR-Bank Memmingen ©
 BLZ 731 900 00
 Kto.-Nr. 7 1659
 BIC GENO DE F1 MMI
 IBAN DE92 7319 0000 0000 0000 0001 0001 1397 81

 Bank für Tirol und Vorarlberg AG Memmingen
 BLZ 720 123 00
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 Sitz der Gesellschaft: Memmingen & Amtsgericht Memmingen HRB 8226
 USt.-Id.Nr. DE 129 094 841



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Certification body of BV CPS GmbH Accredited according to EN 45011 -ISO / IEC Guide 65

# **Certificate of compliance**

Applicant:

**Product:** 

Model:

Steca Elektronik GmbHMammostr. 187700 MemmingenGermanyGrid-tied photovoltaic inverterStecaGrid 4200, StecaGrid 4200x, StecaGrid 3600,StecaGrid 3600x, StecaGrid 3010, StecaGrid 3010x,StecaGrid 3000, StecaGrid 2300, StecaGrid 2300x,StecaGrid 2020, StecaGrid 1800, StecaGrid 1800x

### Use in accordance with regulations:

Automatic disconnection device with single-phase mains surveillance in accordance with IEC 61727:2004 and IEC62116:2008 for photovoltaic systems with a single-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverters.

### Applied rules and standards:

#### IEC 61727:2004

Photovoltaic (PV) systems – Characteristics of the utility interface **IEC 62116:2008** 

Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters **IEC 62109-1:2010** 

Safety of power converters for use in photovoltaic power systems - Part 1: General requirements **IEC 62109-2:2011** 

Safety of power converters for use in photovoltaic power systems - Part 2: Particular requirements for inverters

The following values according IEC61727 and IEC62116 were applied:

under voltage limit (level 1):	195,5V
under voltage limit (level 2):	115,0V
over voltage limit (level 1):	253,0V
overvoltage limit (level 2):	310,0V
lower frequency limit:	49,0Hz
upper frequency limit:	51,0Hz
loss of main detection limit:	2s

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

Report number:		10TH0241-IEC61727		
		10TH0241-IEC62116		
		10TH0241-IEC62109-1		
		10TH0241-IEC62109-2		
	Certificate number:	U13-0709		
	Date of issue:	2013-30-02	Valid until:	2016-30-01

## **Certification body**



Dieter Zitzmann

nn

### Zertifikat/ Certificat/ Certificat Nr.

Die Firma The company La société

### 002-0113



Steca Elektronik GmbH Mammostraße 1 87700 Memmingen Germany www.steca.com

erklärt in alleiniger Verantwortung, dass folgendes Produkt hereby certifies on its responsibility that the following product se déclare seule responsable du fait que le produit suivant Netzwechselrichter StecaGrid 1800 StecaGrid 2300 StecaGrid 3010 StecaGrid 3000 StecaGrid 3600 StecaGrid 4200

auf das sich diese Erklärung bezieht, mit folgenden Richtlinien bzw. Normen übereinstimmt. which is explicitly referred to by this Declaration meet the following directives and standard(s). qui est l'objet de la présente déclaration correspondent aux directives et normes suivantes.

Elektromagnetische Verträglichkeit – Richtlinie Electromagnetic Compability – Directive Compatibilité éléctromagnetique – Directive

Niederspannungsrichtlinie Low Voltage Directive Directive de basse tension 2004/108/EG

2006/95/EG

Europäische Normen <sup>1) (2 / 2)</sup> European Standard Norme européenne

EN 55 014-1

EN 61 000-6-2

EN 61 000-6-3

Ralf Griepentrog, Entwicklungsleiter

EN 62 109-1

EN 62 109-2

Die oben genannte Firma hält Dokumentationen als Nachweis der Erfüllung der Sicherheitsziele und die wesentlichen Schutzanforderungen zur Einsicht bereit.

Documentation evidencing conformity with the requirements of the Directives is kept available for inspection at the above company.

En tant que preuve de la satisfaction des demandes de sécurité la documentation peut être consultée chez la société sousmentionnée.

Memmingen, 22.01.2013

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#### Netzwechselrichter StecaGrid 3010 StecaGrid 4200

#### BG

#### Декларация за съответствие на европейските норми

С настоящето декларираме, че посочените на страница 1 продукти, отговарят на следните норми и директиви:

Електромагнитна устойчивост 2004/108/EG,

директива за ниско напрежение - 2006/95/EG Приложими съгласувани стандарти и норми в частност:

#### EE

#### EL vastavusavaldus

Käesolevaga avaldame, et nimetatud toode on kooskõlas järomiste direktiivide ja standarditega Elektromagnetilise ühilduvuse direktiiv 2004/108/EG Madalningedirektiiv 2006/95/EG

Kohaldatud Euroopa standardid, eelkõige: 1)

#### GR

### Δήλωση προσαρμογής στις προδιαφές της Ε.Ε.

(Ευρωπαϊκής Ένωσης) Δηλώνουμε ότι το προϊόν αυτο σ' αυτή την κατάσταση παράδοσης ικανοποιεί τις ακόλουθες διατάξεις: ΗλΕκτρομαγνητική συμβατότητο 2004/108/EG, Οδηγία χαμηλής τάσης 2006/95/EG

Εναρμονισμένα χρησιμοποιούμενα πρότυπα, ιδιαίτερα:<sup>1)</sup>

#### I T

## Atitikties pareiškimas su Europos Sąjungoje galiojančiomis normomis

Šiuo mes pareiškiame, kad nurodytas gaminys atitinka sekančias direktyvas bei normas

Elektromagnetinio suderinamumo direktyvą 2004/108/EG,

Žemosios itampos direktyva 2006/95/EG. Naudojamas Europoje normas, ypač: 1)

EU-Overensstemmelseserkæring Vi erklærer hermed at denne enheten i utføreise som levert er i overensstemmelse med følgende relevante bestemmelser

EG-EMV-Elektromagnetisk kompatibilitet 2004/108/EG, EG-Lavspenningsdirektiv 2006/95/EG

Anvendte harmoniserte standarder, særlig: 1)

#### RO

#### Declaratie de conformitate UE

Prin prezenta se declară că produsul mai sus menționat este în conformitate cu următoarele directive, respectiv norme

Compatibilitate electromagnetică 2004/108/EG. Directiva CE referitoare la tensiunile joase 2006/95/EG. Norme europene utilizate, în special: 1)

#### SI

#### EU-iziava o skladnosti

Izjavljamo, da je navedeni izdelek skladen z nasledniimi direktivami oz. standardi Direktiva o elektromagnetni združljivost 2004/108/EG, Direktiva o nizkonapetostni opremi 2006/95/EG. Uporabljene evropski standardi, še posebej: 1)

## EU – KONFORMITÄTSERKLÄRUNG EC – DECLARATION OF CONFIRMITY DECLARATION DE CONFORMITE DE LA CE

#### StecaGrid 1800 StecaGrid 3000

#### CZ

#### Prohlášení o shodê EU

Prohlašujeme timto, že tento agregat v dodaném provedeni odpovidá následujícím prislušnym ustanovenim:

Smêrnicim EU-EMV 2004/108/EG Smêrnícim EU-nizkê napéti 2006/95/EG. Pouzité harmonizačni normy, zejména: 1)

#### ES

#### Declaración de conformidad CE Por la presente declaramos la conformidad del producto en su estado de suministra con las disposiciones pertinentes siguientes: Compatibilidad electromagnética 2004/108/EG. Directiva sobre equipos de baja tensión 2006/95/EG. Normas armonizadas adoptadas, especialmente:

#### ΗП

EK. Azonossági nyilatkozat Ezennel kijelentjük, hogy az berendezés az alábbiaknak megfalel: Elektromágneses zavarás/tűrés: 2004/108/EG. Kisfeszültségű berendezések irány-Elve: 2006/95/EG. Felhasznált harmonizált szabványok, különösen: 1)

### 1 V

#### ES Atbilstības deklarācija

Paziņojam, ka minētais izstrādājums atbilst sekojošām direktīvām ieb normām: 2004/108/EG Par elektromagnētisko panesamību,

2006/95/EG Direktīvai par zem spriegumu. Izmantotās Eiropas normas, īpaši: 1)

### PI

Deklaracja Zgodnošci CE Niniejzym deklarujemy z pelną odpowiedzialnoscią źe dostarczony wyrób jest zgdony z następującymi dokumentami:

Odpowiedniść elektromagnetyczna

2004/108/EG.

Normie niskich napięć 2006/95/EG Wyroby są zgodne ze szczególowymi normami zharmonizowanymi

#### RIJ

Деклация о соответствии Европейским нормам Настоящим документом эаявляем, что даннь агрегат в его объеме поставки соответствует следующим нормативным документам: Электромагнитная устойчивость 2004/108/ЕС Слоктронализия устоичивость 2004/100/ Директивы по низковольтному напряженик 2006/95/EG.

Используемые согласованные стандарты и нормы в частности:

#### SK

Prehlásenie o zhode ES Týmto prehlasujeme, že sa uvedený produkt zhoduje s nasledovnými smernicami príp. nomami: Elektromagnetická zlučiteľnosť 2004/108/EG.

Smernica o nízkom napätí 2006/95/EG. Použité európske normy, predovšetkým:1)

#### StecaGrid 2300 StecaGrid 3600

#### DK

#### EF-overensstemmelseserklæring Vi erklærer hermed, at denne enhed ved levering overholder følgende relevante bestemmelser Elektromagnetisk kompatibilitet: 2004/108/EG.

Lavvolts-direktiv 2006/95/EG.

Anvendte harmoniserede standarder, særligt 1)

#### CF-standardinmukaisuusseloste Imoitamme täten, että tämä laite vastaa seuraavia asiaankuuluvia määrävksiä:

Sähkömagneettinen soveltuvuus 2004/108/EG, Matalaiännite direktiivit: 2006/95/EG

Käytetyt yhteensovitetut standardit, eritysest: 1)

#### IT

Dichiarazione di conformitá CE Con la presente si dichiara che i presenti prodotti sono conformi alle squenti disposizioni e direttive rilevanti Compatibilitá elettromagnetica 2004/108/EG, Direttiva bassa tensione 2006/95/EG. Norme amonizzate applicate, in particolare: 1)

#### NI

#### EU-verklaring van overeenstemming Hiermede verklaren wij dat dit aggregaat in die geleverde uitvoering voldget aan de volgende bepalingen Elektromagnetische compatibiliteit 2004/108/EG.

EG-laagspanningsrichtlijn 2006/95/EG.

Gebruikte geharmoniseerde normen, in het biizonder: 1)

#### PT

#### Declaração de Conformidade CE Pela presente, declaramos que esta unidada no seu estado original, estã conforme os seguintes requisitos: Compatibilidade electromagnétice 2004/108/EG, Directiva de baixa voltagem 2006/95/EG. Normas harmonizadas aplicadas, especialmente: 1)

#### SE CE-försäkran

Härmed förklarar via tt denna maskin i levererat utförande motsvarar följande tillämpliga bestämmelser: EG-Elektromagnetisk kompatibilitet 2004/108/EG. EG-Lägspänningsdirektive 2006/95/EG Tilämpada harmoniserade normer, i synnerhet; 1)

#### TR

#### EC Uygunluk Teyid Belgesi Bu cihazın teslim edildiği şekliyle aşağıdaki standarlara uygun olduğunu teyid ederiz: Elektromanyetik Uyumluluk 2004/108/EG, Alçak gerilim direktifi 2006/95/EG. Kismen kullanılan standartlar: 1)