



TSUNESS Co., Ltd
ADD: No. 2266, Taiyang Road, Suzhou City,
Jiangsu Province, P.R. China
Email: sales@tsun-ess.com
Web: www.tsun-ess.com

CERTIFICAT DE CONFORMITÉ

Numéro de certificat: CN-PV-230236

Sur la base des tests effectués, les échantillons<s>du produit ci-dessous se sont avérés conformes aux exigences de la spécification<s>/norme <s> référencée au moment où les tests ont été effectués. Cela n'implique pas qu'Intertek ait effectué une surveillance ou un contrôle du ou des fabricants. Le ou les fabricants doivent s'assurer que le procédé de fabrication assure la conformité des unités de production avec les produits examinés

Demandeur: TSUNESS Co., Ltd
No. 2266, Taiyang Road, High-speed Rail New Town,
Xiangcheng District, Suzhou City, Jiangsu Province, 215133,
P.R. China

Produit: Micro-onduleur

Évaluations et caractéristiques principales : Voir annexe du certificat de conformité

Modèle: TSOL-MS300, TSOL-MS350, TSOL-MS400, TSOL-MS600,
TSOL-MS700, TSOL-MS800

Nom de marque<s> : TSUN

Produit conforme à : EN 50549-1:2019 Exigences pour le raccordement des
équipements de production en parallèle avec les réseaux publics
de distribution

Nom et adresse du bureau de délivrance du certificat : Intertek Testing Services Ltd. Shanghai
West Area, 2nd Floor, No. 707, Zhangyang Road
China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China
Accredited by ACCREDIA in accordance with ISO/IEC
17065:2012

N° de rapport de test<s> : 221101454SHA-002

Informations complémentaires en annexe.

Responsable Certification: Qiao Qiao
Date : 16 Mai 2023



Page 1/3

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ANNEXE : Certificat de conformité

Ceci est une annexe au certificat de conformité numéro : CN-PV-230236

Notes et principales caractéristiques :

Tableau des spécifications			
Modèle	TSOL-MS300	TSOL-MS350	TSOL-MS400
Données d'entrée (CC)			
Vmax PV (Vdc)	60	60	60
Icc PV (max. absolu) (A)	15	20	20
Nombre de trackers MPPT	1	1	1
Nombre de chaînes d'entrée	1	1	1
Max. Courant d'entrée PV(A)	14	14	14
Plage de tension MPPT (Vdc)	16 - 60	16 - 60	16 - 60
Données de sortie (CA)			
Tension de sortie nominale (V)	L/N/PE 230Vac		
Fréquence nominale (Hz)	50Hz		
Max. Courant de sortie continu (A)	1.45	1.59	2
Puissance de sortie continue nominale (kW)	0.3	0.35	0.4
Max. Puissance de sortie continue (kVA)	0.3	0.35	0.4
Facteur de puissance / (par défaut)	-0.8~+0.8		
Autres			
Classe de protection	Classe I		
Indice de protection (IP)	IP 67		
Plage de température ambiante de fonctionnement (°C)	- 40°C to +65°C		
Type d'isolement	<input type="checkbox"/> Pas isolé <input checked="" type="checkbox"/> Haute fréquence isolée		
Catégorie de surtension	OVC III (CA principal), OVC II (PV)		
Dimensions (mm)	178mm * 153mm * 28mm		
Poids (kg)	1.98kg		
Version du firmware	Version du logiciel : V1.0		

Traducteur : TSUNESS Co., Ltd
 Date : 14 Juillet 2023





TSUNESS Co., Ltd
ADD: No. 2266, Taiyang Road, Suzhou City,
Jiangsu Province, P.R. China
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ANNEXE : Certificat de conformité

Ceci est une annexe au certificat de conformité numéro : CN-PV-230236

Notes et principales caractéristiques :

Tableau des spécifications			
Modèle	TSOL-MS600	TSOL-MS700	TSOL-MS800
Données d'entrée (CC)			
Vmax PV (Vdc)	60	60	60
Icc PV (max. absolu) (A)	2*15	2*20	2*20
Nombre de trackers MPP	2	2	2
Nombre de chaînes d'entrée	1/1	1/1	1/1
Max. Courant d'entrée PV(A)	2*14	2*14	2*14
Plage de tension MPPT (Vdc)	16 - 60	16 - 60	16 - 60
Données de sortie (CA)			
Tension de sortie nominale (V)	L/N/PE 230Vac		
Fréquence nominale (Hz)	50Hz		
Max. Courant de sortie continu (A)	3	3.19	4
Puissance de sortie continue nominale (kW)	0.6	0.7	0.8
Max. Puissance de sortie continue (kVA)	0.6	0.7	0.8
Facteur de puissance / (par défaut)	-0.8~+0.8		
Autres			
Classe de protection	Classe I		
Indice de protection (IP)	IP 67		
Plage de température ambiante de fonctionnement (°C)	- 40°C to +65°C		
Type d'isolement	<input type="checkbox"/> Pas isolé <input checked="" type="checkbox"/> Haute fréquence isolée		
Catégorie de surtension	OVC III (CA principal), OVC II (PV)		
Dimensions (mm)	250mm * 170mm * 28mm		
Poids (kg)	3kg		
Version du firmware	Version du logiciel : V1.0		



Certificate of Conformity

Certificate Number: CN-PV-230236

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	TSUNESS Co., Ltd No. 2266, Taiyang Road, High-speed Rail New Town, Xiangcheng District, Suzhou City, Jiangsu Province, 215133, P.R. China
Product:	Microinverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	TSOL-MS300, TSOL-MS350, TSOL-MS400, TSOL-MS600, TSOL-MS700, TSOL-MS800
Brand Name<s>:	TSUN
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	221101454SHA-002

Additional information in Appendix.



Signature

Certification Manager: Qiao Qiao

Date: 16 May 2023



PRD N° 306B

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230236

Ratings & Principal Characteristics:

Specifications table			
Model	TSOL-MS300	TSOL-MS350	TSOL-MS400
<i>Input Data (DC)</i>			
Vmax PV (Vdc)	60	60	60
Isc PV (absolute Max.) (A)	15	20	20
Number of MPP Trackers	1	1	1
Number of Input Strings	1	1	1
Max. PV Input Current(A)	14	14	14
MPPT Voltage Range (Vdc)	16-60	16-60	16-60
<i>Output Data (AC)</i>			
Nominal Output Voltage(V)	L/N/PE 230Vac		
Nominal Frequency (Hz)	50Hz		
Max. Continuous Output Current(A)	1.45	1.59	2
Nominal Continuous Output Power (kW)	0.3	0.35	0.4
Max. Continuous Output Power (kVA)	0.3	0.35	0.4
Power factor /(default)	-0.8~+0.8		
<i>Others</i>			
Protective Class	Class I		
Ingress Protection (IP)	IP 67		
Operating Ambient Temperature Range (°C)	-40°C to +65°C		
Type Of Isolation	<input type="checkbox"/> Non-isolated <input checked="" type="checkbox"/> High frequency isolated		
Over Voltage Category	OVC III (AC Main), OVC II (PV)		
Dimension (mm)	178mm * 153mm * 28mm		
Weight (kg)	1.98kg		
Firmware Version	Software Version: V1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230236

Ratings & Principal Characteristics:

Specifications table			
Model	TSOL-MS600	TSOL-MS700	TSOL-MS800
<i>Input Data (DC)</i>			
Vmax PV (Vdc)	60	60	60
Isc PV (absolute Max.) (A)	2*15	2*20	2*20
Number of MPP Trackers	2	2	2
Number of Input Strings	1/1	1/1	1/1
Max. PV Input Current(A)	2X14	2X14	2X14
MPPT Voltage Range (Vdc)	16-60	16-60	16-60
<i>Output Data (AC)</i>			
Nominal Output Voltage(V)	L/N/PE 230Vac		
Nominal Frequency (Hz)	50Hz		
Max. Continuous Output Current(A)	3	3.19	4
Nominal Continuous Output Power (kW)	0.6	0.7	0.8
Max. Continuous Output Power (kVA)	0.6	0.7	0.8
Power factor /(default)	-0.8~+0.8		
<i>Others</i>			
Protective Class	Class I		
Ingress Protection (IP)	IP 67		
Operating Ambient Temperature Range (°C)	-40°C to +65°C (>50°C derating)		
Type Of Isolation	<input type="checkbox"/> Non-isolated <input checked="" type="checkbox"/> High frequency isolated		
Over Voltage Category	OVC III (AC Main), OVC II (PV)		
Dimension (mm)	250mm * 170mm * 28mm		
Weight (kg)	3kg		
Firmware Version	Software Version: V1.0		

Note: The Irish national deviation was considered

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Certificate of Conformity

Certificate Number: CN-PV-230066

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	TSUNESS Co., Ltd No. 2266, Taiyang Road, High-speed Rail New Town, Xiangcheng District, Suzhou City, Jiangsu Province, 215133, P.R. China
Product:	Microinverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	TSOL-MS300, TSOL-MS350, TSOL-MS400, TSOL-MS600, TSOL-MS700, TSOL-MS800
Brand Name<s>:	TSUN
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks PSE: 18 Dec 2018, requirements of general application resulting from Commission Regulation (EU)2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (NC RfG)
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	221101454SHA-001

Additional information in Appendix.

Signature



Certification Manager: Qiao Qiao
Date: 28 February 2023



PRD N° 306B

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230066

Ratings & Principle Characteristics:

Specifications table			
Model	TSOL-MS300	TSOL-MS350	TSOL-MS400
<i>Input Data (DC)</i>			
Vmax PV (Vdc)	60	60	60
Isc PV (absolute Max.) (A)	15	20	20
Number of MPP Trackers	1	1	1
Number of Input Strings	1	1	1
Max. PV Input Current(A)	12.5	13.3	14
MPPT Voltage Range (Vdc)	16-60	16-60	16-60
<i>Output Data (AC)</i>			
Nominal Output Voltage(V)	L/N/PE 230Vac		
Nominal Frequency (Hz)	50Hz		
Max. Continuous Output Current(A)	1.45	1.59	2
Nominal Continuous Output Power (kW)	0.3	0.35	0.4
Max. Continuous Output Power (kVA)	0.3	0.35	0.4
Power factor /(default)	-0.8~+0.8		
<i>Others</i>			
Protective Class	Class I		
Ingress Protection (IP)	IP 67		
Operating Ambient Temperature Range (°C)	-40°C to +65°C		
Type Of Isolation	<input type="checkbox"/> Non-isolated <input checked="" type="checkbox"/> High frequency isolated		
Over Voltage Category	OVC III (AC Main), OVC II (PV)		
Dimension (mm)	178mm * 153mm * 28mm		
Weight (kg)	1.98kg		
Firmware Version	Software Version: V1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230066

Ratings & Principle Characteristics:

Specifications table			
Model	TSOL-MS600	TSOL-MS700	TSOL-MS800
<i>Input Data (DC)</i>			
Vmax PV (Vdc)	60	60	60
Isc PV (absolute Max.) (A)	2*15	2*20	2*20
Number of MPP Trackers	2	2	2
Number of Input Strings	1/1	1/1	1/1
Max. PV Input Current(A)	2X12.5	2X13.3	2X14
MPPT Voltage Range (Vdc)	16-60	16-60	16-60
<i>Output Data (AC)</i>			
Nominal Output Voltage(V)	L/N/PE 230Vac		
Nominal Frequency (Hz)	50Hz		
Max. Continuous Output Current(A)	3	3.19	4
Nominal Continuous Output Power (kW)	0.6	0.7	0.8
Max. Continuous Output Power (kVA)	0.6	0.7	0.8
Power factor /(default)	-0.8~+0.8		
<i>Others</i>			
Protective Class	Class I		
Ingress Protection (IP)	IP 67		
Operating Ambient Temperature Range (°C)	-40°C to +65°C (>50°C derating)		
Type Of Isolation	<input type="checkbox"/> Non-isolated <input checked="" type="checkbox"/> High frequency isolated		
Over Voltage Category	OVC III (AC Main), OVC II (PV)		
Dimension (mm)	250mm * 170mm * 28mm		
Weight (kg)	3kg		
Firmware Version	Software Version: V1.0		

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Certificat de conformité

Certificate of Conformity

N° d'enregistrement:
Registered No.:

COCPVP03167/23B-01

Référence de fichier
File reference

PVP03167/23B-01

Rapport de test N°
Test report No.

TRPVP03167/23B/01

Date d'émission
Date of issue

2023-03-31

Sur la base des essais réalisés, les échantillons du ou des produits ci-dessous ont été jugés en conformité avec les exigences essentielles des spécifications référencées au moment où les essais ont été effectués :
On the basis of the tests undertaken, the samples of the below product(s) have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out:

Demandeur: TSUNESS CO., LTD
Applicant: No. 2266, Taiyang Road, Suzhou, Jiangsu Province, P.R. China
Fabricant: TSUNESS CO., LTD
Manufacturer: No. 2266, Taiyang Road, Suzhou, Jiangsu Province, P.R. China
Usine: TSUNESS CO., LTD
Factory: No. 2266, Taiyang Road, Suzhou, Jiangsu Province, P.R. China
Produit: Micro - onduleur photovoltaïque
Product: PV Microinverter
Désignation de type: TSOL-MS800, TSOL-MS700, TSOL-MS600
Type designation: TSOL-MS400, TSOL-MS350, TSOL-MS300
Programme de certification: BOS-P-01 Rev. 00
Certification program:
Normes de certification: UTE C15-712-1:2013, Enedis-PRO-RES_10E Version 5, DIN VDE V
Certification fundamental(s): 0126-1-1:2013, DIN VDE 0126-1-1 VFR2019, DIN VDE V 0126-1-1:2006+A1:2012 with deviations according to SEI REF 04 Version V7.
Voir le rapport de test pour des informations détaillées.
See test report for detailed information.

Ce document est basé sur l'évaluation des échantillons du ou des produits mentionnés ci-dessus. Il n'implique pas une évaluation de la production en série du ou des produits et ne permet pas l'utilisation d'une marque TÜV NORD. Le détenteur de ce document peut l'utiliser en relation avec le(s) rapport(s) d'essai correspondant(s).

This document is based on the evaluation of the samples of the above mentioned product(s). It does not imply an assessment of the mass-production of the product(s), and it does not permit the use of a TÜV NORD mark. The holder of this document may use it in connection with the related test report(s).



Renewable Energy