Product Service

Technical Report No.: 64.290.15.01660.03B

Date: 2022-08-23

Client:	Name:	V-TAC EXPORTS LIMITED
	Address:	Room No.301, KAM ON Building 176A Queens Road, Central Hong Kong, HONG KONG
Factory:	Name:	Shenzhen Invt Electric Co., Ltd. (Baoan Factory)
	Address:	4th to 1st floors of Emerson Industral Park, No. 3, Fengtang Avenue, Tongwei Community, Fuhai Street, Baoan District, 518000 Shenzhen, PEOPLE'S REPUBLIC OF CHINA
Test object:	Product:	PV grid-interactive inverter
	Model:	VT-6603105, VT-6605110, VT-6603110, VT-6605105
	Trademark (if any):	V-TAC®
Test specification:		EN 62109-1:2010, EN 62109-2:2011
Purpose of examination:		• Testing for compliance with specified requirements to assess conformity with the essential safety and health requirements of the following European Directives: LVD 2014/35/EU • Testing and evaluation according to the test specification
Test result:		The test results show that the presented product is in compliance with the above listed test specifications.

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question. It does not imply a general statement regarding the quality of products from regular production. For further details please see testing and certification regulation, chapter A-3.4.

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Guangzhou Branch, TÜV SÜD Group

5F, Communication Building, 163 Pingyun Rd,
Huangpu Ave. West,Guangzhou, 510656,
P.R.China

Product Service

1. Description of the test object

1.1. Picture(s)

Refer to Photo Documentation

1.2. Function

General product information:

(1) The PGU unit is non-isolated (transformerless) PV grid-interactive DC-AC inverter for connection with public low voltage grid, for outdoor or indoor use.
(2) The PV grid-interactive inverter shall be used at specified ambient range. Temperature range: -25 °C ~ +60 °C, Auto-derating after 45 °C; Altitude: < 2000 m; Overvoltage category: II(DC side), III(AC side); Relative humidity range: 4 % ~ 100 %.
(3) The PV grid-interactive inverter provides four disconnection relays, two for line conductor and neutral conductor. The internal control is redundant built. It consists one main DSP (U1) and slave DSP (U7). Both DSP can open relays independently and communicate with each other.
(4) The unit can control the active power and reactive power via RS 485 communication port.
(5) DC Switch-disconnector is optional component. Three display board are provided for option, two are different type LCD board, one is LED board. The anti-reflux broad is optional for using with three type display board.
(6) In order to protect the PCE, user and installer, external DC and AC circuit breaker shall be equipped at the end-use application.
(7) Low voltage electrical installations shall comply with national and local regulation.

Model differences:

The 4 models have similar electric circuits, similar electrical control circuits, software protection designed, with mainly differences as below:
(1) Have different amounts of bus capacitors. For detail, see CDF.
(2) Have different ratings of boost and inverting inductor. For detail, see CDF.
(3) Have different ratings of power semiconductors. For detail, see CDF.
(4) Have different Dimension of enclosure. For detail, see CDF.
(5) The Model: VT-6603105, VT-6603110, VT-6605105 has two MPPT trackers with one pair of PV input terminals for each tracker, the Model VT-6605110 have one MPPT tracker with two pairs of PV input terminals.

1.3. Consideration of the foreseeable use

☐ Not applicable
☒ Covered through the applied standard
☐ Covered by the following comment*
☐ Covered by attached risk analysis

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1.4. Technical Data

Model	VT-6603105	VT-6605110	VT-6603110	VT-6605105
Vmax PV	600 Vd.c.	600 Vd.c.	600 Vd.c.	600 Vd.c.
MPPT Range	125 ~ 550 Vd.c.	125 ~ 550 Vd.c.	125 ~ 550 Vd.c.	125 ~ 550 Vd.c.
MPPT Range (full load)	180 ~ 480 Vd.c.	240 ~ 480 Vd.c.	200 ~ 480 Vd.c.	240 ~ 480 Vd.c.
MPPT / Strings per MPPT	2 / 1	1 / 2	2 / 1	2 / 1
Max. Continuous input current	2x8 Ad.c	20 Ad.c.	2x10 Ad.c	2x12 Ad.c
Isc PV	2x9 Ad.c	22 Ad.c.	2x11 Ad.c	2x14 Ad.c
Max. continuous output current	14 Aa.c.	20 Aa.c.	16 Aa.c.	20 Aa.c.
Nominal active power Pn	3000 W	4600 W	3680 W	4600 W
Nominal AC Frequency	50 Hz			
Nominal AC voltage	230 Va.c.			
Power factor (adjustable)	0.95 under-excited to 0.95 over-excited			
Operation temperature range	-25 °C ~ +60 °C, auto-derating above 45 °C			
Over voltage category	DC II, AC III			
Protective class	I			
Ingress protection	IP65			

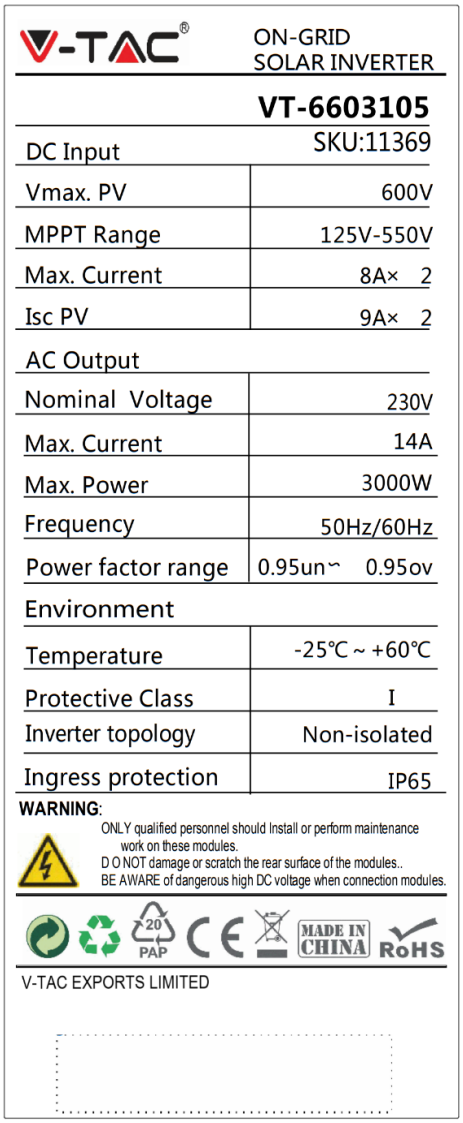
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1.5. Rating Label



V-TAC ON-GRID SOLAR INVERTER

VT-6603105

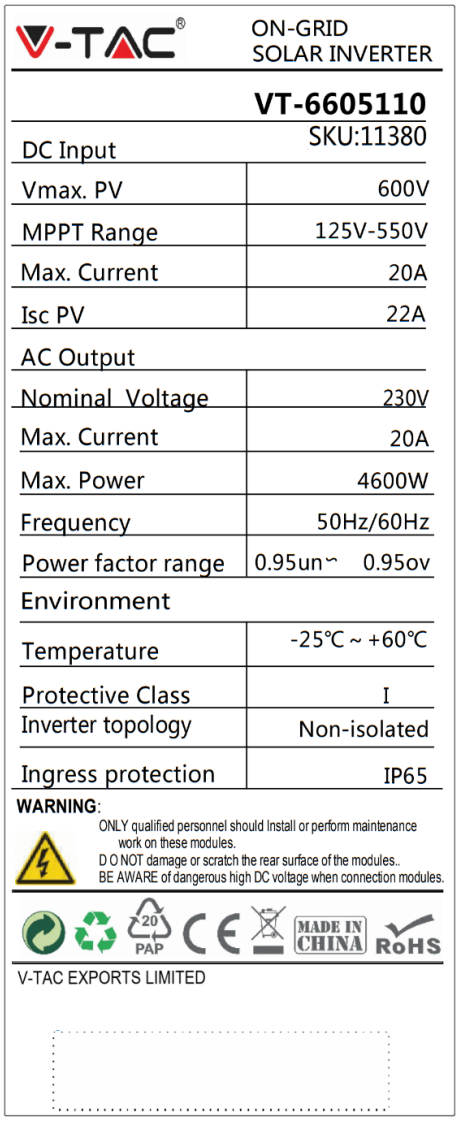
SKU:11369

DC Input	
Vmax. PV	600V
MPPT Range	125V-550V
Max. Current	8A× 2
Isc PV	9A× 2
AC Output	
Nominal Voltage	230V
Max. Current	14A
Max. Power	3000W
Frequency	50Hz/60Hz
Power factor range	0.95un⌢ 0.95ov
Environment	
Temperature	-25℃ ~ +60℃
Protective Class	I
Inverter topology	Non-isolated
Ingress protection	IP65

WARNING:

ONLY qualified personnel should Install or perform maintenance work on these modules.
D O NOT damage or scratch the rear surface of the modules..
BE AWARE of dangerous high DC voltage when connection modules.

V-TAC EXPORTS LIMITED



V-TAC ON-GRID SOLAR INVERTER

VT-6605110

SKU:11380

DC Input	
Vmax. PV	600V
MPPT Range	125V-550V
Max. Current	20A
Isc PV	22A
AC Output	
Nominal Voltage	230V
Max. Current	20A
Max. Power	4600W
Frequency	50Hz/60Hz
Power factor range	0.95un⌢ 0.95ov
Environment	
Temperature	-25℃ ~ +60℃
Protective Class	I
Inverter topology	Non-isolated
Ingress protection	IP65

WARNING:

ONLY qualified personnel should Install or perform maintenance work on these modules.
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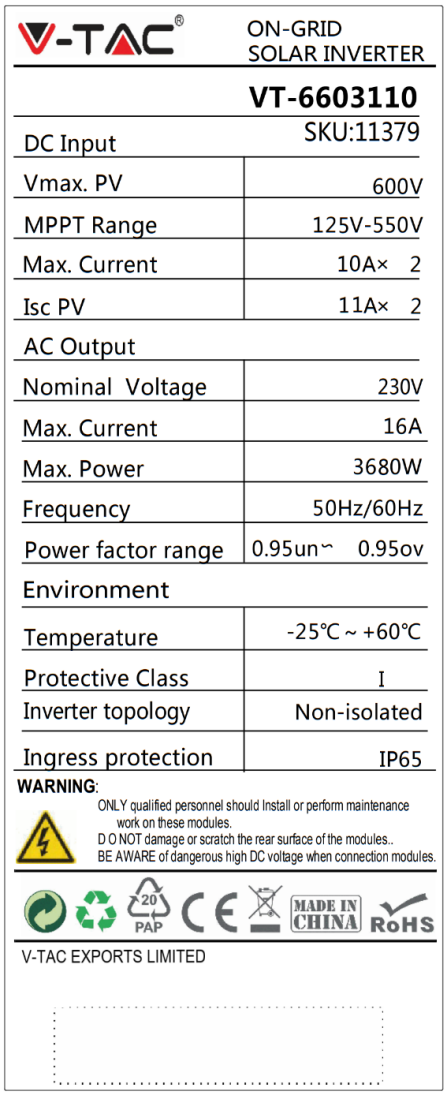
V-TAC EXPORTS LIMITED

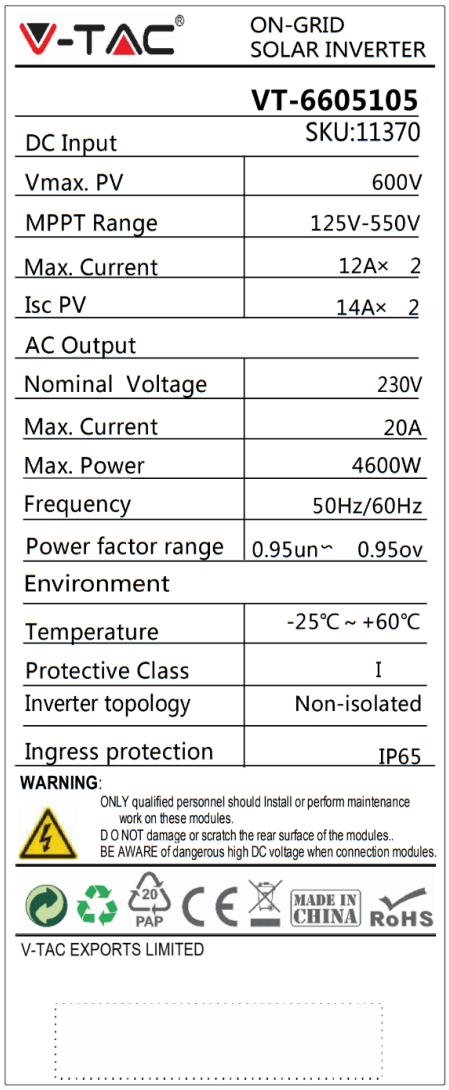
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Dimension (Approx.): 50x100 mm

Below warnings and symbols are silk-screen on label and affixed side of enclosure.



Dimension(Approx.): 40x10mm



Dimension(Approx.): 40x25 mm

2. Order

2.1. Date of Purchase Order, Customer's Reference

2015-05-25, 2019-04-23, 2019-11-21, 2022-07-27

2.2. Test Sample(s)

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- Reception date(s): 2015-05-25, 2019-04-23, 2019-11-25, 2022-08-09
- Location(s) of reception: TÜV SÜD Testing Center, D1 building, No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, P.R. China
- Condition of test sample(s): Intact

2.3. Date(s) of Testing

2015-07-20 to 2015-09-25, 2019-04-24 to 2019-06-16, 2019-11-25 to 2019-12-04, 2022-08-09 to 2022-08-23

2.4. Location(s) of Testing

TÜV SÜD Testing Center, D1 building, No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, P.R. China

2.5. Points of Non-Compliance or Exceptions of the Test Procedure

- None

3. Test Results

- "Decision rule according to IEC Guide 115:2021, clause 4.4.3, 4.5.1 was applied."

3.1. Positive Test Results

Test specification(s)	Report no. / Rev. No.	Date	Remark
Electrical safety:	64.290.15.01660.03B	2022-08-23	-

4. Remarks

4.1. General

The user manual has been examined according to the minimum requirements described in the product standard. The manufacturer is responsible for the accuracy of further particulars as well as of the composition and layout.

4.2. The co-license certificate application is based on the following main license certificate:

Certificate No.: N8A 093811 0034 Rev. 01

Report No.: 64.290.15.01660.03

License holder: INVT Solar Technology (ShenZhen) Co., Ltd.

Model No.: iMars MG3KTL-2M, iMars MG5KTL, iMars MG4KTL-2M, iMars MG5KTL-2M
(for model VT-6603105, VT-6605110, VT-6603110, VT-6605105 in co-license)

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5. Documentation

- CDF
- Photo documentation

6. Summary

The test specifications are met.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
TÜV SÜD Group

Tested by: Vincent Liang

printed name, function & signature

Approved by: Kennen Wang

printed name, function & signature

--- End of Report ---

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