

Technical Report No.: 64.290.22.30584.01

Date: 2022-09-21

Client: Huawei Digital Power Technologies Co.,Ltd.

Factory: Factory1: Liding Electronic Technology (Dongguan) Co., LTD.
Address1: Building 2, No.313, Qingxi North Ring Road, Qingxi Town, Dongguan City, Guangdong Province, P.R.China
Factory 2: Huizhou Huazhi New Energy Technology Co.,Ltd.
Address 2: No.8 Factory, Xinhua Avenue, Chenjiang Street, Zhongkai High-tech Zone, Huizhou, Guangdong Province, P.R.China
Factory 3: Astec Electronics(Luoding) Co.,Ltd.
Address 3: No.68 Baocheng Road East, Fucheng, Luoding, Guangdong, P.R.China

Test object: Product: Solar Inverter
Model: SUN2000-12KTL-M5, SUN2000-15KTL-M5, SUN2000-17KTL-M5, SUN2000-20KTL-M5, SUN2000-25KTL-M5

Test specification: G99/1-6:2020

Purpose of examination: • 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.

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1. Description of the test object

1.1 Picture(s)



Overall view



Internal view



Left side DC switch view

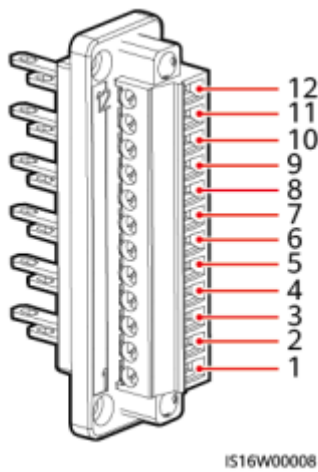
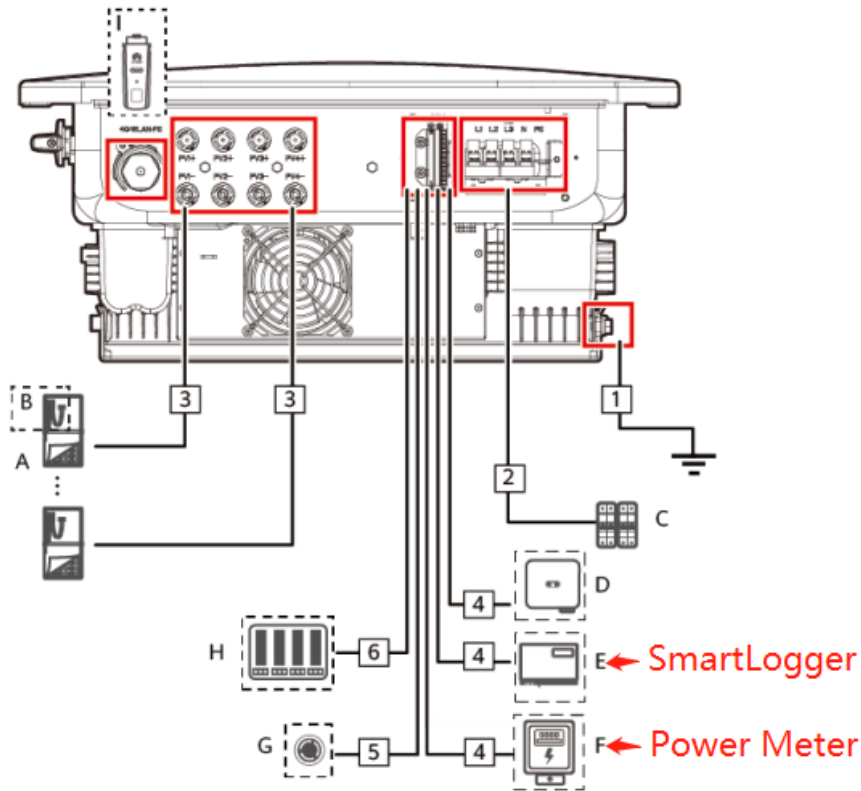


External view

1.2 Function

Manufacturer's specification for intended use:

- (1) The unit is considered as type A, type B Power Generating Modules according to G99/1-6:2020.
- (2) If certain functions are not permitted by local regulation, the function shall be disabled by hardware or software setting (if applicable) by the manufacturer before putting into the market. For example, it's not permissible to draw electricity from the grid and then feed it back in order to claim statutory reimbursement in some nations.
- (3) Low voltage electrical installations shall comply with national and local regulation. Only qualified electricians are allowed to install and maintain the converter.
- (4) In order to protect the inverter, user and installer, external AC circuit breaker shall be equipped at the end-use application.
- (5) Software version: V200R022, Firmware version: V200R022.
- (6) RS485 communication port is used as the logic interface of the unit to control active power. By connecting to the SmartLogger which provides display the protection settings and remoted control function.



Pin	Definition	Function	Description
1	GND	Ripple control	GND port for the DIN1 to DIN5 signals Dry contact for grid scheduling
2	DIN1		
3	DIN2		
4	DIN3		
5	DIN4	Rapid shutdown signal+	For the rapid shutdown DI signal or connecting to the signal cable of an NS protective device
6	DIN5		
7	GND	GND	-
8	-	-	-
9	485A1	RS485A1 differential signal+	For inverter cascading or connecting to the RS485 signal port of a SmartLogger
10	485B1	RS485B1 differential signal-	
11	485A2	RS485A2 differential signal+	Connecting to the RS485 signal port of a power meter
12	485B2	RS485B2 differential signal-	

1.3 Consideration of the foreseeable use

- Not applicable
- Covered through the applied standard
- Covered by the following comment
- Covered by attached risk analysis

1.4 Technical Data

Model	SUN2000-12KTL-M5	SUN2000-15KTL-M5	SUN2000-17KTL-M5	SUN2000-20KTL-M5	SUN2000-25KTL-M5
PV terminal parameters					
Maximum DC input voltage	1100 Vd.c.				
Rated input voltage	600 Vd.c.				
MPPT Range	200~1000 Vd.c.				
MPPT Range (full load)	370~800 Vd.c.	410~800 Vd.c.	440~800 Vd.c.	480~800 Vd.c.	530~800 Vd.c.
Maximum Input Current	2*30 Ad.c.				
Isc PV	2*40 Ad.c.				
Maximum Input Power	18000 W	22500 W	25500 W	30000 W	37500 W
Grid terminal parameters					
Rated AC voltage	230/400 Va.c., 3W+N+PE				
Rated AC output current	17.3 Aa.c.	21.7 Aa.c.	24.5 Aa.c.	28.9 Aa.c.	36.1 Aa.c.
Maximum AC output current	19.1 Aa.c.	23.9 Aa.c.	27.1 Aa.c.	31.9 Aa.c.	39.9 Aa.c.
Registered capacity	12000 W	15000 W	17000 W	20000 W	25000 W
Maximum continuous output apparent power	13200 VA	16500 VA	18700 VA	22000 VA	27500 VA
Rated AC frequency	50 Hz				
Power factor	0.8 leading to 0.8 lagging				

2. Order

2.1 Date of Purchase Order, Customer's Reference

2022-05-11

2.2 Test Sample(s)

- Reception date(s): 2022-07-06
- 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

2022-07-06 to 2022-09-10

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
Grid Code compliance	64.290.22.30584.01	2022-09-21	--

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.



5. Documentation

- None

6. Summary

The test specifications are met.

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

Tested by:

Yuneng Chen

printed name, function & signature

Approved by:

Iris Zheng

printed name, function & signature



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