G100 Declaration of conformance

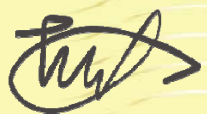## Typetest details

Inverter

| Type	GW5048-EM, GW3648-EM, GW3048-EM
Manufacturer	Jiangsu GoodWe Power Supply Technology Co.,Ltd
Address	NO.189 Kun Lun Shan Road, Suzhou New District, Jiangsu, China

EzMeter

Type	ACR10R-D16TE
Manufacturer	Jiangsu Acrel Electric MFG. Co.,Ltd.
Address	No.5 Dongmeng Road, Jiangyin City, Jiangsu Province, China

Test Address	NO.189 Kun Lun Shan Road, Suzhou New District, Jiangsu, China		
Tel	+86 512 6239 7998		
E-mail address	service@goodwe.com.cn		
Date	2017-03-20		
Signature	谢静	On behalf of	

System Connection Diagram
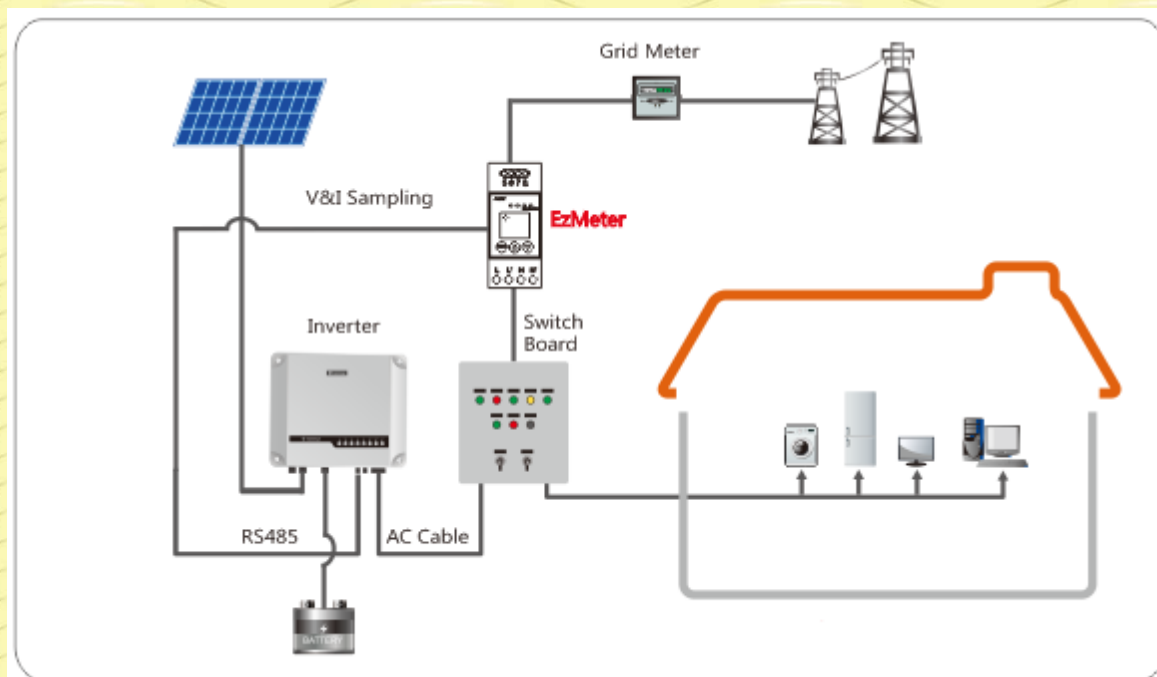
TestDiagram
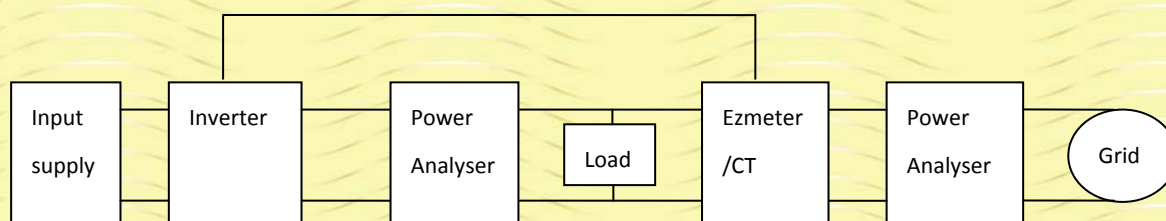
Power limiting setting: adjustable, decided by DNO.

	Non Export
Reverse Power Limit test set point	2% / 25% / 50% / 75% of inverter rating
Declared accuracy	2% (set value= Agreed value-2%)
Definite time delay (fall time)	5 s (detect an excursion and reduce the export to the Agreed Export Capacity)
Response time	1 s(sense an excursion and signal to the generation to reduce output)

Type testing data

1. Setting protection test：

Requirement	Result	Note
The settings is password protected, and cannot be changed by anyone other thangottingwritten agreement ofthe DNO;	Pass	

2. Fail-safe test：

Method: Set 50% export limit, implement the test before start or in running.

Criteria: response time is less than 1s, fall time is less than 5s,the inverter's output active power is less than set limit. After fail safe test , disconnect AC, the reconnect time daleyis more than 10min.

No.	Component	Test	Active Power	Response Time	Fall Time	reconnect time	Pass/ Fail
1	**Power Monitoring Unit(PMU)**	Remove power supply to Meter	1930W	<1s	3S	10min48s	pass
2	**Power Monitoring Unit(PMU)**	Remove CT	1940W	<1s	4.2S	10min48s	pass
3	**Control Unit (CU)**	Remove power supply to any **CU**	NA	NA	NA	NA	NA
4	**Generator Interface units (GIU)**	Remove power supply to all **GIU**s	NA	NA	NA	NA	NA
5	**Demand Control Unit (DCU)**	Remove power supply to all **DCU**s	NA	NA	NA	NA	NA
6	Network hub / switches	Remove power supply	NA	NA	NA	NA	NA
7	**PMU → CU** communication cable	Unplug cable	1970W	0.3s	1.1s	10min48s	Pass
8	**CU → GIU**	Unplug cable (repeat where	NA	NA	NA	NA	NA

	communication cable	additional **GIU** units)					
9	**GIU → Generator** communicationcable	Unplug cable (repeat where additional **GIU** units)	NA	NA	NA	NA	NA
10	**CU → DCU** communication cable	Unplug cable (repeat where additional **DCU** units)	NA	NA	NA	NA	NA
11	**DCU → load** communicationcable	Unplug cable (repeat where additional **DCU** units)	NA	NA	NA	NA	NA

3. Power Limit check

Method: Set export limit, implement the test before start, than start the inverter.

Criteria: response time is less than 1s, fall time is less than 5s, export power $\pm$2% Pn .

2%export Agreedlimit

	Input	Input supply [% Inverter Rating]			
Load \ Pass/ Fail		25%	50%	75%	100%
Load [% Inverter Rating]	0%	pass/3.8S	pass/4.9S	Pass/2.5s	pass/2.9S
	25%	pass/3s	Pass/3.5s	Pass/2.7s	Pass/1.9s
	50%	NA	Pass/3.8s	pass/4.8S	Pass/1.6s
	75%	NA	NA	Pass/2.5s	pass/2.6s
	100%	NA	NA	NA	pass/3.6s

25%export Agreedlimit

	Input	Input supply [% Inverter Rating]			
Load \ Pass/ Fail		25%	50%	75%	100%
Load [% Inverter Rating]	0%	Pass/3s	Pass/3.5s	Pass/3.9s	Pass/2.2s
	25%	NA	pass/3.9S	pass/4.3S	Pass/2s
	50%	NA	NA	pass/0.3S	pass/2.5S
	75%	NA	NA	NA	Pass/2s
	100%	NA	NA	NA	NA

50%exportAgreed limit

	Input	Input supply [% Inverter Rating]			
Load	Pass/ Fail	25%	50%	75%	100%
Load [% Inverter Rating]	0%	NA	Pass/0.4s	Pass/1.5s	Pass/2.4s
	25%	NA	NA	pass/2.8S	Pass/1.9s
	50%	NA	NA	NA	Pass/0.5s
	75%	NA	NA	NA	NA
	100%	NA	NA	NA	NA

75%exportAgreed limit

	Input	Input supply [% Inverter Rating]			
Load	Pass/ Fail	25%	50%	75%	100%
Load [% Inverter Rating]	0%	NA	NA	pass/3.9S	pass/4.1S
	25%	NA	NA	NA	pass/2S
	50%	NA	NA	NA	NA
	75%	NA	NA	NA	NA
	100%	NA	NA	NA	NA

4. decreasing Load test

Input supply: 100% of the inverter rating

The load shall be decreased from the initial load to the final load as shown in followed Table。 The export control function shall manage the input supply such that the exportpower is below the export limit setting within the relevant timeframe for all stepdecreases in load shown in Table.

Criteria: response time is less than 1s, fall time is less than 5s, export power ±2% Pn .

2%export Agreedlimit

	Initial Load	Initial Load [% Inverter Rating]			
Final Load	export/ time	100%	75%	50%	25%
Final Load	75%	Pass/3s	NA	NA	NA

[% Inverter Rating]	50%	Pass/3.4s	Pass/2s	NA	NA
	25%	Pass/4.2s	Pass/4.3s	Pass/2s	NA
	0%	pass/2.7S	pass/1.8S	pass/2.4S	pass/2.5S

25%export Agreedlimit

Initial Load export/ time Final Load		Initial Load [% Inverter Rating]			
		100%	75%	50%	25%
Final Load [% Inverter Rating]	75%	pass/4.6S	NA	NA	NA
	50%	pass/2.6s	Pass/2.6s	NA	NA
	25%	pass/4.4S	Pass/2.1s	pass/2.4S	NA
	0%	Pass/2s	Pass/2.2s	0pass/3.2S	pass/2.5S

50% export Agreedlimit

Initial Load export/ time Final Load		Initial Load [% Inverter Rating]			
		100%	75%	50%	25%
Final Load [% Inverter Rating]	75%	NA	NA	NA	NA
	50%	Pass/3s	Pass/2s	NA	NA
	25%	pass/3S	pass/2.8S	pass/4S	NA
	0%	Pass/2.1s	pass/2.8S	pass/4.3S	pass/3S

75%export Agreedlimit

Initial Load export/ time Final Load		Initial Load [% Inverter Rating]			
		100%	75%	50%	25%
Final Load [% Inverter Rating]	75%	NA	NA	NA	NA
	50%	NA	NA	NA	NA
	25%	pass/1.5s	pass/0.5s	pass/2s	NA
	0%	pass/2.8s	pass/2.6s	pass/3s	pass/3.9s

5. Adding input supply test

At given load, the input shall be added from the initial input supply to the final as shown in followed Table.The exportpower will below the export limit setting within the relevant timeframe for all step .

Criteria: response time is less than 1s, fall time is less than 5s, export power ±2% Pn .

2% export Agreedlimit

Load \ Input export/ time		Final input supply [% Inverter Rating]			
		25%	50%	75%	100%
Load/ Initial input supply [% Inverter Rating]	0%	Pass/3.1s	pass/4.3S	pass/4.2S	pass/4.2S
	25%	NA	pass/2S	pass/1S	pass/0.6S
	50%	NA	NA	pass/1.1S	pass/2.6S
	75%	NA	NA	NA	pass/1.6S

25% export Agreedlimit

Load \ Input export/ time		Final input supply [% Inverter Rating]			
		25%	50%	75%	100%
Load/ Initial input supply [% Inverter Rating]	0%	Pass/0.5s	Pass/4s	Pass/2.4s	Pass/2.2s
	25%	NA	pass/1.1S	pass/1.7S	pass/3.2S
	50%	NA	NA	pass/1.2S	pass/4.8S
	75%	NA	NA	NA	Pass/2s

50% export Agreedlimit

Load \ Input export/ time		Final input supply [% Inverter Rating]			
		25%	50%`	75%	100%
Load/ Initial input supply [% Inverter Rating]	0%	NA	Pass/2s	pass/4.3S	Pass/3.2s
	25%	NA	NA	Pass/0.5s	pass/4S
	50%	NA	NA	NA	Pass/1.2s
	75%	NA	NA	NA	NA

75% export Agreedlimit

Load	Input export/ time	Final input supply [% Inverter Rating]			
		25%	50%	75%	100%
Load/	0%	NA	NA	Pass/2.7s	pass/4.2s
Initialinput supply	25%	NA	NA	NA	pass/2.5s
	50%	NA	NA	NA	NA
[%Inverter Rating]	75%	NA	NA	NA	NA

Comments

Test data is tested inGW5048D-EMcooperated with EzMeter ACR10R-D16TE. GW3648D-EM / GW3048S-EMis similar to GW5048D-EM in circuit and construction except for output rating of current and power. The test date can refer to GW5048D-EM .