Sungrow Power Supply Co., Ltd.
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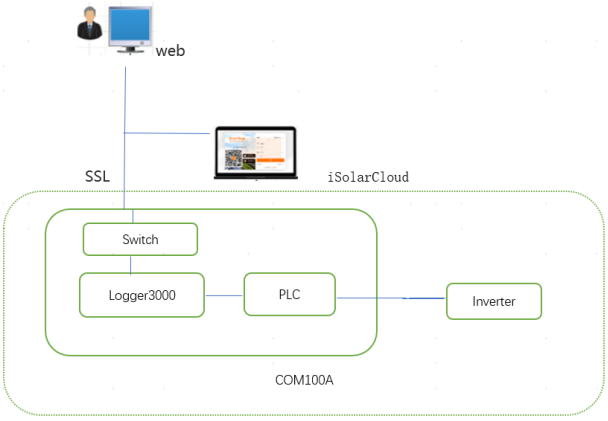
ChenCheng,born on 02 May 1993 in China, As the standard certification engineer of the product Certification group,

on behalf of the company declares the following:

1) The application scenarios of the SG250HX include internal and external logic communications as summarized in the following scheme:



where the main components involved and their main functions are explained in the following table:

model	name	function	details
Logger3000	Data Logger	The data logger is applied in the photovoltaic power station, and the inverter and other photovoltaic equipment constitute a system, used for data acquisition, power control and protocol conversion equipment. The equipment also integrates communication gateway and power station operation and maintenance functions.	in the Smart Communication Box -- COM100A
PLC	Power Line Communictaion	Power Line Communication mode	Between the inverter and the data logger
SG250HX	PV inverter	The inverter converts the DC into grid-compatible	The inverter does not

		AC and feeds the AC into the grid	participate in external communication, all through data logger
Solar cloud	Cloud	Support the full set of management business of data acquisition, power station monitoring, operation and maintenance of photovoltaic, energy storage and other new energy power stations. Through the cloud big data analysis platform, it helps users realize core functions such as transparent management, automatic operation and maintenance, intelligent diagnosis and auxiliary decision-making of all its new energy power stations. It fully meets the needs of users at all levels in the life cycle of new energy power stations, maximizes the value of power stations and protects the core assets of users.	cloud server

1) Power Line Communication is adopted between Logger3000 and PLC equipment; The PLC device communicates with the inverter over RS485 with modbus communication protocol. All communications between internal components, take place via appropriate line of communication and are not directly connected to any device or system outside.

2) The inverter does not communicate with the outside world directly. It communicates with the outside world through the network port of Logger3000. The Logger3000 network port is connected to the switch to send the collected data to Insight or a third-party server, and the background sends the data to iSolarCloud through the router.

3) The cloud server directly communicates with the Logger3000, and the communication

becomes secure by using TLS (version number TLS1.2) technology on the data logger and SSL technology on the web side.

4) The communication between the cloud server and all parties is protected by SSL technology.

The cyber-security assessment of the inverter communication system was performed according to the ETSI EN 303 645 standard, and it is reported according to the Table B.1 form of the same standard:

EN 303 645 v2.1.1 (2020-06) Table B.1: Implementation of provisions for consumer loT security

Clause number and title			
Reference	**Status**	**Support**	**Detail**
5.1 No universal default passwords			
Provision 5.1-1	M C (1)	Y	
Provision 5.1-2	M C (2)	Y	
Provision 5.1-3	M	Y	
Provision 5.1-4	M C (8)	Y	
Provision 5.1-5	M C (5)	Y	
5.2 Implement a means to manage reports of vulnerabilities			
Provision 5.2-1	M	Y	
Provision 5.2-2	R	Y	
Provision 5.2-3	R	Y	
5.3 Keep software updated			
Provision 5.3-1	R	Y	
Provision 5.3-2	M C (5)	Y	
Provision 5.3-3	M C (12)	Y	
Provision 5.3-4	R C (12)	Y	

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Provision 5.3-5	R C (1 2)	Y	
Provision 5.3-6	R C (9, 12)	Y	
Provision 5.3-7	M C (1 2)	Y	
Provision 5.3-8	M C (1 2)	Y	
Provision 5.3-9	R C (1 2)	Y	
Provision 5.3-10	M (11, 12)	Y	
Provision 5.3-11	R C (1 2)	Y	
Provision 5.3-12	R C (1 2)	Y	
Provision 5.3-13	M	Y	
Provision 5.3-14	R C (3, 4)	N/A	The device is not constrained.
Provision 5.3-15	R C (3, 4)	N/A	The device is not constrained.
Provision 5.3-16	M	Y	
5.4 Securely store sensitive security parameters			
Provision 5.4-1	M	Y	
Provision 5.4-2	M C (1 0)	Y	
Provision 5.4-3	M	Y	
Provision 5.4-4	M	Y	
5.5 Communicate securely			
Provision 5.5-1	M	Y	
Provision 5.5-2	R	Y	
Provision 5.5-3	R	Y	
Provision 5.5-4	R	Y	
Provision 5.5-5	M	Y	
Provision 5.5-6	R	Y	

Provision 5.5-7	M	Y	
Provision 5.5-8	M	Y	
5.6 Minimize exposed attack surfaces			
Provision 5.6-1	M	Y	
Provision 5.6-2	M	Y	
Provision 5.6-3	R	Y	
Provision 5.6-4	M C (1 3)	Y	
Provision 5.6-5	R	Y	
Provision 5.6-6	R	Y	
Provision 5.6-7	R	Y	
Provision 5.6-8	R	N/A	This is not implemented in DUT due to software development limitation.
Provision 5.6-9	R	Y	
5.7 Ensure software integrity			
Provision 5.7-1	R	N/A	This is not implemented in DUT due to software development limitation.
Provision 5.7-2	R	N/A	This is not implemented in DUT due to software development limitation.
5.8 Ensure that personal data is secure			
Provision 5.8-1	R	N/A	This is not necessary to be implemented due to no personal data is transmitted between device and s ervice accordig to ETSI TS 103 701 table A.1 note 21).
Provision 5.8-2	M	N/A	This is not necessary to be implemented due to no personal data is transmitted between device and s ervice accordig to ETSI TS 103 701 table A.1 note 22).
Provision 5.8-3	M	N/A	This is not necessary to be implemented due to no external sensing capabilities according to ETSI TS 103 701 table A.1 note 23).
5.9 Make systems resilient to outages			
Provision 5.9-1	R	Y	
Provision 5.9-2	R	Y	
Provision 5.9-3	R	Y	
5.10 Examine system telemetry data			
Provision 5.10-1	R C (6)	Y	

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5.11 Make it easy for users to delete user data			
Provision 5.11-1	M	Y	
Provision 5.11-2	R	N/A	This is not necessary to be implemented due to no personal data stored on associated services according to ETSI TS 103 701 table A.1 note 25).
Provision 5.11-3	R	N/A	This is not necessary to be implemented due to no personal data stored on DUT according to ETSI TS 103 701 table A.1 note 26).
Provision 5.11-4	R	Y	
5.12 Make installation and maintenance of devices easy			
Provision 5.12-1	R	Y	
Provision 5.12-2	R	Y	
Provision 5.12-3	R	Y	
5.13 Validate input data			
Provision 5.13-1	M	Y	
6 Data protection provisions for consumer IoT			
Provision 6.1	M	N/A	This is not necessary to be implemented due to no personal data processed according to ETSI TS 103 701 table A.1 note 25).
Provision 6.2	M C (7)	N/A	This is not necessary to be implemented due to no personal data processed.
Provision 6.3	M	N/A	This is not necessary to be implemented due to no personal data processed according to ETSI TS 103 701 table A.1 note 7).
Provision 6.4	R C (6)	Y	
Provision 6.5	M C (6)	Y	
Conditions			
1)passwords are used;			
2)pre-installed unique per device passwords are used;			
3)software components are not updateable;			
4)the device is constrained;			
5)the device is not constrained;			
6)telemetry data being collected;			

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7)personal data is processed on the basis of consumers' consent;
8)the device allowing user authentication;
9)the device supports automatic updates and/or update notifications;
10) a hard-coded unique per device identity is used for security purposes;
11) updates are delivered over a network interface;
12) an update mechanism is implemented;
13) a debug interface is physically accessible;
14) sensitive security parameters are stored persistently;
15) critical security parameters used for integrity and authenticity checks of software updates in device softwar e or for protection of communication with associated services in device software exist;
16) access to device functionality via a network interface in the initialized state is possible;
17) device functionality that allows security-relevant changes in configuration via a network interface exists;
18) critical security parameters are transmitted;
19) critical security parameters are transmitted via remotely accessible network interfaces;
20) critical security parameters relating to the device exist;
21) personal data is transmitted between a device and a service;
22) sensitive personal data is transmitted between a device and a service;
23) external sensing capabilities exist;
24) user data is stored on the device;
25) personal data is stored on associated services;
26) personal data is stored;
27) data input via user interfaces or transferred via APIs or between networks in services and devices is suppo rted;
28) personal data is processed.

chencheng

standard certification engineer
On behalf of Sungrow Power Supply Co., Ltd.
28th Feb. 2023