

产 品 规 格 书

Product Specification Report

供应商 (Supplier Name):		IGEN TECH CO.,Ltd.
供应商料号 (Supplier Part No.):		81-0079-002
客户名称 (Customer Name):		
客户料号 (Customer No.):		——
产品名称 (Product Name):		Stick Logger (WiFi)
产品型号 (Product Type):		LSW-5A0253
WEB 版本号 (WEB Version):		v1.0.24
WiFi 版本号 (WiFi Version):		LSW5BLE_16_FFFF_1.0.00
逆变器型号 (Inverter Type):		Maiden voyage inverter
逆变器协议 (Inverter Protocol):		1-40KW-G1 First voyage PV inverter ModBUS protocol 20201204 50-70KW-G1 first voyage PV inverter ModBUS protocol First voyage Energy storage MODBUS protocol WIFI190311, First voyage energy storage integrated machine modbus protocol V1-20180829
生效日期 (Effective date):		2021.01.14
客户确认 (Customer Approval)		供应商确认 (Supplier Approval)
确认人 (Confirmed By)	审核人 (Approved By)	

版本	变更内容	更新时间	更新人
1.0	初稿	2021.01.14	包宏伟

一、简介 list

数据采集棒 (WiFi) 主要通过采集记录逆变器的工作状态和发电情况对光伏发电系统进行长期而有效的监控, 从逆变器端接收光伏系统的各项信息。同时, 小麦光伏系统云平台可以为采集棒提供强大的数据支持。采集棒通过无线方式将数据发送到监控平台, 光伏系统的实时状态以及历史数据都能以图表方式呈现, 直观、清晰易懂。用户还可以自定义故障报警方式, 通过短信、邮件等方式及时了解系统的异常及故障状况。真正帮助用户实现随时随地监控光伏系统, 极大地简化了维护工作。

采集棒内部集成了 WiFi 模块, 就可以通过 WiFi 网络传输数据。

Data acquisition stick (WiFi) mainly collects and records the working state and power generation of the inverter for long-term and effective monitoring of the photovoltaic power generation system, and receives various information of the photovoltaic system from the inverter end. At the same time, the cloud platform of wheat photovoltaic system can provide powerful data support for acquisition rod. The acquisition wand wirelessly sends data to the monitoring platform, and the real-time status and historical data of the PHOTOVOLTAIC system can be presented in the form of charts, which are intuitive, clear and easy to understand. Users can also customize fault alarm modes to learn about system anomalies and faults in a timely manner by SMS or email. Truly help users to achieve anytime and anywhere monitoring of photovoltaic systems, greatly simplifies maintenance work.

The acquisition stick is integrated with WiFi module, so data can be transmitted through WiFi network

二、采集棒基本参数 Basic parameters of the acquisition bar

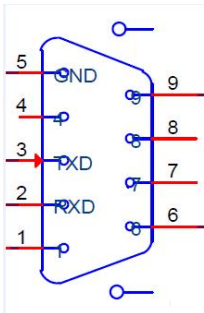
分类classify	参数parameter	取值value
无线参数 Wireless parameters	工作频率 working frequency	2.412GHz~2.472GHz
	发射功率 transmitted power	802.11b: +17 dBm±1.5dBm (@11Mbps)
		802.11g: +15 dBm±1.5dBm (@54Mbps)
		802.11n: +14 dBm±1.5dBm (@HT20, MCS7)
	天线选项 Antenna options	内置PCB天线 Built-in PCB antenna
蓝牙 bluetooth	无线标准 Wireless standards	BLE5.0
	频率范围 frequency domain;	2.402GHz-2.480GHz
	发射功率 transmitted power	MAX15dBm
硬件参数 Hardware parameters	数据接口 data interface	RS232
	工作电压 working voltage	DC5V ~DC12V
	工作功率	1.5W

	operating power	
	指示灯 indicator light	一路与逆变器连接信号灯 Connect signal lamp with inverter all the way
		一路与路由连接信号灯 Connect the signal lamp with the route
		一路心跳指示灯 One heartbeat indicator
	数据存储 data storage;	默认配置8MBYTE FLASH The default configuration is 8MB FLASH
	工作温度 operating temperature	-30℃~+70℃
	工作湿度 operating humidity	10%-90%相对湿度，无冷凝 10%-90% relative humidity, no condensation
	存储温度 storage temperature	-45℃~+90℃
	存储湿度 Store humidity	<40%
	对外接口 external interface	DB9
软件参数 The software parameters	连接逆变器数量 Number of connected inverters	One
	串口通信速率 Serial communication rate	默认配置9600bps (1200-115200bps 可调) The default configuration is 9600bps (1200-115200Bps adjustable)
	数据采集间隔 Data acquisition interval	默认配置5分钟 (1-15 分钟可选) The default value is 5 minutes (1-15 minutes optional)
	用户配置user profile	AT+指令集 The AT + instruction set
		本地 web 页面配置 Local Web page configuration
		远程服务器 remote server
		蓝牙 bluetooth
	固件升级 firmware upgrade	本地 web 页面升级 The local Web page is upgraded
		remote upgrade
	数据传输平台 Data transmission platform	本地 web 页面配置 Solarman 三期 Set Solarman PHASE 3 on the local web page
	其他 else	实时远程升级控制、断点续传 Real-time remote upgrade control and resumable transmission

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三、模组接口定义

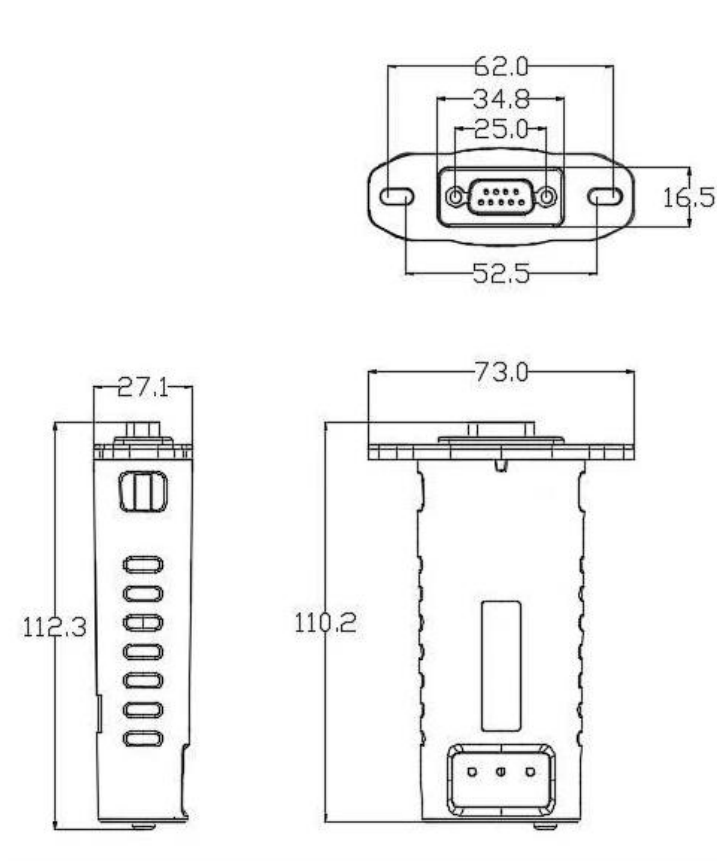
Module interface definition



Pin	描述 describe	网络名称 Network name	类型 type	说明 explain;
2	接收数据 receive data	RXD	I	RS232 接收 RS232 receive
3	发送数据 send data	TXD	0	RS232 发送 RS232 send
1、4、6、7、8	悬空 impending	NC		未使用 unused
5	电源 GND The power GND	GND	Power	外接电源： GND External power supply: GND
9	电源 VCC The VCC power supply	DC_VIN	Power	外接电源： DC 5V~12V (至少 1.5W 供电) External power supply: DC 5V to 12V (at least 1.5W)

四、采集棒尺寸(单位：mm)

Acquisition bar size (unit: mm)



五、实物图 the physical picture





六、LED 指示灯状态说明 LED indicator status description

采集棒连接设备后，查看 NET 灯、COM 灯和 READY 灯的状态以及平台上是否有数据。（NET、COM 和 READY 各有且只有一个指示灯）

After the acquisition bar is connected to the device, check the status of NET, COM and READY lights and whether there is data on the platform. (NET, COM, and READY have only one indicator each)

路由器正常连网情况下，采集棒上电后正常运行状态：

When the router is normally connected to the network, the acquisition bar runs normally after being powered on:

1、采集棒上电后 NET 灯常亮（服务器连接成功）；

NET light is steady on after the acquisition bar is powered on (server connection is successful)

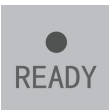
2、READY 灯闪烁（采集棒正常工作）；

READY light flashes (acquisition bar works normally);

3、COM 灯常亮(采集棒连接逆变器成功);

COM light is steady on (acquisition bar connected to inverter successfully);

指示灯标识 Indicator label	指示灯含义 Meaning of indicator	状态说明 statements
	采集器与路由器 通信状态 Communication status between the collector and the router	1.灯灭：路由器连接失败。 2.灯亮 1s/灯灭 1s（慢闪）：路由器连接成功。 3.灯常亮：服务器连接成功。 4.灯亮 100ms/灯灭 100ms（快闪）：快速配网中。 1. Off: The router fails to connect. 2. On for 1s/ off for 1s (blinking slowly) : The router is successfully connected. 3. Steady on: The server is successfully

		connected. 4. The indicator is on for 100ms/ off for 100ms (blinking at short intervals) : the network is connected.
	采集器与逆变器 通信状态 Communication status between the collector and the inverter	1.灯常亮: 采集棒与逆变器已连接。 2.灯灭: 采集棒与逆变器连接失败。 3.灯亮 1s/灯灭 1s (慢闪): 采集棒与逆变器通信中。 1. Steady on: The acquisition bar is connected to the inverter. 2. Off: The acquisition bar fails to connect to the inverter. 3. On for 1s/ off for 1s (blinking at long intervals) : The acquisition bar is communicating with the inverter.
	采集器工作状态 Collector operating status	1.灯灭: 采集棒工作异常。 2.灯亮 1s/灯灭 1s (慢闪): 采集棒工作正常。 3.灯亮 100ms/灯灭 100ms (快闪): 采集棒恢复出厂值状态。 1. Off: The acquisition bar is not working properly. 2. On for 1s/ off for 1s (blinking at long intervals) : The acquisition bar works normally. 3. On for 100ms/ off for 100ms (blinking at short intervals) : the collection bar is restored to its factory default value State.

七、异常状态及处理 Abnormal state and treatment

采集棒工作状态下出现平台数据异常，请查看下表，依据 LED 灯的状态完成简单的故障排除，如果仍无法解决故障或者灯故障状态在下表中没有体现，请联系售后处理。

（注：请让采集棒上电 2 分钟后再使用下表查询）

If the platform data is abnormal under the working status of the acquisition bar, please refer to the following table and complete simple troubleshooting according to the status of the LED lamp. If the fault still cannot be solved or the lamp fault status is not reflected in the following table, please contact the after-sales service.

(Note: Please power on the acquisition bar for 2 minutes before using the following table for query)

NET 灯 NET light	COM 灯 COM lamp	READY 灯 The READY light	故障说明 Fault descripti on	故障原因 failure cause	解决方法 solution
					
任意状态 free position	灭 destro y	慢闪 Slow flash	采集棒与 逆 变 器 通 信 异 常 The communica tion between the acquisiti on bar and inverter is abnormal	1. 采集棒与逆变器 连接松动。 2. 逆变器与采集棒。 通讯速率不匹配。 1. The connection between the acquisition bar and the inverter is loose. 2. Inverter and acquisition bar. Communica tion rates do not match.	1. 检查采集棒与逆变器之间的连 接是否异常，重新插拔采集棒。 2. 检查逆变器的通讯设置是否与 采集棒一致。 1. Check whether the connection between the acquisition bar and the inverter is abnormal. Reinsert and remove the acquisition bar. 2. Check whether the communication Settings of the inverter are consistent with those of the acquisition bar.

灭灯 Light is off	常亮 Normally on	慢闪 Slow flash	采集棒和路由通信异常 The communication between the collection bar and the route is abnormal	1. 采集棒未配网 2. 天线异常 3. wifi 信号弱 1. The acquisition bar is not equipped with a network 2. The antenna is abnormal 3. The wifi signal is weak	1. 检查是否配置无线网。 2. 检查天线是否损坏，松动。 3. 路由器信号问题，建议改善路由信号强度。 1. Check whether the wireless network is configured. 2. Check whether the antenna is loose or damaged. 3. Router signal problems, it is suggested to improve the routing signal strength.
慢闪 Slow flash	常亮 Normally on	慢闪 Slow flash	采集棒和路由连接正常，与远程服务器连接异常 The connection between the collection bar and the route is normal, but the connection between the collection bar and the remote server is abnormal	1. 路由器联网异常。 2. 采集棒服务器指向被修改。 3. 网络限制服务器连接。 1. The router is not connected properly. 2. The collection bar server point is modified. 3. The connection to the server is restricted.	1. 检查路由器是否可以上网。 2. 检查路由器设置，是否限制了连接。 3. 联系售后处理问题。 1. Check whether the router can access the Internet. 2. Check whether the router Settings are restricted The connection. 3. Contact after-sales service

灭 destroy	灭 destroy	灭 destroy	供电异常 Abnormal power supply	1. 采集棒与逆变器连接异常，松动 2. 逆变器功率不够 3. 采集棒异常 1. The connection between the acquisition bar and the inverter is abnormal or loose 2. The inverter power is insufficient 3. The collection bar is abnormal	1. 检查连接状态，重新插拔。 2. 检查逆变器输出功率是否满足要求。 3. 联系售后处理问题。 1. Check the connection status and reinsert the disk enclosure. 2. Check whether the output power of the inverter meets the requirements. 3. Contact after-sales service.
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八、外包装 external packing



编号	标签类型	标签内容
1	产品标签—英文	Product: Stick Logger Model: LSW-5 Input: DC 5V-12V 1.5W

		认证、环保等标识
2	SN 标签—英文	SN 二维码、数字序列

8.2 发货外箱标签信息

供应商	英臻科技有限公司
客户订单号	以实际订单号为准
客户料号	
IGEN 料号	81-0079-002
规格型号	LSW-5
数量	以实际包装数量为准
日期	以实际发货日期为准

九、固件配置

1	域名	无特殊要求
2	IP	无特殊要求
3	端口号	无特殊要求
4	APN	无特殊要求

十、联系方式

无锡英臻科技有限公司

地址：江苏省无锡市新区菱湖大道 200 中国物联网国际创新园 F4 栋

电话：400 181 0512

邮箱：customerservice@solarmanpv.com

网站：www.solarman.cn

序号	名称	数量	备注
1	数据采集棒 (WiFi)	1	--
2	螺丝	3	--

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.