Stick Logger (4G)

Product Model： **LS4G-4-C**

Contact

IGEN Tech Co., Ltd.

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Introduction

By collecting operating data and power generation of inverter, stick logger (4G) can run a long-term and efficient monitoring of PV system. Logger can connect to single inverter via serial port, which enables to collect all the data of PV system from the inverter. Meanwhile, remote monitoring cloud platform (SOLARMAN Portal) provides powerful data support for the logger. Logger sends the data to the monitoring platform. The real-time status and historical data can be displayed with graphs, enabling intuitive and clear understanding of PV system.

MEGMEET   JFY   PurpleRubik

CHINT CPS SCA (Senergy)   Big Aviation Head   Small Aviation Head

2.54 Pedestal (GOODWE)   RJ45 (SUNGROW)

DB9 (General)   CHINT CPS SCJ (SAJ)   GROWATT
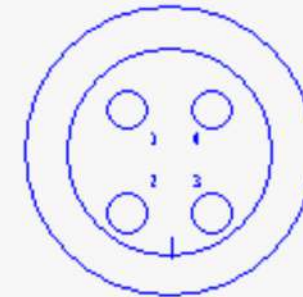
USB (General)   USB (GOODWE)   USB (HUAWEI)

Product Parameter

Catalog	Parameter	Value
Wireless Parameter	Wireless Frequency	LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM/EDGE: B3/B8
	Working Frequency	704MHZ-960MHZ 1710MHZ-2690MHZ
	Antenna Option	External Stick Antenna
Hardware Parameter	Data Interface	RS485
	Working Voltage	DC5V-12V
	Max. Working Voltage	DC 15V
	Working Power	3.5W
	Indicator Light	One connected to inverter
		One connected to server
		One connected to network
	Data Storage	Default: 8 MBYTE FLASH
	SIM Card	Micro SIM Card Slot
	Working Temperature	-30℃~+70℃
	Working Humidity	< 90% (No Condensation)
	Storage Temperature	-45℃~+90℃
	Storage Humidity	<40%
	External Interface	Aeronautical head

	Number of Connections	One
Hardware Parameter	Serial Communication Rate	9600bps (1200-115200bps Configurable)
	Data Transmission Interval	5min (1-15 Configurable)
	Configuration	AT+Instruction Set
		Remote Server
	Firmware Upgrade	Remote Update
	Others	Real-time Control, Data Resuming
Application Range	Target Area	Europe

Module Interface Identification

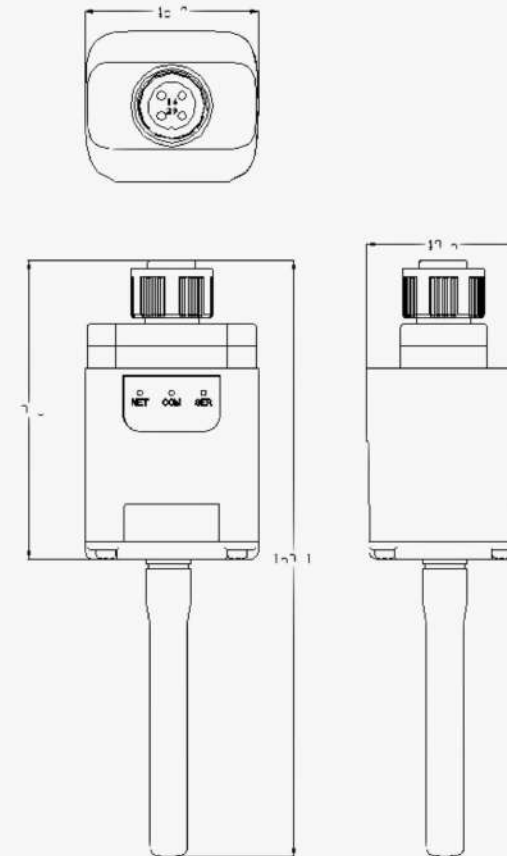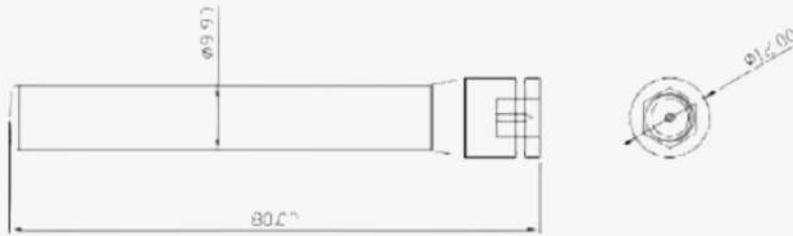| Pin	Description	Network Name	Type	Detail
1	Power	VCC	POWER	External power
2	Power ground	GND	GND	GND
3	Data communication	A	I/O	RS485_A Line
4	Data communication	B	I/O	RS485_B Line

Product Pictures

Front View

Back View

Side View

Logger Size
(Unit: mm/Accuracy: ±2%)

Logger Antenna (Unit：mm)

Size of Antenna

Antenna electrical performance index:

Classification	Performance Parameter
VSWR	≤3.0
Input Impedance-Ω	50Ω
Gain-dBi	8dBi at max.
Working Temperature-℃	-30℃~+70℃

LED Indicator Lights Instruction

After the logger is connected to the inverter, you can check logger working status according to the status of SER, COM and NET light.(There is only one light for each SER, COM and NET light.)

Light	Implication	Instruction
NET	Communicate with base station	1.On 200ms/Off 1800ms: 4G module has connected to base station. 2.On 1800ms/Off 200ms: 4G module is idle. 3.On 125ms/Off 125ms: 4G module is transmitting data. 4.Off: 4G module is not running.
COM	Communicate with inverter	1.On: Logger has connected to inverter. 2.On 400ms/Off 1600ms: Logger is in initialization. 3.On 400ms/Off 400ms: Logger is transmitting data with inverter. 4.Off: Communication failed.
SER	Communicate with server	1.On: Logger has connected to server. 2.On 400ms/Off 1600ms: Logger is in initialization. 3.On 400ms/Off 400ms: Communicatin failed.

Abnormal Status Processing

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If the data on platform is abnormal when the stick logger is running, please check the table below and according to the status of indicator lights to complete a simple troubleshooting. If it still can not be resolved or indicator lights status do not show in the table below, please contact our Customer Service.(Notice: Please using the following table query after power-on for 2mins.)

Normal operation status after the stick logger is powered on:

1.Logger in initialization: COM&SER lights flash slowly after the stick logger is powered on;

2.Module in registration: NET light flashes (On 200ms/Off 1800ms) around 50s;

3.Successful communication with inverter: COM light flashes fast three times around 53s;

4.Successful registration on network: NET light flashes (On 1800ms/Off 200ms) around 83s, ready to send data;

5.Normal operation: COM&SER lights keep on and NET light flashes (On 125ms/Off 125ms) around 150s.

Notice 1: Blink time of indicator lights will change according to network status on site.

Notice 2: When logger is powered on, COM and SER lights flashes slowly (On 400ms/Off 1600ms), then NET light starts to fast flash (On 64ms/Off 800ms), NET light will flashes slowly (On 64ms/Off 2000ms) and COM, SER lights will keep ON around 2min.

NET	COM	SER	Fault Description	Fault Cause	Solution
NET	COM	SER			
Any status	OFF	Any status	Communication with inverter abnormal	1.Connection between stick logger and inverter loosen. 2.Inverter does not match with stick logger's communication rate.	1.Check the connection between stick logger and inverter. Remove the stick logger and install again. 2.Check inverter's communication rate to see if it matches with stick logger's.

| Flash | Flash/ON | Flash | Communication with base station abnormal | 1.SIM card is in arrears 2.Antenna abnormal 3.4G signal strength weak. | 1.Check if SIM card balance is sufficient. 2.Check the antenna, if there is any damage or loose. 3.Base station signal problem. It is suggested to change sucker antenna. |
| OFF | OFF | OFF | Power supply abnormal | 1.Connection between stick logger and inverter loosen or abnormal. 2.Inverter power insufficient. 3.Stick Logger abnormal. | 1.Check the connection, remove the stick logger and install again. 2.Check inverter output power. 3.Contact Customer Service. |

Firmware Configuration

Direct Transmission Configuration	
Domain Name	access1.solarmanpv.com (solarman 3.0)
IP :	47.102.152.71 (solarman 3.0)
Port No.	10000 (solarman 3.0)
APN	General APN