SOLARMAN
Monitored Analyzed Networked

Stick Logger (GPRS)

Product Model:
LSG-3-C

Contact

IGEN Tech Co., Ltd.

Add: Block F4, China IoT International Innovation Park, No. 200, Linghu Avenue, Wuxi, Jiangsu, P. R. China

Sales Inquiries: info@solarmanpv.com

After-sales Inquiries: customerservice@solarmanpv.com

Website: www.solarmanpv.com

Introduction

By collecting operating data and power generation of inverter, stick logger (GPRS) can run a long-term and efficient monitoring of PV system.

Logger can connect to single inverter via multi interfaces, 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 via GPRS. The real-time status and historical data can be displayed with graphs, enabling intuitive and clear understanding of PV system. Furthermore, customized alerts can notify users of any malfunction or defect immediately via SMS and E-mails, which realizes the management of PV system at anytime and anywhere, also simplifies the maintenance significantly.

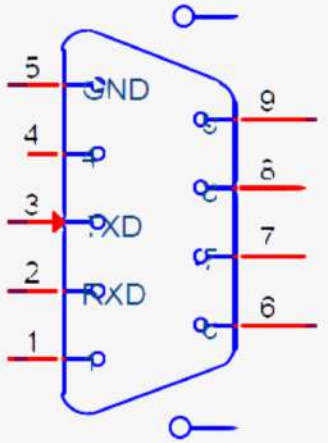
The GPRS module is integrated inside the logger, which is applicable to the power plant projects in remote areas where no cable laying.

Product Parameter

Catalog	Parameter	Value
Wireless Parameters	Working Frequency	GSM850/EGSM900/DCS1800/PCS1900MHz
	Transmit Power	Class 4(2W) GSM850、EGSM900
		Class 1(1W) DCS1800、PCS1900
	Antenna Options	External GPRS Stick Antenna
Hardware Parameters	Data Interface	RS232
	Working Voltage	DC 5V-12V
	Working Power	3W
	Indicator light	One connected to inverter
		One connected to server
		One GPRS network indicator light
	Data Storage	Default: 2MBYTE 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	DB9
Software Parameters	No. of Connections	One
	Serial Communication Rate	Default: 9600bps（1200-115200bps Configurable）
	Data Transmission Interval	Default: 5 mins（1-15 mins Configurable）
	Configuration	AT+Instruction Set
		Remote Server
	Firmware Upgrade	Remote Upgrade
	Others	Real-time Control, Data Resuming

Module Interface Identification



Pin	Description	Network Name	Type	Detail
2	Receiving data	RXD	I	RS232 receiving (RS485_B line, TTL_RX)
3	Sending data	TXD	O	RS232 sending (RS485_A line, TTL_TX)
1、4、6、7、8	Suspended	NC		Not used
5	Power GND	GND	Power	External Power： GND
9	Power VCC	DC_VIN	Power	External Power：DC 5V-12V (at least 3W supply)

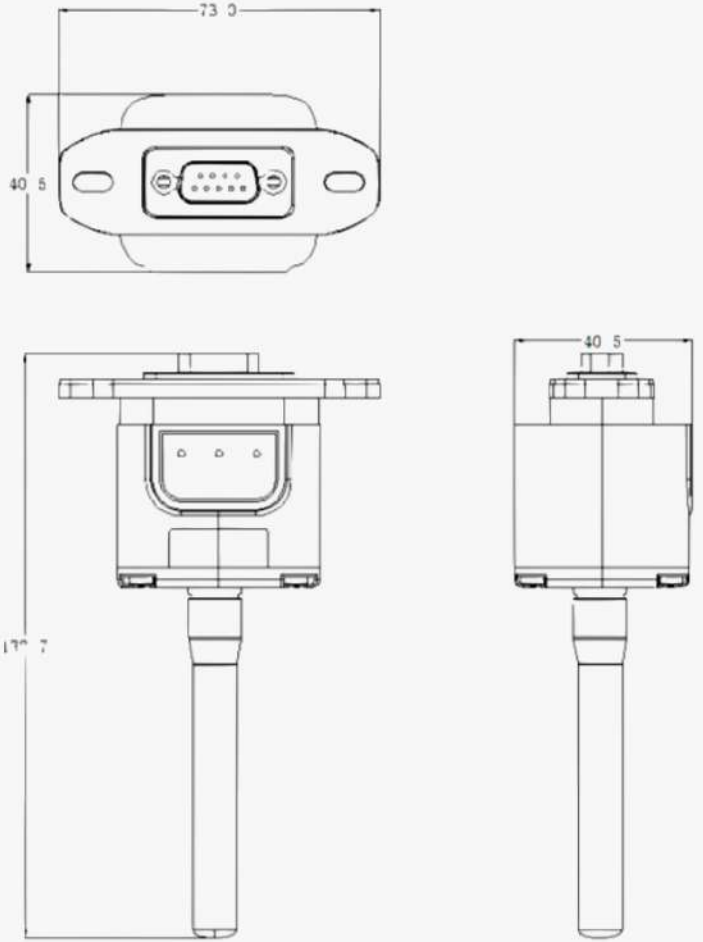
Product Pictures

Front View

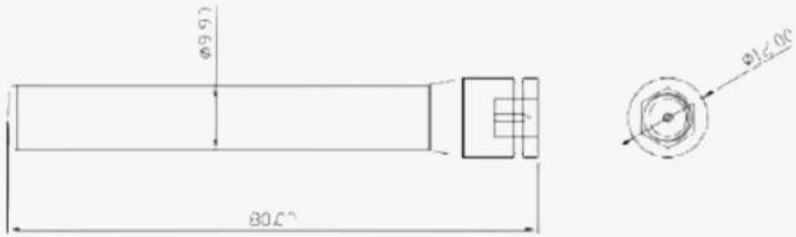
Back View

Side View

Logger Size (Unit: mm/Accuracy: ±2%)



Logger Antenna (Unit： mm)



Size of Antenna

Antenna electrical performance index:

Classification	Performance Parameter
Frequency rang-MHz	900/1800MHZ
VSWR	≤3.0
Input Impedance-Ω	50Ω
Gain-dBi	3-8dBi
Working Temperature-℃	-30℃~+70℃
Antenna Color	Black
Input connector	SMA

LED Indicator Lights Instruction

After logger connected to the device, check the status of NET light, COM light, SER light and whether there are data on the platform.There is only one light for each NET, COM and SER light.

The normal operation status after the stick logger powered on:

1.Initializing: COM&SER light flash slowly after the stick logger powered on;

2.Network registration: NET light flashes fast around 35s; Successful registration: NET light flashes slowly around 45s;

3.Successful communication with inverter: COM light flashes fast three times and keeps on around 50s

4.Normal operation: COM&SER light keep on and NET light flashes slowly around 2 mins.

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

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.)

NET	COM	SER	Fault Description	Fault Cause	Solution
					
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.