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Stick Logger (4G)

Product Model： LS4G-5

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 multiple 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 via 4G to the monitoring platform. The real-time status and historical data can be displayed with graphs, enabling intuitive and clear understanding of PV system.

Product Parameter

Catalog	Parameter	Value
Wireless Parameter	Working Frequency	FDD-LTE:B1,B3,B5,B8TDD-LTE:B38,B39,B40,B41GSM/GPRS:850/900/1800/1900MHz
	Transmitting Power	GSM850：+33dBm
		EGSM900：+33dBm
		DCS1800：+30dBm
		PCS1900：+30dBm
		LTE：+23dBm
	Antenna Option	Embedded PCB Antenna
Hardware Parameter	Data Interface	RS485

	Working Voltage	DC5V ~DC12V
Hardware Parameter	Max. Working Voltage	15V
	Max. Working Power	3.5W
	Indicator Light	One connected to inverter
		One connected to server
		One connected to network
	Data Storage	8MBYTE FLASH
	SIM Card	Integrated SIM CHIP（6mm*5mm）
	Working Temperature	-30℃~+70℃
	Working Humidity	< 90% (No Condensation)
	Storage Temperature	-45℃~+90℃
	Storage Humidity	<40%
	External Interface	USB
Software Parameter	Number of Connections	One
	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

Module Interface Identification

Pin	Description	Network Name	Type	Detail
1	Receiving Data Power VCC	VCC	POWER	External power: DC 5V~12V
2	Data communication	A	I/O	RS485_A Line
3	Data communication	B	I/O	RS485_B Line
4	Power GND	GND	Power	External power: GND

Product Pictures

Front View

Back View

Side View

Logger Size
(Unit: mm/Accuracy: ±2%)
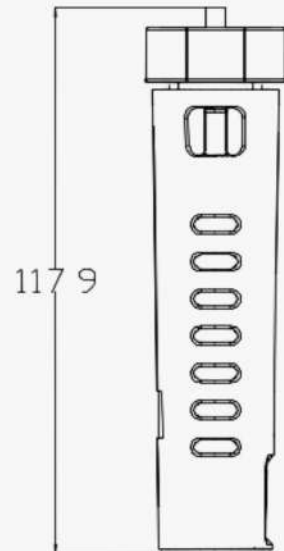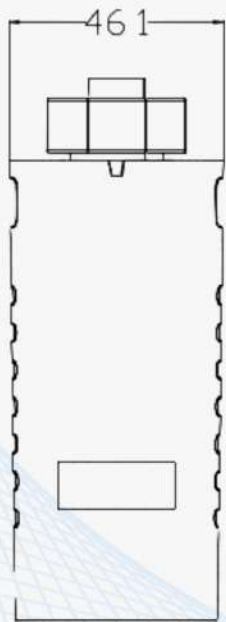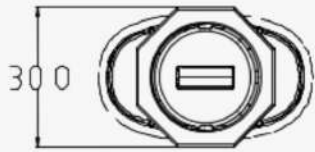
LED Indicator Lights Instruction

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.)

The normal operation status after the stick logger powered on:

1.Initialization: COM&SER light flash slowly.

2.Network registration: NET light flashes slowly around 30s; NET light will keep ON if the registration is successful.

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

4.Normal operation: NET light flashes fast, COM&SER light keep on.

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
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.

OFF	Flash/ ON	Any status	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.