

Data Logger FAQ

How to connect external sensors to Logger1000

Applicable to: Logger1000

1. Log in to the Web interface of Logger 1000

WiFi-login

Logger1000 supports WiFi-login. After the device is powered, check the SN code on the device and select the WiFi hotspot signal named SG-XXXX (XXXX is the device SN) to connect to WiFi.

W AND	*
无线网络连接	^
HUAWEI Mate 20	已连接,机
sungrow	liter
Xiaomi8	∎
SG-A1906160009	
mi	
thermal1	1000
SG-LIWEI247	500
SG-LOGGGGGGER	500
Yf_iPhone	1000
colin	
CD6B]]#Mafat	共享中心
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Enter the default IP address of Logger 1000 in the browser address bar after the device is connected: 11.11.11.1 to open the device management interface, the initial password is pw1111.



Ethernet login

Logger 1000 also supports Ethernet login. The default IP address of Logger 1000 is 12.12.12. First, after the device is powered, use the network cable to connect it with the computer, and change the IP address of the computer to make it in the same network segment as the device, as shown in the following figure.

SUNGROW Connected			^
		Edit IP settings	
Network profile type		Manual ~	
O Public (Recommended) Your device is not discoverable	e on the network. Use this in most cases—	IDv/	place.
O Private Your device is discoverable on	the network. Select this if you need file sh	On On	should know and trust the
people and devices on the net	work.	IP address	
Configure firewall and security	settings	12.12.12.9	
Authentication settings		Subnet mask	Edit
Metered connection	o reduce data usage when you're connect	255.255.255.0	Off
Cot o doto l'ositito holo control		Gateway	
Set a data limit to help control	data usage on this network	12.12.12.254 ×	
IP assignment:	Automatic (DHCP)	Preferred DNS	Edit
DNS server assignment:	Automatic (DHCP)		Edit
Link speed (Dessive (Transmit))	1000/1000 (Mhac)	Preferred DNS encryption	
Link-local IPv6 address:	fe80::a8d2:6d33:8b63:aa6d%11	Unencrypted only ~	Сору
IPv4 address:	10.20.81.17		
IPv4 DNS servers:	10.20.81.244 (Unencrypted)	Alternative DNS	
Manufacturer:	DisplayLink Dell Giga Ethernet		
Driver version:	9.3.3309.0	Save	
Physical address (MAC):	A0-29-19-CF-35-07	Save Cancel	



Enter the default IP address of Logger 1000 in the browser address bar after the device is connected: 12.12.12.12 to open the device management interface, and the initial password is pw1111. After logging in, the main interface of Logger1000 is shown in the following figure.

Logger1000	Ξ						0 0		L O&M User
Overview	Shortcut Menu								
General Information	1	k							
Current Alarms	Setup Wizard	System Maintenance							
Device Monitoring									
X Device 👻	Data Index								Expand~
T Power Control 👻	kWh			- kW		D 1 Piece			
History Data	KWh			kW		0 Piece			
O System -	Total Yield		M	ax. Adjustable Active Power		Online Device			
a About	Inverter Real-time Values (o	ff-grid 1, On-grid 0)							
	Device Name	Device Model	Status		Daily Yield(kWh)	Active Power(KW)	Reactive Por	wer(kvar)	
	SG50CX(COM1-001)	SG50CX	Offline						
A A A A A A A A A A A A A A A A A A A									



2. Add Modbus sensors

2.1 Add Kipp&Zonen sensors

Kipp&Zonen sensors mainly include SMP10 irradiation and RTI temperature sensor, which are mainly used in combination with WS601 or other sensors. The factory default communication parameters for both SMP10 and RTI are: Address 1, baud rate 19200bps, data bit 8, non parity, stop bit 1. The RS485 communication line of the sensor is connected with data collector RS485 terminal in reverse, A to B, B to A.



2.2 Add SMP10 irradiator

Electrical connection:



Add SMP10 irradiator, and the device model SMP10-Horizontal refers to horizontal irradiator and SMP10-Slope refers to slope irradiator:

Logger1000	Ξ						⊗ ∘ <u>∧</u> ∘	English 💄 O&M user
😫 Overview 👻	Auto Search Add Device							Delete
Device Monitoring	No.	SN	Device N	Add Device	× Device Address ©	Forwarding Modbus	Com Status	Operation
X Device	4 1.			Device Type	_	ID \$		
Device List 2.				Meteo Station	√ 4.			
Firmware Update				Port	-			
Inverter Log				COM1	 ✓ 5. 			
AFCI Activation				Device Model	-			
Fault Recorder				PC-4-Slope	^ 🔁 6.			
🛔 Power Control 🛛 👻				RT1-Slope	•			
S History Data				PVMET75/200 SMP10-Horizontal	1			
🗘 System 👻				SMP10-Slope 7.				
About				Tm-RS485-MB SI-V51-Horizontal				
					_			
🛜 🖻 🛆								



2.3 Add RTI temperature sensor

Electrical connection:

	Wire	Function	Connect with
	Yellow	Modbus® RS-485	B/B`/+
	Grey	Modbus® RS-485	A/A`/-
	Green	Modbus® common / Ground	
	White	Power 5 to 30 VDC (12 V recommended)	60 mW max.
	Black	Power ground	
	Shield	Housing	Ground *
1	* Connect to grou	nd if radiometer not grounded	

Table 1 RT1 connection

Add RTI temperature sensor, and the device model RTI-Horizontal refers to horizontal sensor, RTI-Slope refers to slope sensor:

Logger1000	Ξ						⊗ o ∆ o	English
🚦 Overview 🔻	Auto Search Add Device							Delete
Device Monitoring	No.	SN	Device N	Add Device	× Device Address ¢	Forwarding Modbus	Com Status	Operation
X Device	C 1.			Device Type		ID ¢		
Device List 2.				Meteo Station ~	4.			
Firmware Update				Port	-			
Inverter Log				сомі ~	S .			
AFCI Activation				Device Model	-			
Fault Recorder				PC-4-Slope	6 .			
1 Power Control -				PC-4-Pro				
History Data				WS601				
Ó System 👻				RT1-Horizontal 7.				
About				PVMET75/200				
🔶 🖻 🖒								



2.4 Add Lufft WS601 intelligent meteorological sensor

WS601 intelligent meteorological sensor mainly includes the sensors for rainfall, wind direction, wind speed, air temperature, relative humidity, atmospheric pressure and compass, which are mainly integrated with Kipp&Zonen SMP1 irradiator and RTI temperature sensor. Factory communication parameters: Address 1, baud rate 19200bps, data bit 8, non parity, stop bit 1.

> Green: RS485 Interface A Yellow: RS485

Electrical connection:

Add WS601:

Logger1000	Ξ							0 0 ∆ 0 €	English 🙎 O&M user
😫 Overview 👻	Auto Search Add Device 3								Delete
Device Monitoring	No.	SN	evice N	Add Device	×	Device Address \$	Forwarding Modbus	Com Status	Operation
X Device	1 .			Device Type			ID ÷		
Device List 2.				Meteo Station	~ 4				
Firmware Update					_				
Inverter Log				COM1	~	5.			
AFCI Activation				Device Medel					
Fault Recorder				PC-4-Slope	^	<u> </u>			
* Dower Control				PC-4-Pro	1				
				WING-TRACKER					
History Data				WS601 7					
🌣 System 👻				RT1-Horizontal					
About				PVMET75/200					
					٣				
😤 🖻 🛆									

Please be aware that if more than 2 irradiance sensors are added, the first one will be taken into the calculation for plant performance ratio (PR).



3. Add analogue sensors

To add an analogue sensor, please see the pictured steps below, be aware, that this is an example of a temperature sensor. If you need to install a different type of analogue sensor, please refer to the corresponding options in the settings as well as the values, written on the label of the sensor.

Logger1000	Ξ				😮 0 🛕 0 🌐 English	💄 O&M User
O System	Suilt-in 1.	External				
Run Information	AI	Input Type	Lower Limit	Upper Limit	Purpose	
System Maintenance	Al1	Voitage (V) Current (mA)	0	10		
Remote Maintenance	AI2	Voltage (V) Current (mA)	0	10		8
Message Export	AI3	Voltage (V) Current (mA)	0	10		
System Time	A14	Voltage (V) Current (mÅ)	0	10		-
Transfer Configuration		C roundle (r) C content (unit				
R5405						
Ethernet						
WIFI						
AI 3.						
DI						
DO						
MPLC						
3 About						

Navigate: System -> Port Parameter -> Al

Now, you have the option, to configure four AI-ports, depending on which one you connected. Set Voltage/Current and corresponding values.

Logger1000	Ξ				Set Successfully			🙁 0 🛕 0 🛛 😂 English	L O&M User
O System	6	Built-in Exte	ernal						
Run Information	AI		Input Type	Lower Lin	nit	Upper	r Limit	Purpose	
System Maintenance	1. AI	11	Voltage (V) Current (mA)	0		10		TempSensor	B 🔁 2.
Remote Maintenance	AI	12	Voltage (V) Current (mA)	0		10			8
Message Export	AI	13	Voltage (V) Current (mA)	0		10			-
Transfer Configuration	AI	14	Voltage (V) Current (mA)	0		10			
Port Parameter									
RS485									
EyeW485									
Ethernet									
WIFi									
AI									
DI									
DO									
MPLC									
About									



After the AI-port is configured, you need to add the sensor.

Navigate: Device -> Device List -> Add Device

Logger1000	Ξ							○ ○ ▲○ ●	English 💄 O&M User
Overview	Auto Search Add Device	3.							Delete
Device Monitoring	No.	SN	Device Name	Device Model	Port ©	Device Address \$	Forwarding Modbus	Com Status	Operation
X Device					No Data				
Device List 2.									
Firmware Update									
AFCI Activation									
Fault Recorder									
1 Power Control 👻									
History Data									
🗢 System 👻									
About									

Select Meteorological Sensor and Save the setting.

Logger1000	Ξ						0 0 ∆ 0 €	English 🚨 O&M User
😫 Overview 👻	Auto Search Add Device							Delete
Device Monitoring	No.	SN	Device N	Add Device	× Device Address ¢	Forwarding Modbus	Com Status	Operation
X Device				Device Type		ID ÷		
Device List				Meteorological Sensor	· _ 1.			
Firmware Update				Save 2.				
Inverter Log								
AFCI Activation								
Fault Recorder								
1 Power Control 👻								
 History Data 								
♦ System -								
About								



Set up your sensor, by navigating to Device Monitoring -> Initial Parameters. Set the analogue input as well as minimum and maximum values of the sensor. To save the settings, click Save and your sensor is set up.

Logger1000	<u>=</u>				😢 0 🛕 0 💮 English 💄 O&M User
🖬 Overview 👻	All	Realtime Values Initial Parameter 2.			
Device Monitoring	\$3 meteo sensor 1.				6. Save
× Device -		Name	AI	Min.	Max.
1 Power Control 🗸		Plane instantaneous irradiation (W/m ²)	- ~	0	0
 History Data 		Bevel instantaneous irradiation (W/m ²)	- ~	0	0
• System -		Ambient Temperature (°C) 3.	Al1 ~	442	5. 46
 About 		Module Temperature (°C)	- ~	0	0

You can see, if you set it up correctly, by checking the **Realtime values**.

Logger1000	Ξ		🔕 0 🛕 0 🌐 English 💄 O&M User
😫 Overview 🗸 👻	All	Reatime Values Initial Parameter	
Device Monitoring	% meteo sensor	Parameter Name	Current Value (Unit)
🗙 Device 👻		Transient Horizontal Irradiation	Whit ²
T Power Control 🗸		Daily Horizontal Irradiation	With ²
History Data		Slope Transient Irradiation	Wtm²
✿ Svstem ▼		Slope Daily Irradiation	Wim?
A frank		Ambient Temperature	-42.0 °C
U Abbut		remp. (+v moaule)	- "L

For further information, please download the user manual <u>here</u>.



This manual is intended for professional technicians who are responsible for installation, operation, maintenance and troubleshooting of inverters, and users who need to check inverter parameters. The inverter must only be installed by professional technicians.

The professional technician is required to meet the following requirements:

- Know electronic, electrical wiring and mechanical expertise, and be familiar with electrical and mechanical schematics.
- Have received professional training related to the installation, commissioning and troubleshooting of electrical equipment.
- Be able to quickly respond to hazards or emergencies that occur during installation, commissioning and troubleshooting.
- Be familiar with local standards and relevant safety regulations of electrical systems.
- Read this manual thoroughly and understand the safety instructions related to operations.