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# SmartPV

Intelligent monitoring platform

**PV Station Remote Monitoring system**

## A kind of logger to support station O&M and effectively improve the station management efficiency.

It is important to monitor the running status of each equipment in the PV station. Taoke Logger can provide 24 hours continuous monitoring service and keep the station operation in a good condition.

Compared with CT monitoring, it is more affordable with more detailed PV data information such as the fault status and equipment generated energy etc. Moreover, it can collect the day, month, year and total energy production information and weather information and support the data analysis function.



Q. Why the PV station needs remote monitoring system?

A. To protect the vital assets

## To know the fault ASAP!

In the process of normal station operation, some environmental factors such as lightning stroke, snow cover and typhoon etc., which always happened to damage the site equipments and give rise to abnormal energy production; other factors also cause the poor sunlight such as the tall plant or grass which lower the energy production and delay the ROI. For avoiding these risk, it is necessary to install the PV station remote monitoring system.



All SmartPV data is stored in Cloud server so as to viewing and checking in Management interface (SmartPV service). The management interface make the user easy to know the detailed information of running status and energy production of multiple plants. In addition, for general view to plant, SmartPV provides the interface for common user and can be accordingly used as per the user type.



## Management page TOP ( Manage user )

Manage user can manage and view the whole station operation status.



## Station status

- Fault level:★★★★★
- Shutdown level:★★★★☆
- Logger Offline level:★★★★★
- Device Offline level:★★★★☆
- Part Shutdown level:★★★★☆
- Normal level:★★★★★

## Station Alarm

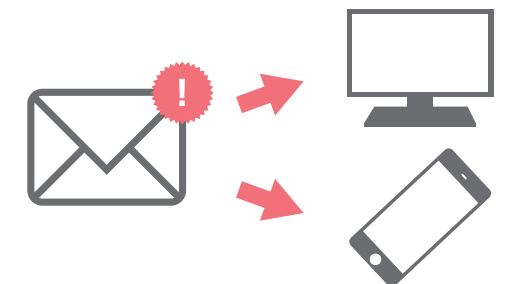
- Fault level:★★★★★
- Equipment daily halt alarm level:★★★★☆
- Logger off-line level:★★★★★
- Station low month efficiency level:★★★★☆
- Equipment off-line level:★★★★★
- Equipment low month efficiency level:★★★★☆
- Station daily halt alarm level:★★★★★

## The plant' detailed screen (Common user)

Combining with the site data of weather station to perform the collecting and analysis of all kinds of plant data.



## To timely notice the plant abnormal situation to user in time!



After fault happened to Pes, the alarm will be showed in the management interface, meanwhile, the alarm email will be sent to user. Quickly know the plant running status and timely minimize the loss of energy production.



# 01 Reduce the cost of use !

The cost for SmartPV and CT monitoring is similar, but SmartPV monitoring system can monitor and get high accurate and detailed data from each inverter, so if any abnormal situation happened, user can know the inverter running status and solve the problem quickly.

# 02 Simultaneously combine with the function of Ethernet logger and 3G router !

TK series logger adopts high intensification design, simultaneously combined with data collection function of Ethernet logger and wireless transmission function of 3G router, in other word, one pay with double service enjoy.

# 03 Long-term data store and real time data view !

If user adopts the service from SmartPV monitoring system, the real time power generation data can be freely stored for 10 year. User can view the historical data and analysis data etc. at any time.

# 04 One Datalogger can monitor multiple inverters

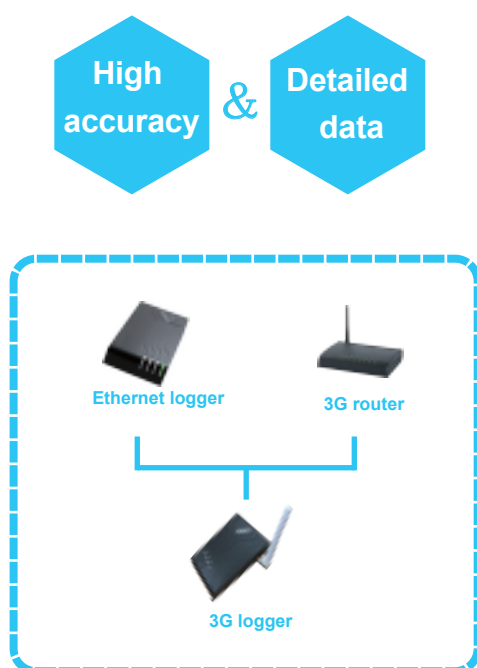
Number of connected devices	Purpose	Model
12	Industrial inverter(1~12)	TK-W30-12

# 05 Be compatible with most brands inverter in global market

## Corresponding brand list

- Delta Electronics, Inc.
- Hitachi, Ltd.
- GS Yuasa Corp.
- Omron Corp.
- Mitsubishi Electric Corp.
- Meidensha Corp.
- Sanyo Denki Co., Ltd.
- Huawei Technologies Co., Ltd.
- Panasonic Corp.
- IDEC Corp.
- TMEIC Company
- Daihen Corp.
- Fujisaki Electric Co., Ltd.
- Shindengen Electric Mfg. Co., Ltd.
- Yaskawa Electric Corp.
- Sungrow Power Supply Co., Ltd.
- Nissin Electric Co., Ltd.
- Tabuchi Electric Co., Ltd.
- Schneider electric Corp.
- SMA Japan Corp.

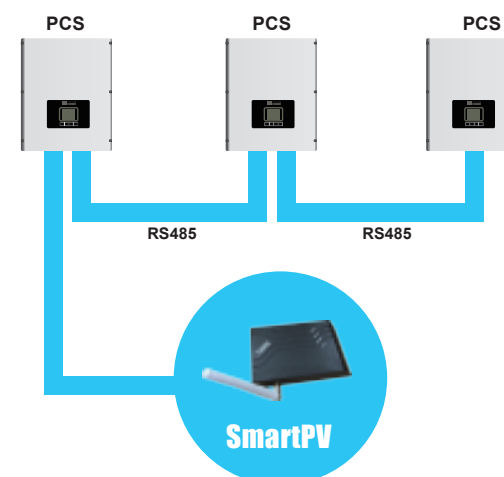
※Ranking listed in no particular order  
 ※Reserve for listed brand is available  
 The compatibility for the brand not listed here is also available, for more information, please contact us.



## Provide detailed information on Inverter Monitoring Data !

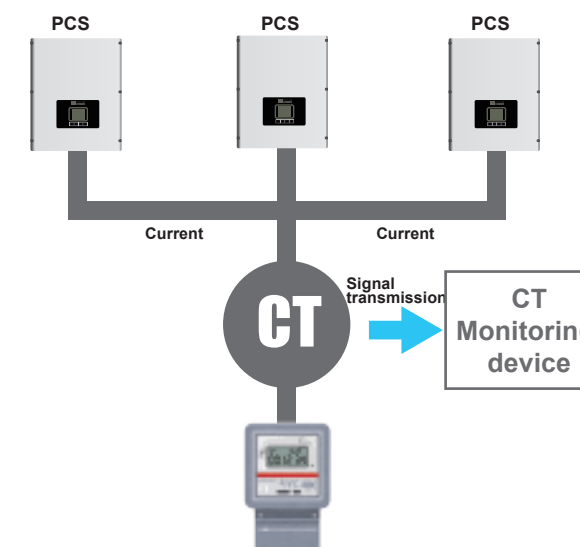
### SmartPV AND CT Contrast

#### Monitoring using PV Smart



Logger directly connect with inverter' communication module to collect the data, compared with CT, the data is from inverter itself, so the data error is small and easy to monitor the abnormal status of each inverter.

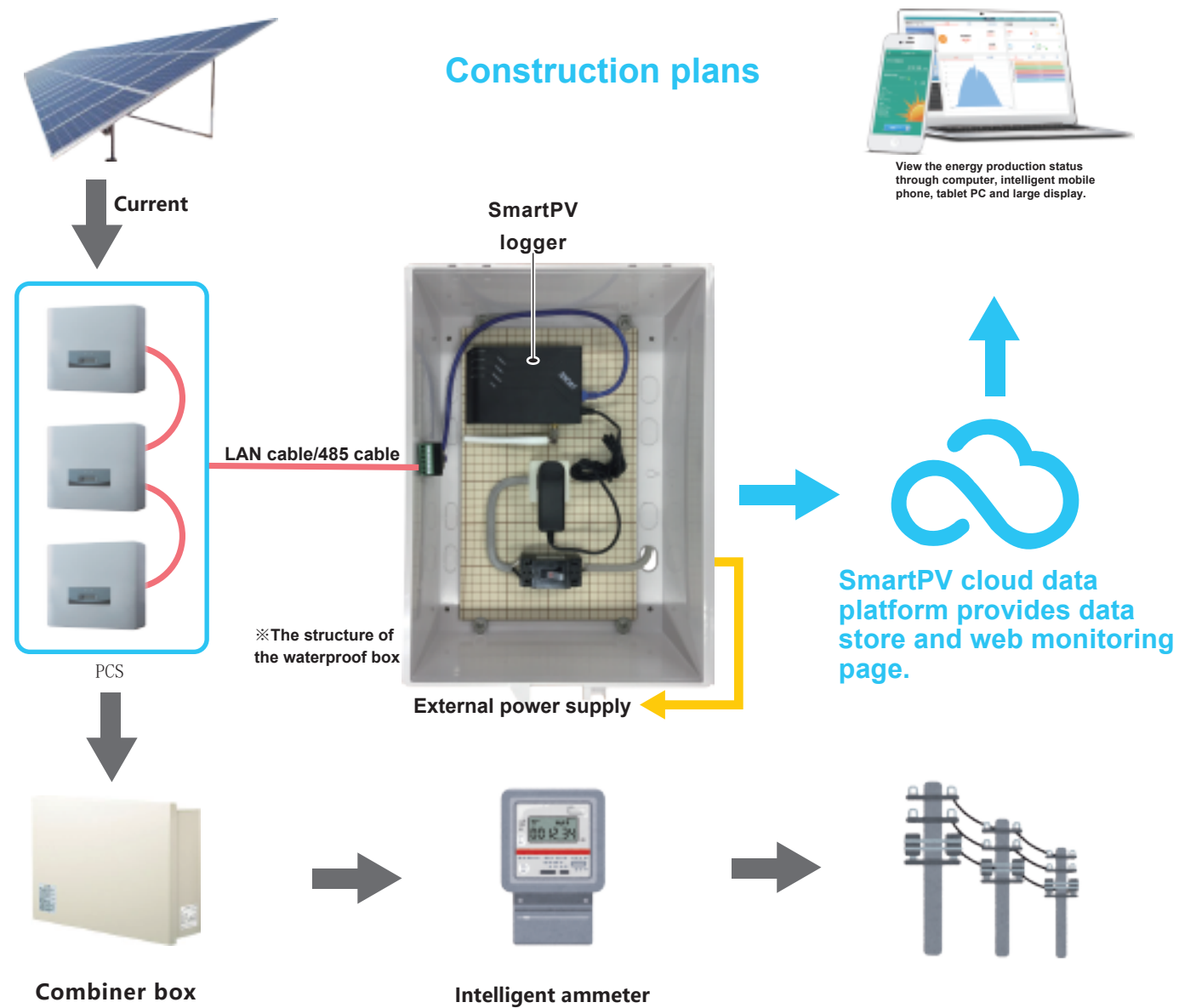
#### Monitoring using CT



Can not get the inverter status and detailed information and the data is not detailed enough.

## Comparison between SmartPV monitoring system and CT monitoring system

		SmartPV	CT
Monitoring content (Collected data)	Inverter daily energy production	○	×
	Inverter MPPT information	○	×
	Inverter fault alarm notification	○	×
	Inverter energy production comparison	○	×
Other	Measuring accuracy	○	△
	Inverter daily halt alarm(day)	○	×
	Inverter month low efficiency alarm(month)	○	×



## Check the station status anytime and anywhere

### Be able to check all site equipments simultaneously !

Check and view the station energy production, inverter status and local weather data information through computer, intelligent mobile and tablet PC etc. anytime and anywhere.



Mobile phone



Pad



PC

## Try out the SmartPV monitoring platform from the Channels below

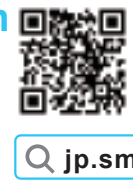
### Mobile version

Use your mobile or tablet to scan the QR code and download the software.



### WEB version

Use the browser to visit the WEB version SmartPV monitoring platform.



jp.smart-pv.net



Mobile & WEB common version

Account

jp@smart-pv.net

Password

smartpv

## Installation Record in Japan ( 1 )



Tokai University ,Tokyo  
Inverter : YASKAWA  
Capacity : 50KW



Tosu-shi, Saga  
Inverter : Shindengen  
Capacity : 50KW



Isai-shi, Kagoshima  
Inverter : TOSHIBATEMCO  
Capacity : 990KW



Uki-shi, Kumamoto  
Inverter : Huawei  
Capacity : 900kW



Takehara-shi, Hiroshima  
Inverter : Delta  
Capacity : 400kW



Omitama  
Inverter: OMRON  
Capacity : 49.5kW



Honjo-shi, Saitama  
Inverter : Hitachi  
Capacity : 543.5kW



Isesaki-shi, Gunma  
Inverter : SMA  
Capacity : 57.24kW