



Reliable Electrical Measurement Instruments And Preventing illegal Power use

HIOKI E.E. CORPORATION
Product Marketing Department
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Agenda

1. HIOKI Profile

2. Surveillance of Counterfeit Power Meter, Stealing Electricity and illegal usage

- AC Clamp Power Meter CM3286 Series

3. Measurement Instrument for Renewable Energy

- POWER QUALITY ANALYZER PQ3100
- Measuring instrument for PV power generation

4. Approach to IoT

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1. HIOKI Profile

Trade Name : HIOKI E.E. CORPORATION

Businesses : Development ,Manufacture, Sale and Service of Electrical Measuring Instruments

Founded : June 1935

Incorporated : January 1952

Capitalization : 3,299million JPY

President & CEO : Kazutoshi Hosoya

Head Office and Plant :

81 Koizumi,Ueda,Nagano,Japan

Consolidated Subsidiaries:

HIOKI USA CORPORATION

HIOKI SINGAPORE PTE. LTD.

HIOKI KOREA CO.,LTD.

HIOKI INDIA ENGINEERING PRIVATE LIMITED

HIOKI Forest Plaza Corporation

Employees : 909 (Including all HIOKI Group companies) (as of 31st Dec 2016)

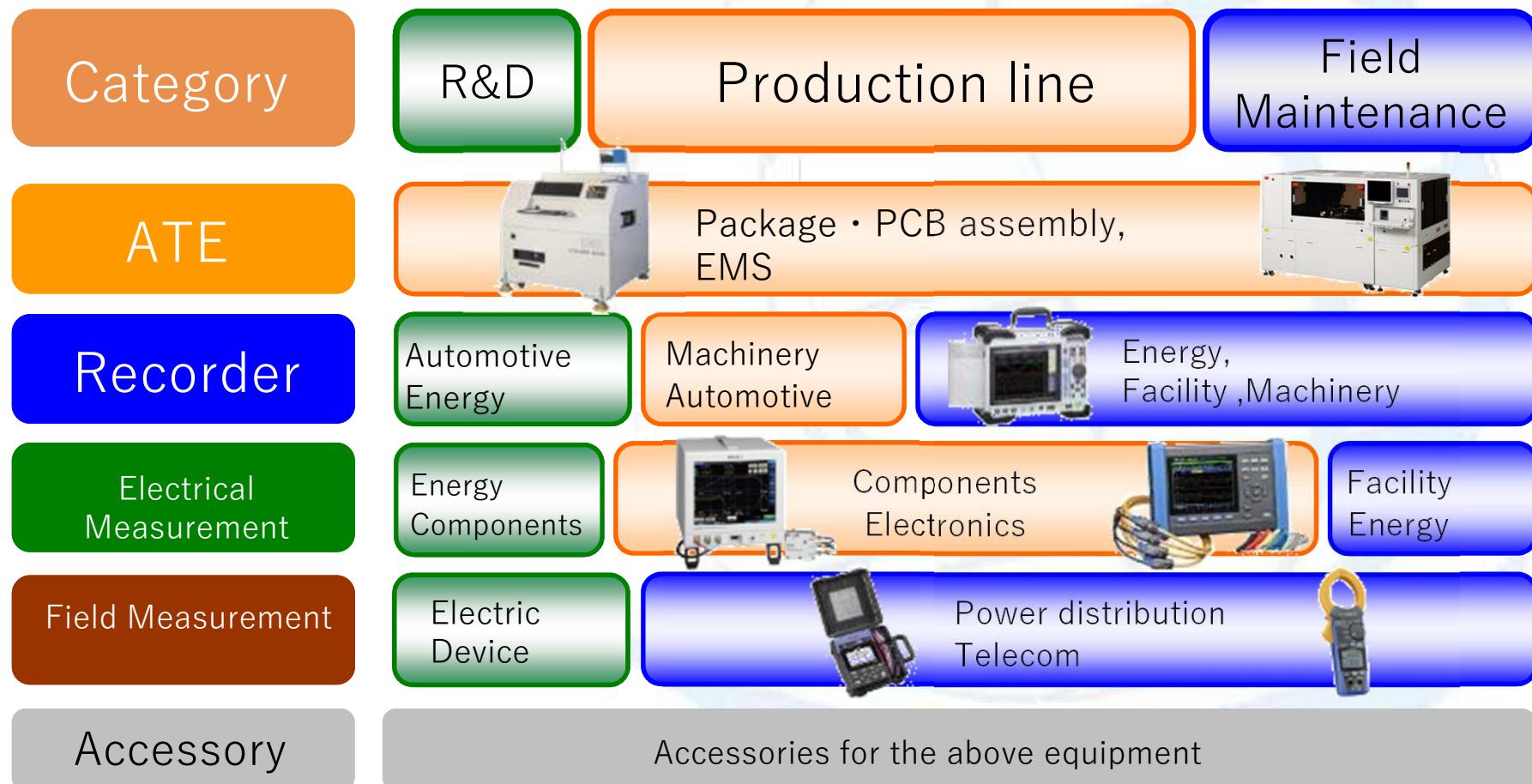
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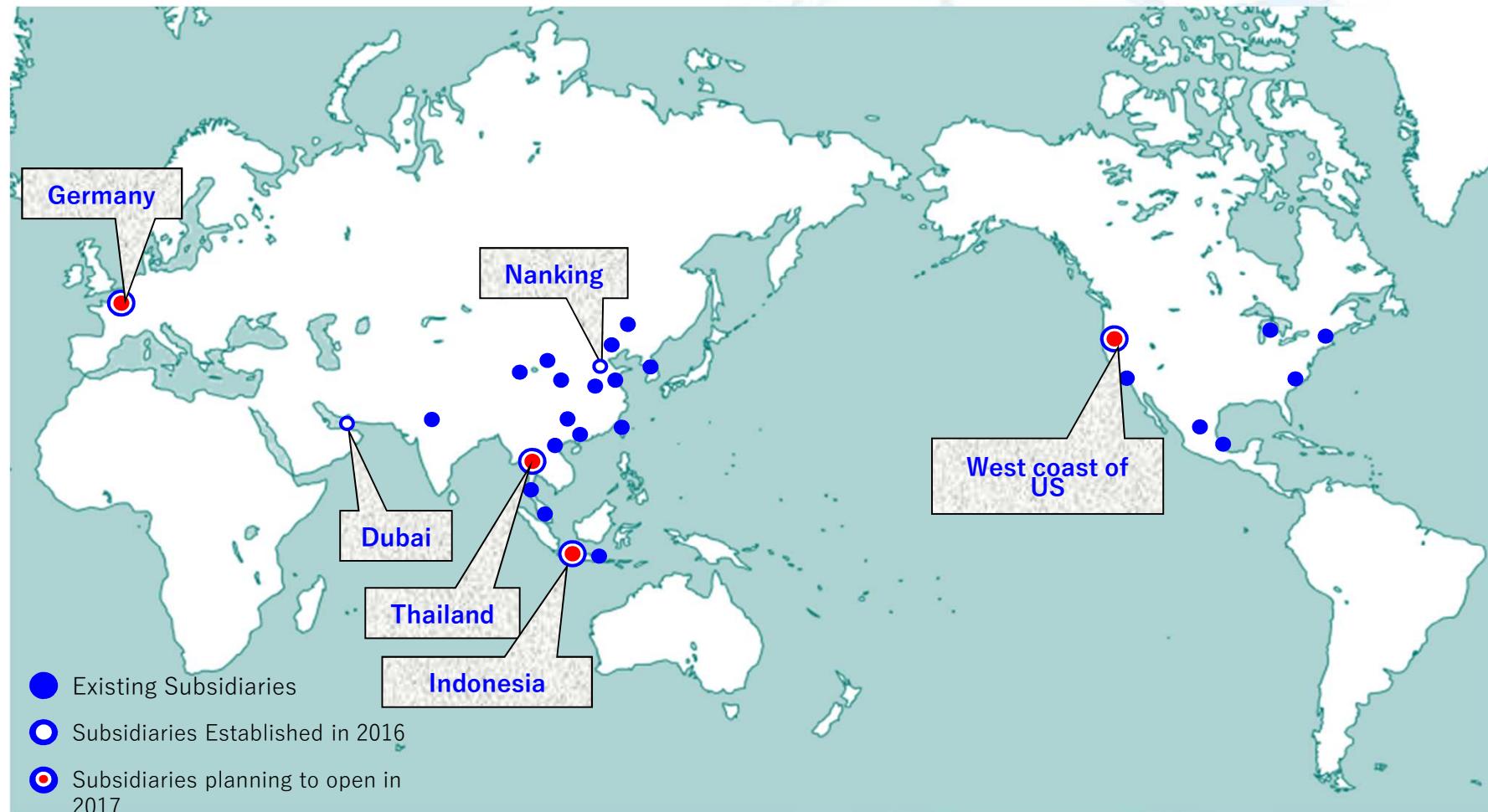


HIOKI Product Category and Target sector

HIOKI Products are for R&D, Production line, Field Maintenance. More than 300 products



Global Business development



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Unique HIOKI Technology

The world's first no-metal-contact voltage sensing technology

Provided user-friendliness and safety

Non-Metallic
contact

Voltage and Phase
detection



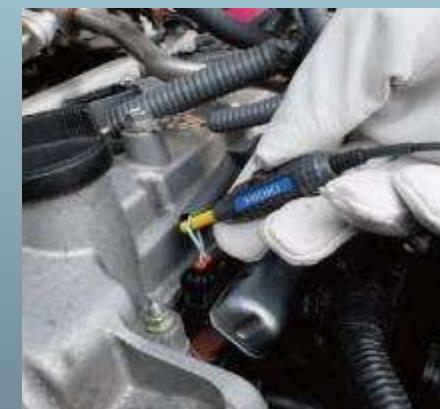
Non-Metallic
Contact

Clamp Power
Meter



Non-Metallic
Contact

AD Voltage
Probe



2. Surveillance of Counterfeit Power Meter, Stealing Electricity and illegal usage

AC Clamp Power Meter CM3286 Series

The electric power checker which sees through illegal connection

■ Specifications

Item	Specification
Measurable lines	Single-phase, Three-phase (balanced, unbalanced*2)
Measured parameters	Voltage(Peak), current(peak),effective/reactive/apparent power, power factor, phase angle, reactivity, frequency, Voltage/current harmonic levels*1
Rated measurement current (range)	AC 600 A (AC6A/60A/600A)
Measurable conductor diameter	Φ46mm or less
Degree of protection	IP54(excluding jaws, Jaws:IP50)
Other functionality	Without Bluetooth®: CM3286 With Bluetooth® : CM3286-01
Measurement category	CAT IV 600V / CAT III 1000V
Operating temperature range	-25~65°C



Illegal connection check function(CM3286)

Surveillance of Counterfeit Power Meter

① Mechanical Meter ② Electronic Meter

③ Power Check

Illegal connection

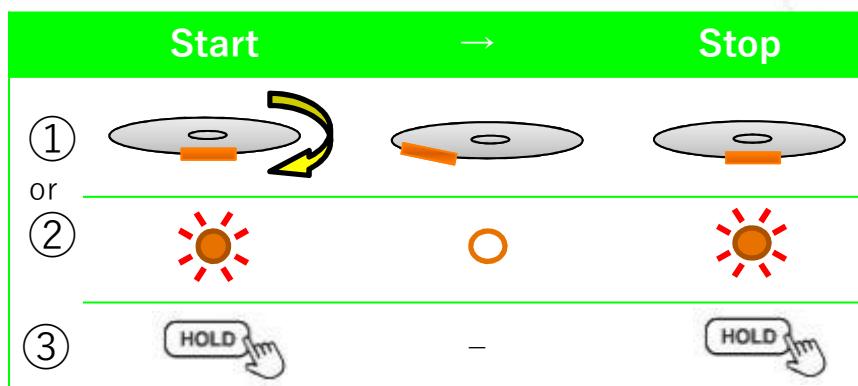


600rev/kWh

Input



L
N



Illegal connection check function(CM3286-01)

Surveillance of Counterfeit Power Meter

① Mechanical Meter ② Electronic Meter



③ Power Check

Illegal connection



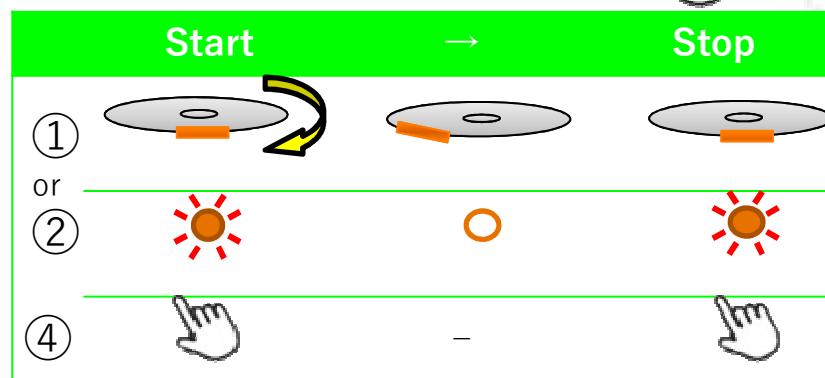
④ Smart Phone



600rev/kWh

Input

Download data
Via e-mail



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Illegal connection check function(CM3286-01)

Surveillance of Stealing power

1

Real time data transfer and take a picture.



2

Automatic Report Generation on your Android Phone or iPhone.



3

Download data.

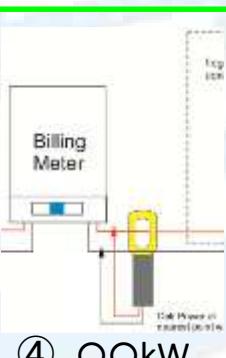
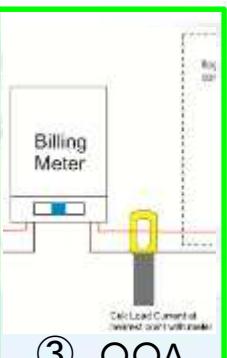
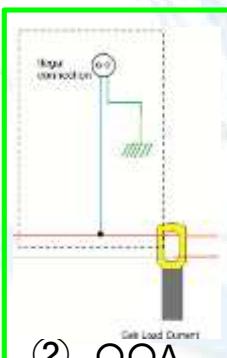
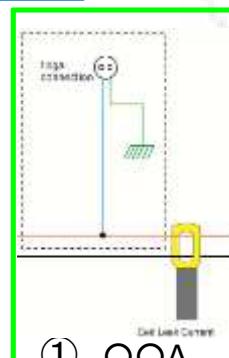


Via e-mail

Report

Date : 2017/04/xx 13:20

Data :



Map :



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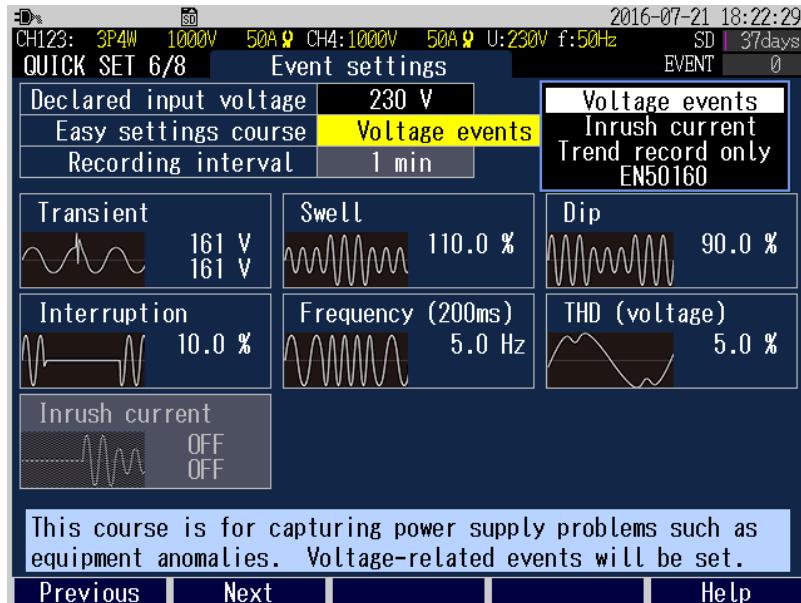
3. Measurement Instrument for renewable energy

POWER QUALITY ANALYZER PQ3100

- ◆ After installation of Renewable energy plant
- ◆ Power Quality Measurement for power grid and facility
- ◆ Multilingual
(English, French, Chinese and so on)



Quick Trouble shooting Setting Assist function



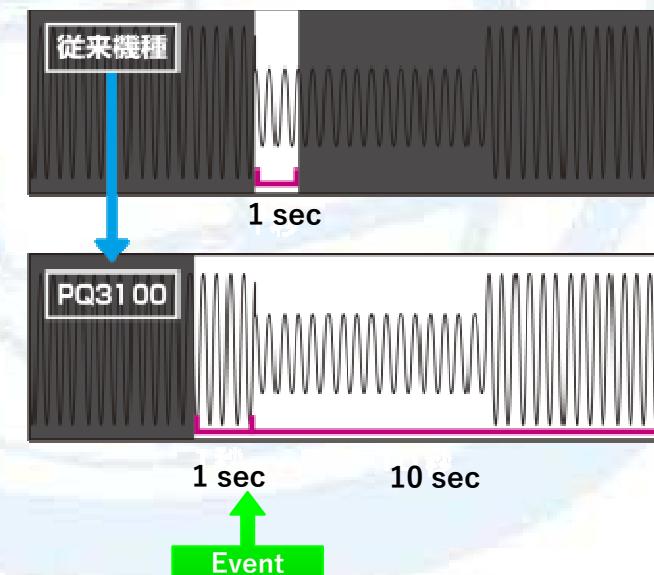
Easy Setting
Can be checked all of
parameter on the display

Event Waveform recording

Record waveform before and after event
(before 1 sec • After 10 sec)

Effect secondary output measurement for power conditioner of PV
(10 sec is needed to check after Power fail recovery)

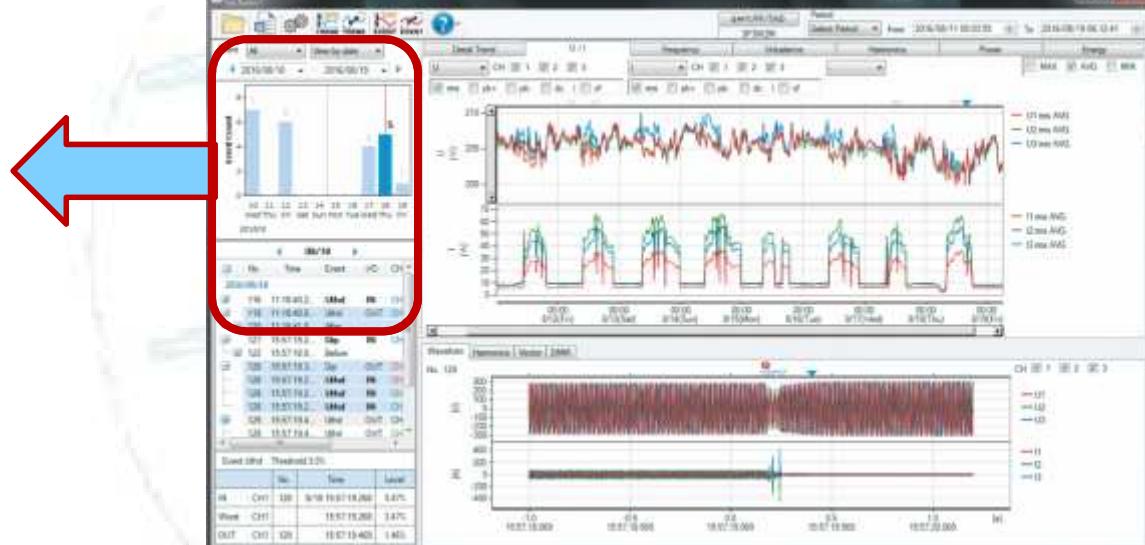
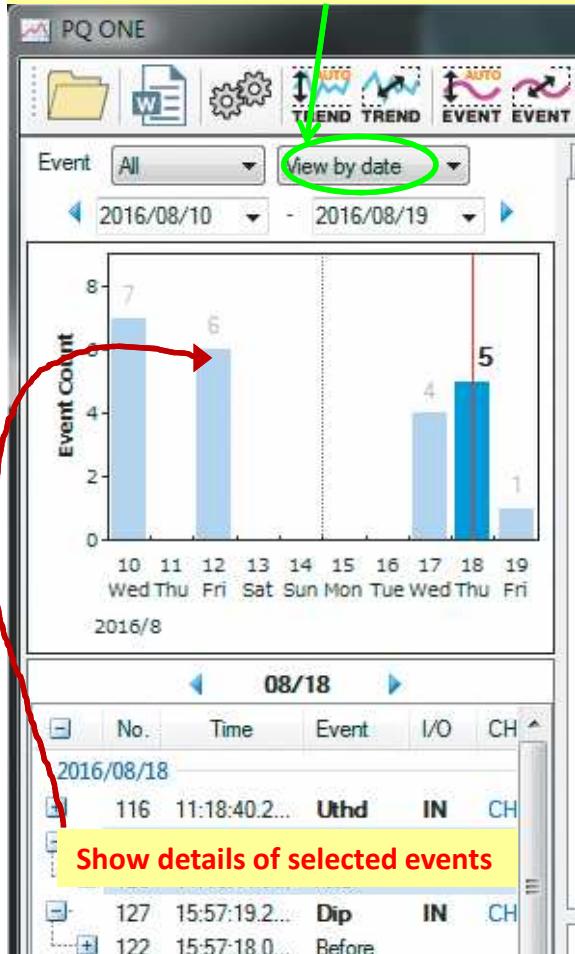
Effect to identify the cause of PQ trouble



PQ ONE

Useful events statistics function for analysis

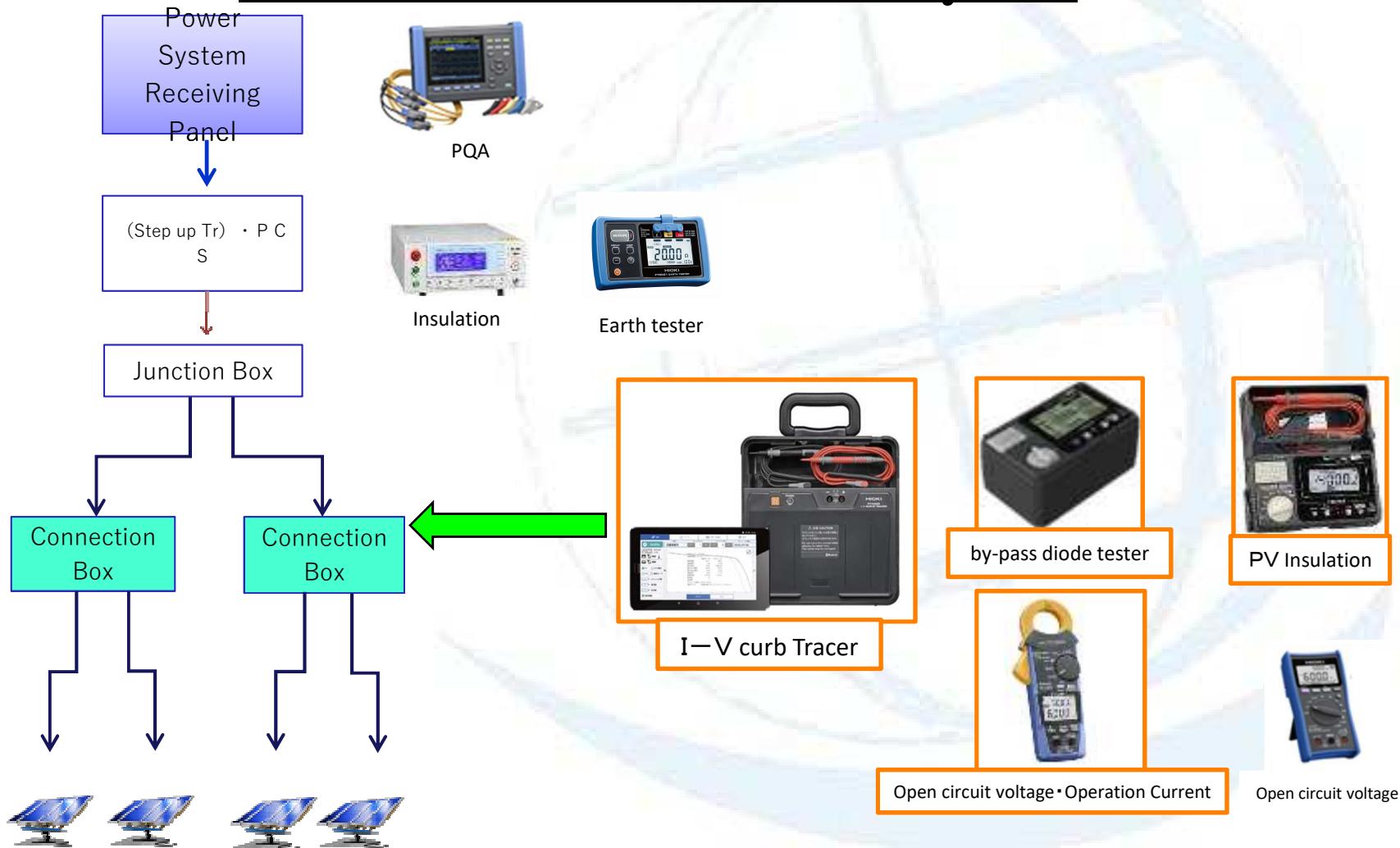
Selectable from day, a day of the week, time



Events Statistics Function

Now even easier to identify power trouble trends
 thanks to time or day of week display

Products for PV Generation System



4. Approach to IoT

HIOKI GENNECT



GENNECT Cross (Free)

Field measure instruments can be more convenient!



GENNECT Field (Charge fee)

The processes relevant to measurement quickly!



■ Common point

- HIOKI's products equivalent for Bluetooth Smart are able to connect both Cross and Field !

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HIOKI common free application GENNECT Cross

**Choose the measure functions
on the home screen.**



General measurement

Press button and save measure value



Logging

Save automatically at regular intervals



Waveform Graph

Describe waveform as easily oscilloscope



Battery

Battery measure functions



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Fédération Internationale pour la Sécurité des Usagers de l'Électricité
International Federation for the Safety of Electricity Users
Federacion Internacional para la Seguridad de los Usuarios de la Electricidad

THANK YOU
MERCI



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