

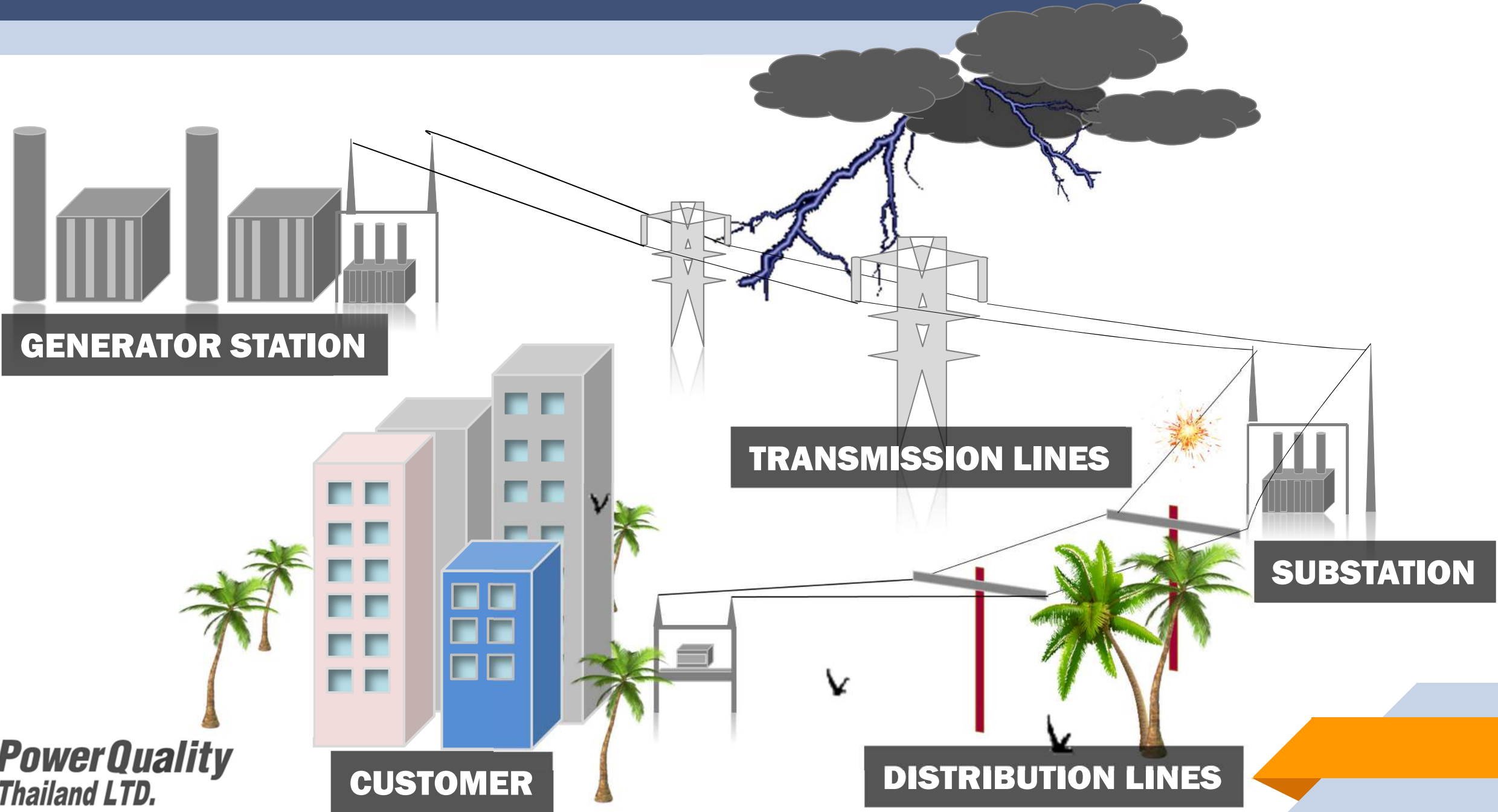
# PQSIM 200™

**A POWER QUALITY PRACTITIONER TRAINING TOOL**

## **PQSIM 200™**

- **DESIGNED BY POWER QUALITY EXPERTS WITH 30 YEARS' EXPERIENCE IN TROUBLESHOOTING, TESTING AND DOCUMENTING POWER QUALITY ISSUES.**
- **A PURPOSE BUILT FUNCTION GENERATOR THAT PRODUCES VOLTAGE AND CURRENT WAVEFORMS OF THE MOST COMMON POWER QUALITY DISTURBANCES.**

# POWER DISTURBANCES



# AUTO – SEQUENCE TEST

- 9 DIFFERENT POWER QUALITY EVENTS
- EACH EVENT SPACED AT 30 SECONDS INTERVAL.  
FOR EASY DATA DISPLAY IN THE INSTRUMENT SOFTWARE.

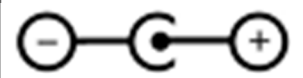
# PQ EVENTS SELECTIONS

- USER CAN SELECT INDIVIDUAL POWER QUALITY DISTURBANCE WAVEFORMS.



**OUTPUT PHASE VOLTAGE 120 ~ 240 VAC, 50-60Hz**

**INPUT POWER 12 VDC**

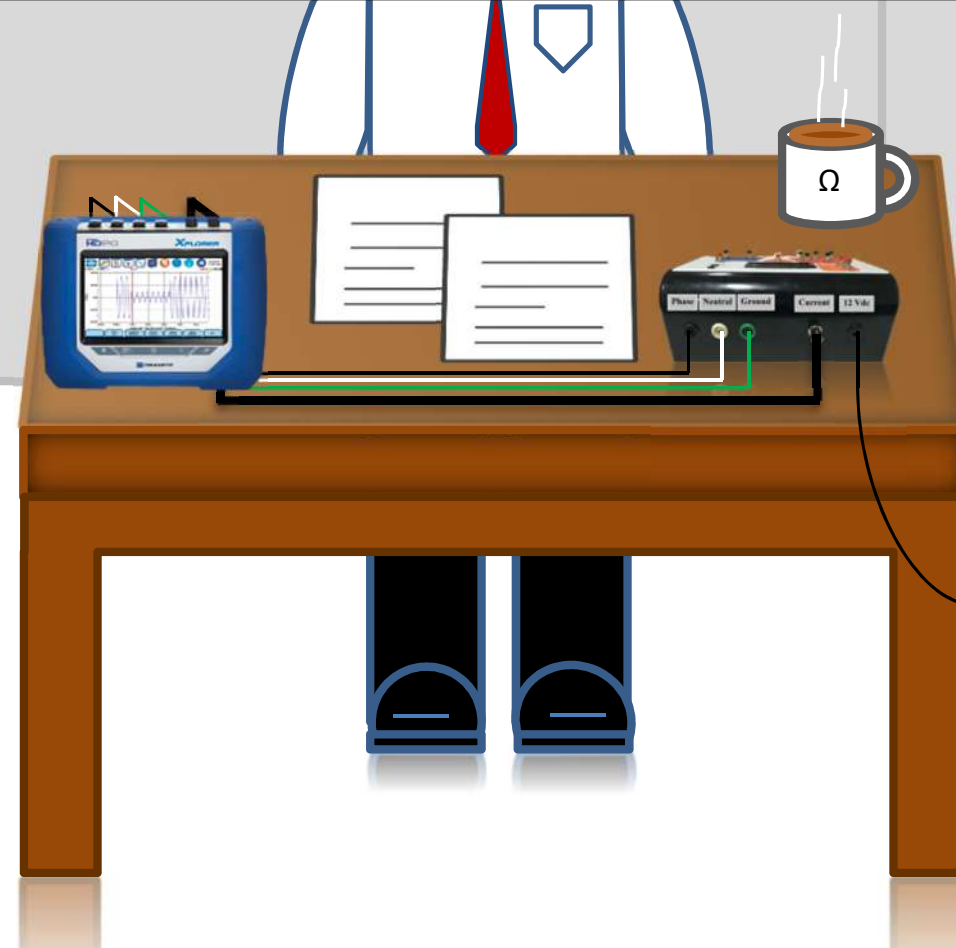


**VOLTAGE 0 TO 1.5 VAC FOR CURRENT SIGNAL TO PQ METER.**

## POWER QUALITY DISTURBANCES

### RMS VOLTAGE:

- **SAG (USER SELECT MAGNITUDES AND DURATIONS)**
- **SWELL (PHASE TO NEUTRAL) AND (NEUTRAL TO GROUND) (USER SELECT DURATIONS)**
- **UNIPOLAR TRANSIENTS (PHASE TO NEUTRAL) AND (NEUTRAL TO GROUND)**
- **BIPOLAR TRANSIENTS**
- **PF CAP (DECAYING) RINGWAVE**
- **ODD HARMONICS**



## VOLTAGE SAG / DIP

**MAGNITUDES: 10/25/50%**  
**- BELOW NOMINAL VOLTAGE**  
**DURATIONS: 0.05/0.5/1/5/11 CYCLES**

**Typical Sag: 25%, up to 50%.**

**0.05 CYCLE; (DO NOT RESULT IN SIGNIFICANTLY LOWER RMS READINGS. THESE ARE TECHNICALLY REFERRED TO AS NOTCHES.)**

**0.5 CYCLE RESULT IN A ½ THE VALUE CHANGE FOR A VOLTAGE SAG.**

**5 CYCLES: IS THE TYPICAL CLEARING TIME FOR TRANSMISSION LEVEL FAULTS 10 AND GREATER. (FOR DISTRIBUTION LEVEL FAULTS)**



**IEC STANDARDS REQUIRES A LENGTH OF 10 CYCLES TO BE CAPTURED, ALLOWING HARMONICS TO BE CALCULATED. SOME PQ METER DESIGNS MAY HAVE DIFFICULTY IN CORRECTLY RECORDING THE 11 CYCLE EVENT ACCURATELY.**

## VOLTAGE SWELL

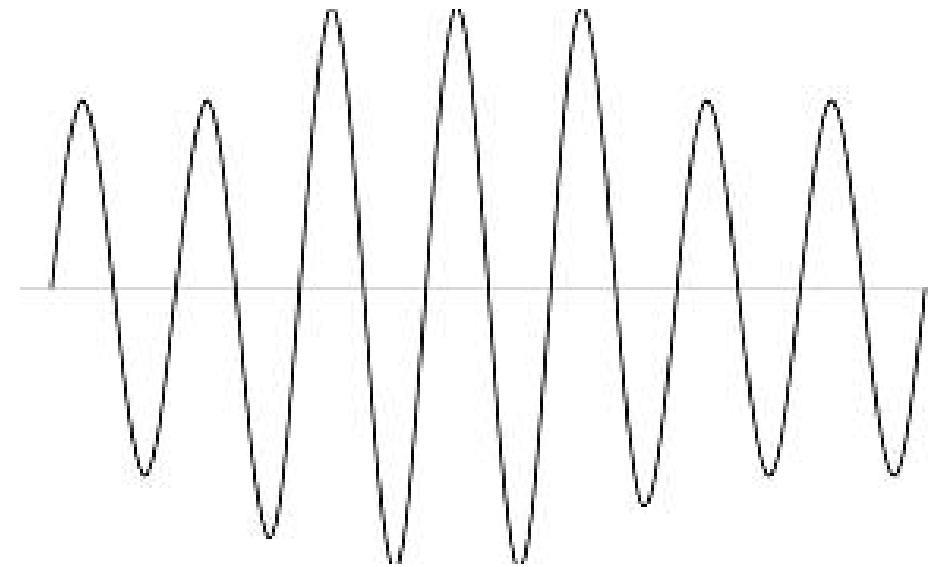
**SWELL (P-N)**

**MAGNITUDES: + 10%**

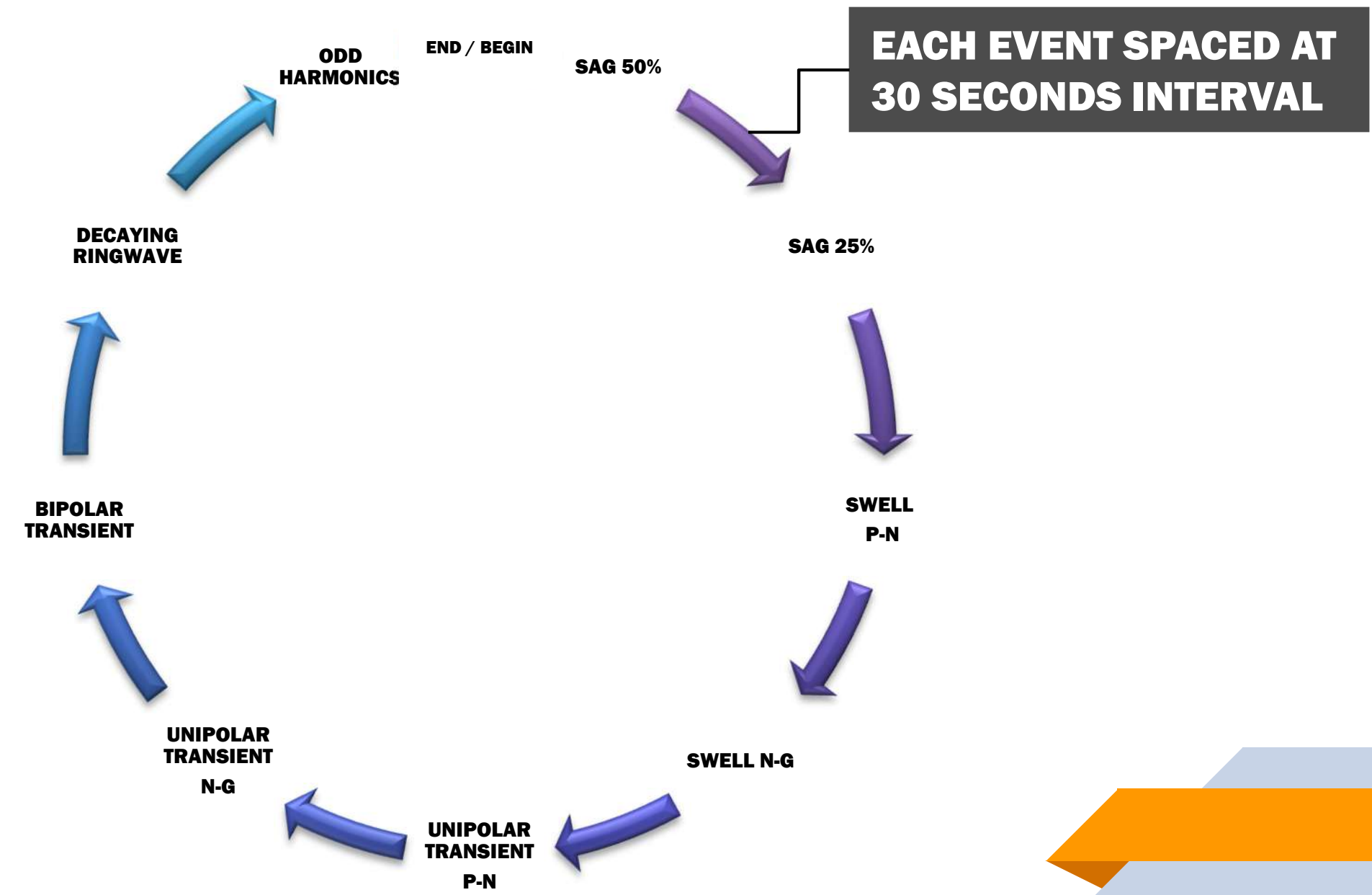
**- OVER NOMINAL VOLTAGE**

**SWELL (P-N & N-G)**

**DURATIONS: 0.05/0.5/1/5/11 CYCLES**



# AUTO - SEQUENCE





## CONNECTING THE PQSIM 200™ TO THE PQ METER

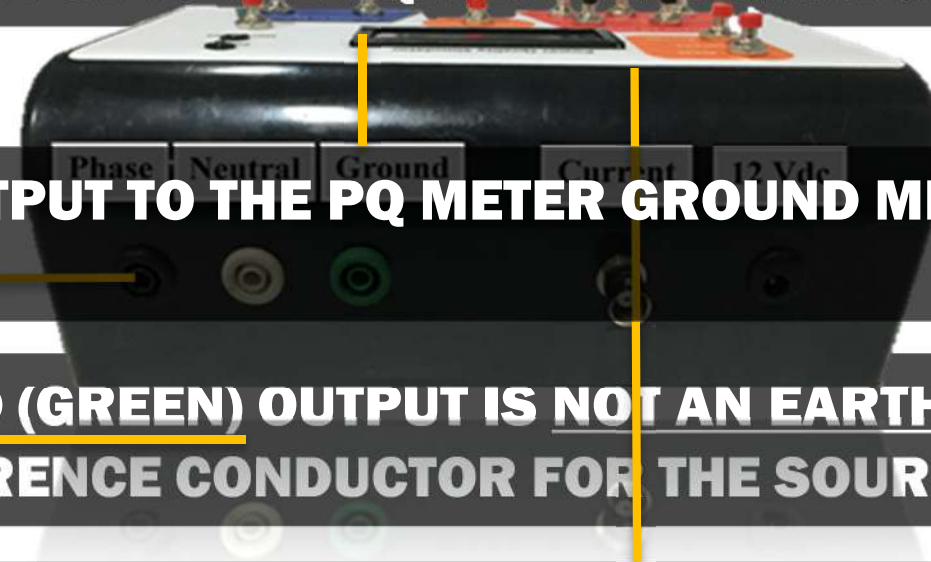
**OUTPUT PHASE VOLTAGE TO THE PQ METER VOLTAGE CHANNEL PHASE A +**

**NEUTRAL OUTPUT TO THE PQ METER NEUTRAL JACK**

**GROUND OUTPUT TO THE PQ METER GROUND MEASUREMENT CHANNEL**

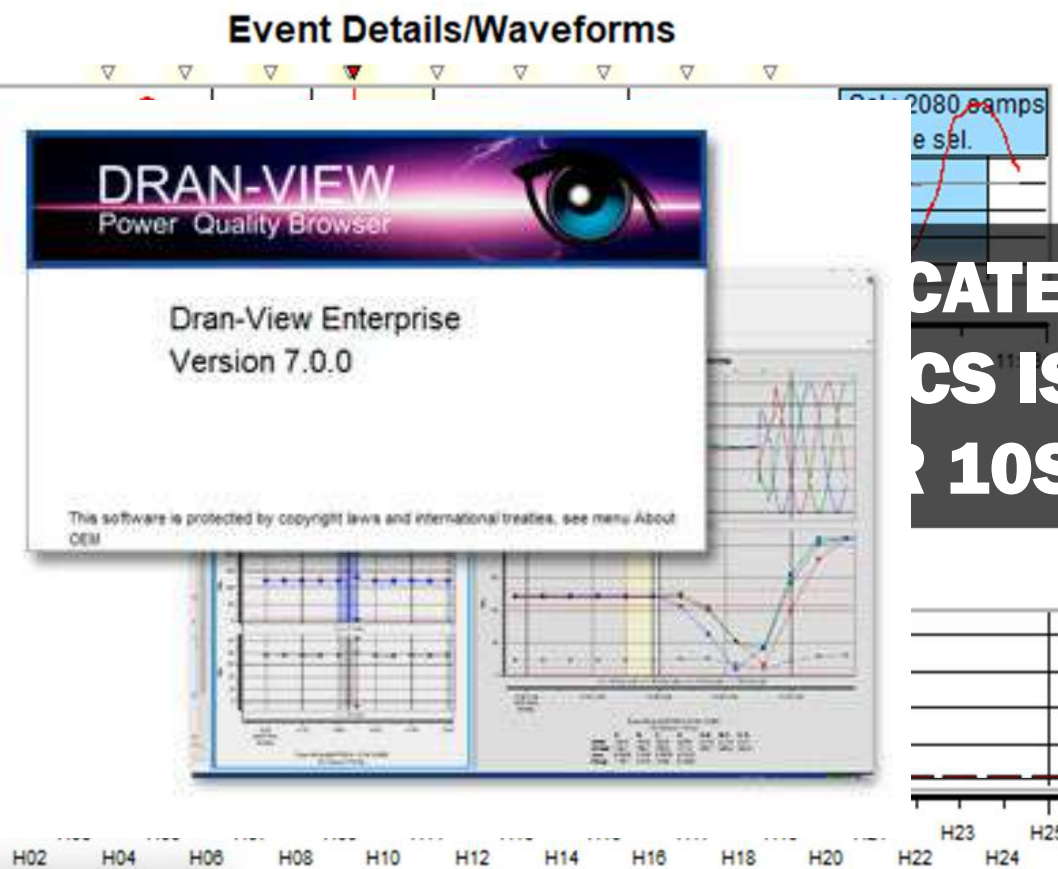
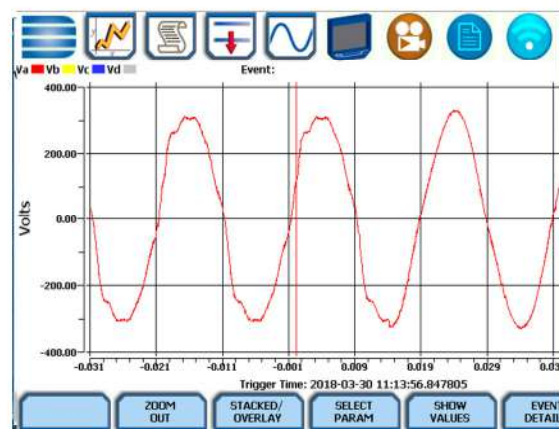
**THE GROUND (GREEN) OUTPUT IS NOT AN EARTH GROUND; IT IS THE REFERENCE CONDUCTOR FOR THE SOURCE OUTPUT.**

**CURRENT SIGNAL (BNC MOUNT CONNECTOR) TO THE PQ METER CURRENT CHANNEL PHASE A.**



GENERATED BY PQSIM 200™

SMALL ODD HARMONICS 11.11%



INDICATES  
THD IS  
11.11%

	AV	DV	AI	DI
RMS	184.63	0.53	2.23	0.01
FND	229.69	0.66	2.78	0.00
DC	0.90	-0.02	-0.00	0.02
THD	22.10	0.13	0.26	0.00

CAPTURED ON HDPQ XPLORER

ANALYSIS AND MONITORING DATA ON DRAN-VIEW 7





## STANDARD SET

1. PQSIM 200™

2. 12VDC POWER SUPPLY ADAPTER

3. 12VDC SPLITTER CABLE

4. DC POWER EXTENSION CORD WITH SWITCH

5. 3 VOLTAGE LEADS

6. JUMPER CABLE

7. BNC CONNECTOR CABLE

8



9



10



11



## AVAILABLE OPTIONS

- 8. STORAGE CASE
- 9. 4 CHANNEL VOLTAGE LEADS
- 10. 4 CHANNEL BNC CONNECTOR CABLE
- 11. 12VDC POWER BANK

## **PQSim – Frequency 50 Hz**

**Power Quality (Thailand) Co., Ltd**

**52/44 Moo 1, Soi Ramkhamhaeng  
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Sapansoong Sub-District, Bangkok  
10240**

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**Email: [info@powerquality.co.th](mailto:info@powerquality.co.th)**

**[www.powerquality.co.th](http://www.powerquality.co.th)**

## **PQSim – Frequency 60 Hz**

**Power Quality Inc.**

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85365**

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**[www.powerquality.org](http://www.powerquality.org)**



***Power Quality***  
***Thailand LTD.***