

# Power Quality Analyzer

## **TEKON**® 560

TEKON560 Series power Quality analyzers are handheld instruments that accurately measure, diagnose and analyze electrical power characteristics and parameters of power distribution and communication related systems. By incorporating a 7-inch wide touch screen into its lightweight design, they maximize user convenience, allowing the user to perform power quality logging and analysis.

The system allows you in the most effective and easiest manner to perform measurement, data storage, analysis and output via the 7" wide LCD screen, in addition a function of transferring measurement data to remote locations by using a mobile app.

### Features

- Measuring the quality of power and electrical parameters at the same time
- Displaying how to conduct wiring and measurement on the touchscreen
- 7" wide LCD making easier measurements and analyses
- Providing touch functions in order for the user to search/archive menus via intuitive UI
- Enabling the user to download, view and analyze stored data, and make up reports
- Providing flexible coil clamp (Rogowski coil) as basic current sensor
- Captures three-phase power quality measurements
- Simultaneously measures active/reactive/apparent power, power factor, RMS voltage/current, phase angle and neutral line current
- Supports a variety of wiring such as single-phase 2-wire, single-phase 3-wire, three-phase 3-wire and three-phase 4-wire
- Displays voltage and current in waveforms and phase diagram



## Functions for measurement

- Voltage: TRMS, Peak, Crest Factor (3 channels)
- Current: TRMS, Peak, Crest Factor (4 channels)
- Power (active, inactive, apparent)
- Measurement of imbalance and flicker
- Measurement of harmonic (up to 50th harmonic), THD measurement
- Energy (active, inactive, generated, consumed)
- Capturing and recording of power events (shut-down, outage, increase, decrease)
- Analysis of the quality of power in accordance with EN 50160
- Measurement of temperature in operating environment
- Measurement of power factor ( $\cos\phi$ )

## General specifications

Power (battery)	7.2V/5.2Ah Li-ion, 12V/2.5A DC adaptor
Data storage	Micro SD card (8GB), 32GB max
Communication	USB Ver2.0, Bluetooth Ver2.1 + EDR Class2
LCD display	1024x600 pixels, 7.0-inch color TFT screen (touch panel)
Operating temp/humidity	0°C ~ 45°C, RH 85% max
Storage temp/humidity	-20°C ~ 60°C, RH 85% max
Compliant Standard	IEC 61010-1 CAT IV 300V, CAT III 600V Pollution Degree 2, IEC 61010-2-030, IEC 61010-031, IEC 61326, EN 50160, IEC 61000-4-30 Class S, IEC 61000-4-15, IEC 61000-4-7
Dimension	270(L)x246(W)x124(H) mm
Weight	3.0kg
Case Color	Black, Yellow, Orange

## Accessories

Standard	Test Lead, Rogowski Coil (dia. 200mm), 12V/2.5A adaptor, 7.2V/5.2Ah Li-ion battery, USB cable, Micro SD card (8GB), Portable bag, PC SW, User's manual
Optional	Rogowski Coil (dia. 100mm) AC 5A, 50A, 500A, 1000A Current Clamp

## Electrical specifications

### Power Quality Analyzer

Voltage Input	AC+DC
Input channels	4
Voltage range(L-N)	Phase voltage (L-N) : 50 ~ 1000VRMS Line voltage (L-L) : 50 ~ 1730VRMS
Measurable range	10% ~ 150% of nominal voltage
Sampling	10.24k Samples/sec @ 50/60Hz
Frequency	40 ~ 70Hz $\pm$ 20 mHz
Current input	AC+DC
Input channels	4
Measurable range	(Rogowski Coil used) 3 ~ 5000ARMS $\pm$ 1.5% of mV (Current clamp-on used) 50m ~ 1000ARMS $\pm$ 0.5% of mV.
Power wiring	1P2W, 1P3W, 3P3W, 3P4W
Measurement parameters	Voltage, Current, Frequency, Active power, Inactive power, Apparent power, Active power value, Inactive power value, Apparent power value, Power factor ( $\cos\theta$ ), Neutral current, Harmonics, Power quality (swell / dip / cycle / transients / over voltage / inrush current / unbalanced rate), Flicker

### Measurement of voltage (RMS)

Range	1000V
Accuracy	$\pm 0.25\% \text{rdg} \pm 0.2\% \text{f.s.}$ (sine wave, 40~70Hz)
Effective input	1~120%(rms) of each range; 200%(peak) of each range
Display	0.15~130% of each range (less than 0.15% will be displayed as 0)
CF(Crest Factor)	3 max

### Measurement of current (RMS)

Range	Rogowski coil : 50/500/5000A Clamp : 5/50/500/1000A
Accuracy	$\pm 0.25\% \text{rdg} \pm 0.2\% \text{f.s.}$ + clamp-on sensor accuracy (sine wave, 40~70Hz)
Active power	1~110%(rms) of each range; 200%(peak) of each range
Display	0.15~130% of each range
CF(Crest Factor)	3 max

### Active power

Accuracy	$\pm 0.3\% \text{rdg} \pm 0.2\% \text{f.s.}$ + clamp-on sensor accuracy (PF 1, sine wave, 40~70Hz)
Power Factor	$\pm 1.0\% \text{rdg}$ (reading at power factor 0.5 against PF 1.0)

### Measurement of waveforms

Channel	4
Bandwidth	DC to 100Hz

### Temperature & Humidity (operating environment)

Measurement	Measurable range	Accuracy
Temperature	-40°C ~ 125°C	$\pm 0.3^\circ\text{C}$ (10~60°C)
Humidity	0 ~ 100%RH	$\pm 2\%$ (20~80%RH)

- Built-in temp/humidity sensor



Test Lead



1000A Clamp



Rogowski Coil (200A)



7.2V/5.2Ah Li-ion battery Pack