

# Battery Quality Analyzer



## TEKON® 960

To prevent faults or quality issues in critical battery back-up applications caused by defects in stationary batteries, TEKON960 battery quality analyzer enables the user to diagnose and evaluate the performance and the degree of ageing by testing the conditions of individual batteries (1000V max) in type of cell, module or pack. TEKON960 can handle virtually all battery testing (e.g. aged status of battery under test and the condition of a power system) in systems that use high-voltage battery packs, such as ESS, EV, HEV and PV as well as UPS.

### Features

- Measures internal resistance of 1000V max of batteries
- Measures voltages at battery (DC1500V)
- Measures voltage of UPS (AC1000V)
- Measures ripple voltage, current and temperature
- Diagnoses ageing of battery and predicts its use life (to determine timing for replacement)
- Can conduct history management of battery using 8MB memory
- Auto Hold and Data Storage
- Prints out measurement data in reports
- Transmits measurement data to remote locations (e-mail, server) using Mobile App

### General specifications

|                          |                                                                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power [battery]          | 7.2V/5.2Ah Li-ion, 12V/2.5A DC adaptor                                                                                                                                |
| Data storage             | Micro SD Card [8GB]                                                                                                                                                   |
| Communication            | Bluetooth Ver2.1 + EDR Class2                                                                                                                                         |
| LCD display              | 1024x600 pixels, 7" TFT with TSP                                                                                                                                      |
| Operating temp/ humidity | 0°C ~ 45°C, RH 85% max                                                                                                                                                |
| Storage temp/ humidity   | -20°C ~ 60°C, RH 85% max                                                                                                                                              |
| Compliant standards      | IEC 61010-1 CAT IV 600V, CAT III 1000V 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                | 240(L)×160(W)×65(H) mm                                                                                                                                                |
| Weight                   | 900g                                                                                                                                                                  |

## Electrical specifications

### Measurement of resistance (Auto/Manual)

| Range | Resolution | Measurable current | Accuracy       |
|-------|------------|--------------------|----------------|
| 3mΩ   | 1uΩ        | 100mA              | ±0.5%rdg±10dgt |
| 30mΩ  | 10uΩ       | 100mA              |                |
| 300mΩ | 100uΩ      | 10mA               |                |
| 3Ω    | 1mΩ        | 1mA                |                |
| 30Ω   | 10mΩ       | 0.1mA              |                |
| 300Ω  | 100mΩ      | 0.1mA              |                |
| 3KΩ   | 1Ω         | 0.1mA              |                |

### DCV (Auto/Manual)

|            |                    |
|------------|--------------------|
| Range      | 5, 50, 500V, 1500V |
| Resolution | 1mV                |
| Accuracy   | ±0.5%rdg±5dgt      |

### ACV

|            |                 |
|------------|-----------------|
| Range      | 0~1000V         |
| Resolution | 100mV           |
| Frequency  | 40Hz~100Hz      |
| Accuracy   | ±0.75%rdg±10dgt |

### Ripple voltage

|            |                |
|------------|----------------|
| Range      | 0~5V           |
| Resolution | 1mV            |
| Frequency  | 40Hz~10Hz      |
| Accuracy   | ±5.0%rdg±10dgt |

### Measurement of temperature

|            |               |
|------------|---------------|
| Range      | -10°C ~ 100°C |
| Resolution | 0.1°C         |
| Accuracy   | ±1°C+2dgt     |

### DC

|            |                               |
|------------|-------------------------------|
| Range      | 4, 40, 400A                   |
| Resolution | 1mA                           |
| Accuracy   | ±0.5%rdg±5dgt (+CT Tolerance) |

### AC

|            |                                 |
|------------|---------------------------------|
| Range      | 4, 40, 400A                     |
| Resolution | 1mA                             |
| Accuracy   | ±0.75%rdg±10dgt (+CT Tolerance) |

## Accessories

|          |                                                                                                                                                   |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard | Pin-type Kelvin Probe, Test Lead, Li-ion battery (7.2V/5.2Ah), 12V/2.5A adaptor, Zero-Bar, Portable bag, PC Program, User's Manual, clamp-on/950B |
| Optional | Extensible rod (500mm), clamp, Clip-type Kelvin probe                                                                                             |



7.2V/5.2Ah  
Li-ion battery Pack



Zero Bar



Extensible rod  
(500mm)



Test Lead



Kevin Probe (Pin)



Kevin Probe (Clip)

## Comparison of functions in TEKON950 Series

| Function               |                  | TEKON950A   | TEKON950B   |
|------------------------|------------------|-------------|-------------|
| Impedance              | Scale            | 3mΩ~3KΩ     | 3mΩ~3KΩ     |
|                        | Accuracy         | ±0.8%       | ±0.8%       |
|                        | Max Test Voltage | 500V        | 1000V       |
| DC/V                   |                  | 0~1500V     | 0~1500V     |
| AC/V                   |                  | 0~1000V     | 0~1000V     |
| Ripple Voltage         |                  | 0~5V        | 0~5V        |
| DC/A(Floating Current) |                  | 4A/40A/400A | 4A/40A/400A |
| AC/V(Ripple Current)   |                  | 4A/40A/400A | 4A/40A/400A |
| Temperature            |                  | NTC         | NTC         |
| Analyzer               | Trend            | ○           | ○           |
|                        | Change time      | ○           | ○           |
| Data record            |                  | 8MB         | 8MB         |
| PC Interface           |                  | Bluetooth   | Bluetooth   |
| External Interface     |                  | Mobile App  | Mobile App  |
| Auto Hold              |                  | ○           | ○           |
| Auto Record            |                  | ○           | ○           |