

Handheld Power Quality Analyzer

Protek 505A

Protek 505A is portable power quality analyzer that can be easily used at the field of electric technology. It is equipped with easy data reporting function as well as 3-phase measurement.



Safety 600V
CAT I,II,III Voltage
IEC 60664, CE

Features

- Voltage, Current, Power Trend Analytical record
- 600V AC, 1000A AC True RMS Measurement & Record
- Single Phase of sequential method
- 3-Phase & unbalanced 3-phase measurements.
- Harmonic (~50th) measurement & record
- DC(Offset) component Measurement of Voltage & Current
- Detect inrush current & record and display the change of half cycle
- Long testability and instantaneous event record
- Differential input, Real-time Clock
- Snapshot recording with data capture
- Bluetooth & USB Interface
- Mutual data transfer & math function using two products.



Specification

Function	Measurement Range		Resolution	Accuracy
Frequency	40Hz	69Hz	0.01Hz	± 1dgt
T-RMS Voltage	4V	600V	0.1V	±(0.5%+5dgt)
DC Voltage	4V	600V	0.1V	±(0.5%+5dgt)
T-RMS Current	40A	1,000A	1A	±(0.75%+CT Tolerance)
DC Current	40A	1,000A	1A	±(0.5%+CT Tolerance)
Half-period T-RMS Vol.	4V	600V	0.1V	±(0.8%+5dgt)
Half-period T-RMS Cur.	40A	1,000A	1A	±(0.75%+CT Tolerance)
Peak Voltage	4V	600V	0.1V	±(0.75%+5dgt)
Peak Current	40A	1,000A	1A	±(0.75%+5dgt)
Crest factor	1.00	9.99	0.01	±(5%+5dgt)
Active power	0W	600.0kW	4 digits	±(1%+5dgt), Cos ≥ 0.8 ±(1.5%+10dgt), 0.2 ≤ Cos < 0.8
Reactive power	0VAR	600.0kVAR	4 digits	±(1%+5dgt), Sin ϕ ≥ 0.5 ±(1.5%+10dgt), 0.2 ≤ Sin ϕ < 0.5
Apparent power	0VA	600.0Kva	4 digits	±(1%+5dgt)
Power factor	-1	1	0.001	±(1.5%+5dgt), Cos ≥ 0.5 ±(1.5%+10dgt), 0.2 ≤ Cos < 0.5
Active power	0Wh	9,999MW	4 digits	±(1%+5dgt), Cos ≥ 0.8 ±(1.5%+10dgt), 0.2 ≤ Cos < 0.8
Reactive power	0VARh	9,999MVARh	4 digits	±(1%+5dgt), Sin ϕ ≥ 0.5 ±(1.5%+10dgt), 0.2 ≤ Sin ϕ < 0.5
Apparent power	0VAh	9,999MVAh	4 digits	±(1%+5dgt)
Phase shift	-179°	180°	1°	±(2°)
Displacement factor (DPF)	-1	1	0.001	±(1°) on ϕ ±(5dgt) on DPF
Tangent VA ≥ 50VA	-32.76	32.76	0.001 Tan ϕ < 10	±(1°) on ϕ
Level of harmonics Order (VRMS > 50V)	0%	999.9%	0.10%	±(1%+5dgt)
Angles of harmonics (VRMS > 50V)	-179°	180°	1°	±(3°), Order ∈ [1:25] ±(10°), Order ∈ [26:50]
Global level of harmonics (THD-F)	0%	999.9%	0.10%	±(1%+5dgt)
Distortion factor(THD-R)	0%	999.9%	0.10%	±(1%+10dgt)
K factor	1	99.99	0.01	±(5%+5dgt)
Environment Specification				
Parameter	Reference Environment			
Operation Environment	Max 73° ± 5°F (23° ± 3°C) Humidity ± 45 to 75%			
Working pressure	25.4" to 31.3" Hg (860 to 1060 hPa)			
Phase-to-earth voltage	50 to 600Vrms without DC (< 0.5%)			
Clamp current circuit input voltage	30mVrms to 0.4Vrms without DC (< 0.5%)			
Network frequency	50 and 60Hz ± 0.1Hz			
Phase shift	0° active power / 90° reactive power			
Harmonics	< 0.1%			
Balanced 3-Phase connection	3φ mode OFF			
Measure method	Sequential wiring measurement in 3-phase measurement			

Specification

Specification	
Voltage Input	Operating Range: Phase-Phase – 0 to 660Vrms AC/DC*
	Phase-Neutral – 0 to 600Vrms AC/DC
	*Provided that the max with 600Vrms in regards to earth is not exceeded
	Input Impedance: 451k Ω
	Overload: 1,33Vn (Vn = nominal voltage)
Current Input	Operating Range: 0 to 1V
	Input Impedance: 1M Ω for current probe circuit
	Overload: 1.7V
	Sample Rate: 10,24kHz
Hardware Specification	
Weight & Dimensions	100mm(W)x220mm(D)x54mm(H) / 800g (including battery)
Power Source	Input AC 100V~ 240V @ 50/60Hz 0.5% Adapter Output DC 12V 1A
Battery Capacity	6Ni-MH Rechargeable Battery Pack >1,800mAh 7.2V,0.8A
Battery powered	Max 8 hours standby & continuous use (4 hours charge)
Shock Vibration / Airtight	EN 61010-1 / IP54 EN60529
Storage drive / Temp. & Humidity	Operation: 0~ 50°C, Storage: -20~ 50°C, Humidity: within 10~ 85%
Display	240X160 Pixel Mono Graphic dot back light LCD (ON/OFF)
Interface	USB , Bluetooth(Optional)
Standard products	Test Lead, Manual, CD(Reporting Software), Adaptor, Battery
Measuring Clamp(Optional)	Current Clamp (200A~ 1000A)

Handheld Battery Quality Analyzer

Protek 606A

Protek 606A is designed to prevent and inspect the power system failure of quality problems caused by the bad light consumption of the battery.

It is handheld battery analyzer that efficiently analyzes the installation and management status of the battery and diagnoses and evaluates the performance right on the spot



Safety 500V
CAT I,II,III Voltage Specification
CE Certification

Features

- Impedance measure mode (Impedance+DCV+Temp)
- DC Voltage + Ripple voltage (Simultaneous measure)
- DC Voltage + DC Current (Simultaneous measure)
- AC Voltage + AC Current (Simultaneous measure)
- Ripple Current, Floating Current (Sequential measure)
- Battery Life & Replacement time
- Capacity Analyzer(Charge / Discharge Test)
- Hydrogen gas detector(UPS system status check)
- Battery unit installation environment and safety check
- Bluetooth Interface(E-mail, PC Interface)
- Battery charge rate, efficiency measurement



Specifications

Specifications	
Impedance Measure	Range : 3m Ω ~ 300 Ω (6Range) Accuracy : $\pm 0.8\%rdg \pm 10dgts$ Battery Pack Test voltage ; Max DC/400V
DC Current Measure	Range : 5V~ 500V (3Range) Accuracy : $\pm 0.5\%rdg \pm 5dgts$
AC Voltage Measure	Range : 500V (1Range) Accuracy : $\pm 0.75\%rdg \pm 5dgts$ (40Hz~500Hz)
AC Ripple Voltage Measure	Range : 5V (1Range) Accuracy : $\pm 2.5\%rdg \pm 10dgts$ (Max 10kHz)
DC/AC Current Measure	Range : 4A,40A,400A,1000A Accuracy : $\pm 0.5\%rdg \pm 5dgts + CT$ Tolerance
Temperature(NTC Sensor) Measure	Range : -10 $^{\circ}C$ ~ 100 $^{\circ}C$ Accuracy : $\pm 1^{\circ}C \pm 2dgts$
Data Storage & Interface	Internal Memory : 8MB(up to 250String) Bluetooth : E-mail sending, Data transfer with PC connection
Power Source	Internal Battery : 7.4V/5.4A(Li-ion) External Adaptor: 12V/2.5A Battery Time : up to 8 hours
Standard products	Meter bar 1SET, Manual, Bluetooth connector Data interface CD 1Copy, External Adaptor
Optional	Current Clamp adapter(CT), Temperature sensor, Warranty Extension (Basic Warranty is 1 year)
Weight & Dimensions	Display : 4" Mono LCD Size : 232mm(L)X192mm(W)X111(H)mm Weight : 1.4kg (Including Battery)