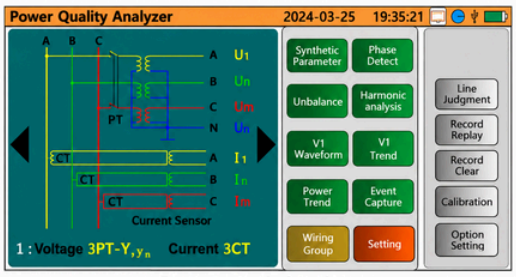
POWER QUALITY ANALYZER LWPQA-600AT

Functions

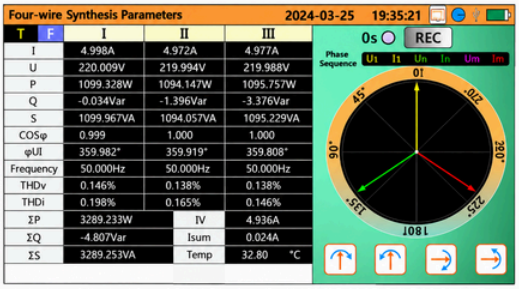
- Comprehensive analysis and diagnosis of three-phase power quality.
- 6 types of current sensors for options to application on various sites.
- 4 current and 3 voltage channels are measured simultaneously.
- Testing accuracy is class 0.5, the test is stable and the anti-interference ability is strong.
- Touch colorful screen, simple human-machine operation, and switch with different operation language (Chinese & English).
- USB communication upload the test results to the computer for analysis.
- Equip with large capacity lithium battery.

Features

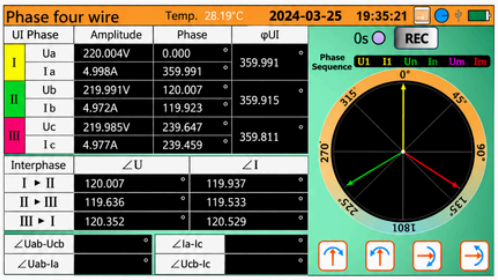
- Waveform real-time display (3 voltage/4 currents channels).
- True effective values (TRMS) of voltage and current.
- Phase diagram display.
- Each phase harmonics measurement, harmonic up to 51 orders.
- The bar graph shows the harmonic ratio of each phase current and voltage.
- Total harmonic distortion (THD).
- Active/reactive/apparent power value and total value of each phase.
- Voltage & current power trend chart.
- Three-phase unbalance measurement (voltage & current).
- Record waveform and parameters.
- Screenshot and save.
- Touch screen operation.
- Voltage flicker, voltage surge and voltage drop capture.
- Starting current and surge current monitoring.
- USB interface communicate with the computer.
- Setting the wiring connection method and power network type of the instrument.
- Selecting different type clamp current sensor and different voltage test ratio.
- One key to phase volt-ampere testing, turns ratio testing, and DC testing.
- Power energy calculation.
- DC voltage, current and power.



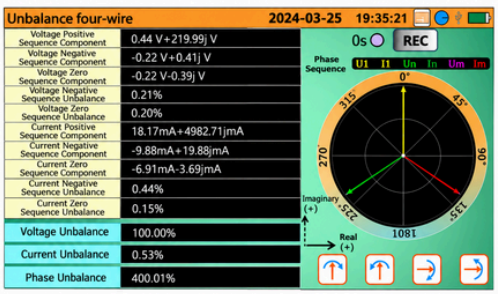
Power on main interface



Comprehensive parameters - 3-phase 4-wire test interface



Phase measurement - 3-phase 4-wire test interface



Unbalance - 3-phase 4-wire test *interface*

Factory Units: Unit-1: Dhakoli – 140603 Unit-2: Rampur, Ambala Cantt, Haryana – 133006
Registered Office 1: S.C.O. No. 14, Vasant Vihar Phase 3, Dhakoli, Zirakpur, Punjab –140603
Registered Office 2:Plot No. 576, Industrial Area, Phase 2, Chandigarh – 160002
Website: www.labwan.in / www.labwan.co.in Email: info@labwan.co.in GSTIN: 03CIAPA7432A1Z8

TECHNICAL SPECIFICATION

Parameter	Specification
Power Supply	Rechargeable lithium battery 7.4V, 5200mAH, external charger
Display Mode	7 inch touch colorful screen
Channel	3 voltage channels, 4 current channels
AC Voltage Range	AC 0.001V ~ 1000V
DC Voltage Range	DC 0.1V ~ 1000V
Clamp Current Sensor (Optional)	008B Clamp current sensor: Φ8mm; 032B Clamp current sensor: Φ32 x 42mm 050B Clamp current sensor: Φ50mm 300FA Flexible coil current sensor: Φ300mm 035AD DC current sensor: Φ30 x 35mm 068AD DC current sensor: Φ68mm
Current Range	008B Clamp current sensor: AC 10mA ~ 10.0A 032B Clamp current sensor: AC 0.1A ~ 100A 300FA Flexible coil current sensor: AC 10A ~ 6000A 035AD DC current sensor: DC 0.1A ~ 1000A
Frequency	40Hz ~ 70Hz
Harmonic	Yes, 2 ~ 51 orders
Total Harmonic Distortion	Yes, 2 ~ 51 orders, each phase
Memory	8G, expandable to 32G
Three-Phase Unbalance	Yes
Communication Interface	USB
Working Current	Approx. 490mA
Battery Power Indication	Battery symbol display battery power, when the battery power too low, the instrument will automatic shutdown
Automatic Shut Down	When record function enable, the meter will not automatic shutdown When record function disable, setting the automatic shutdown time of 15minutes, 30minutes, 60minutes.
Input Impedance	Test voltage input impedance: 1MΩ
Withstand Voltage	The instrument circuit and the housing can withstand 3700V/50Hz sine wave AC voltage for 1 minute.
Insulation	Between the instrument circuit and housing ≥ 10MΩ
Structure	Double insulation, with insulation anti-vibration sheath
Suitable Safety Standard	IEC-61010 CAT III 1000V / CAT IV 600V, IEC-61010-031, IEC-61326, Pollution Degree 2
Working Temperature	- 10° ~ 40°C; Below 80%RH
Storage Temperature	- 10° ~ 60°C; Below 80%RH
Instrument Weight	Approx. 8kg (include all accessories)

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INSTRUMENT ACCURACY

Measurement Specification	Range	Display Resolution	Max Error
Frequency	40Hz ~ 70Hz	0.001Hz	± (0.01)Hz
Voltage True RMS	0.01V ~ 1000V	Min. resolution 0.001V	± 0.5 % rdg ± 0.1 % fs
DC Voltage	0.1V ~ 1000V	Min. resolution 0.1V	± (0.5 % rdg ± 5dgt))
Current True RMS	0.01mA ~ 6000A	Min. resolution 0.001A	± (0.5 % rdg ± 5dgt))
DC Current	0.1A ~ 1000A	Min. resolution 0.1A	± (0.5 % rdg)
Active Power	0.001W ~ 6000kW	Min. resolution 0.001W	± (1 % rdg + 3dgt); CosΦ ≥ 0.8± (1.5 % rdg + 10dgt); 0.2 ≤ CosΦ < 0.8
Reactive Power	0.001VAR ~ 6000kVAR	Min. resolution 0.001VAR	± (1 % + 3dgt); SinΦ ≥ 0.5 ± (1.5 % + 10dgt); 0.2 ≤ SinΦ < 0.5
Apparent Power	0.001VA ~ 6000kVA	Min. resolution 0.001VA	± (1 % + 3dgt %)
Power Factor	- 1.000 ~ 1.00	0.001	± (1.5 % + 3dgt); CosΦ ≥ 0.5 ± (1.5 % + 10dgt); 0.2 ≤ CosΦ < 0.5
Active Energy	0.001kWh ~ 9999.999MWh	Min. resolution 0.001kWh	±(1 % rdg + 3dgt); CosΦ ≥ 0.8± (1.5 % rdg + 10dgt); 0.2 ≤ CosΦ < 0.8
Reactive Energy Inductive & Capacitive	0.001kVARh ~ 9999.999MVARh	Min. Resolution 0.001kVARh	± (1 % rdg + 3dgt); SinΦ ≥ 0.5± (1.5 % rdg + 10dgt); 0.2 ≤ SinΦ < 0.5
Apparent Energy	0.001kVAh ~ 9999.999MVAh	Min. Resolution 0.001kVAh	± (1 % rdg + 3dgt)
Phase Angle	- 179° ~ 180	0.001°	± (3°)
Voltage Harmonic Ratio 2 ~ 51 Orders (Vrms > 50V)	0.0 % ~ 99.9 %	0.001%	(2 ~ 20 orders) ± (1 % rdg + 5dgt) (21 ~ 30 orders) ± (1 % rdg + 10dgt)
Voltage Harmonic Angle (Vrms > 50V)	-179° ~ 180°	0.001°	± (3°) harmonic 2 ~ 25 orders± (10°) harmonic 26 ~ 51 orders
Current Harmonic Ratio 2~51 Orders (Arms>I range/100)	0.0 % ~ 99.9 %	0.001%	(2 ~ 20 orders) ± (1 % rdg + 5dgt) (21 ~ 30 orders) ± (1 % rdg + 10dgt)(31 ~ 51 orders) ± (1 % rdg + 15dgt)
Current Harmonic Angle (Arms >Arms>I range/100)	-179° ~ 180°	0.001°	± (3°) harmonic 1 ~ 25 orders± (10°) harmonic 26 ~ 50 orders
Total Harmonic Rate (DF or THD-F) ≤ 50	0.0 % ~ 99.9 %	0.001%	± (1 % rdg + 10dgt)
Distortion Factor (DF or THD-R) ≤ 50	0.0 % ~ 99.9 %	0.001%	± (1 % rdg + 10dgt)
Three-phase Unbalance	0.0 % ~ 100 %	0.01%	± (1 %)

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CURRENT SENSOR CHARACTERISTICS (OPTIONAL)

Current Sensor Model	Photo	Current True RMS	Max. Resolution	Current True RMS Max Error	Phase Angle φ Max Error
EM008B CT Size: Φ8mm		AC 10mA ~ 10.0A	1mA	± (1 % rdg + 0.05 % fs)	± (2°)
EM032B CT Size: 35 x 40mm		AC 0.10A ~ 100A	1mA	± (1 % rdg + 0.05 % fs)	± (2°)
EM050B CT Size: Φ50mm		AC 1.0A ~ 1000A	1mA	± (2 % rdg + 0.05 % fs)	± (2°)
EM300FA CT Size: Φ300mm		AC 10.0A ~ 6000A	1mA	± (1 % rdg + 0.05 % fs)	± (2°)
EM035AD CT Size: Φ30 × 35mm		DC 0.1A - 1000A	0.1A	± (3 % rdg + 0.5 % fs)	

Accessories

- Host*1PC
- Instrument tool bag*1PC
- Pen probe test lines*4PCS (each 1PC of yellow, green, red, black)
- Alligator clip*4PCS
- Power adaptor*1PC
- 4G Memory card*1PC
- Clamp current sensor* (optional)

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