

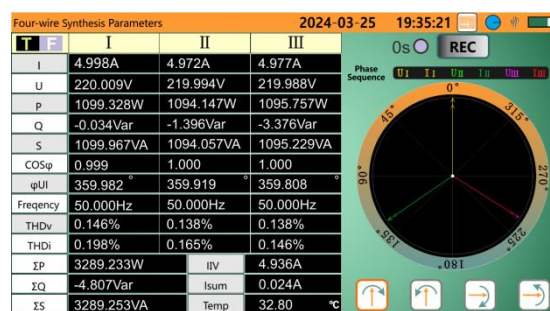
Power on main interface

### Product Function

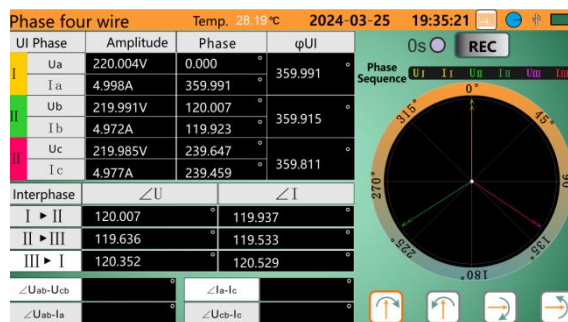
- Make comprehensive analysis and diagnosis of three-phase power quality.
- 4 types of current sensors provide options to application on various sites.
- 4-channels current and 3-channels voltage are measured simultaneously.
- The test accuracy is 0.5 class, the test is stable and the anti-interference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

### Product Features

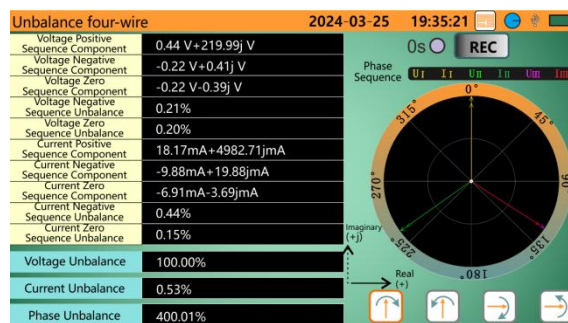
- Waveforms real-time display (3 channels voltages/4 channels currents).
- True effective values(TRMS) of voltage and current.
- Phase diagram display.
- Each phase harmonics measurement, harmonic up to 50 orders.
- The bar graph shows the harmonic content rate of each phase current and voltage.
- Total harmonic distortion (THD).
- Active/reactive/apparent power value and total value of each phase.
- Voltage & current power trend chart.
- Three-phase unbalance measurement (voltage and current).
- Record wave forms 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 host computer.
- Setting the wiring connection method and power network type of the instrument.
- Selecting different clamp current sensor and different voltage test ratio.



Comprehensive parameters - 3-phase 4-wire test interface



Phase measurement - 3-phase 4-wire test interface



Unbalance - 3-phase 4-wire test interface

### TECHNICAL SPECIFICATION

Power Supply	Rechargeable lithium battery 7.4V, 5200mAH, external charger
Display Mode	5 inch touch colorful screen
Working Current	About 490mA

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<b>Clamp Current Sensor (Optional)</b>	Clamp current sensor 015B: 17mm x 18mm; Clamp current sensor 042B: 35 x 40mm Clamp current sensor 050B; $\Phi$ 50mm Flexible coil current sensor 300FA: $\Phi$ 300mm
<b>Meter Dimension</b>	240mm x 170mm x 68mm
<b>Channel</b>	3 channels voltage, 4 channels current
<b>Voltage Range</b>	2V ~ 600V
<b>Current Range</b>	Clamp current sensor 015B: 10mA ~ 10.0A Clamp current sensor 042B: 0.1A ~ 100A Clamp current sensor 050B; 1A ~ 1000A Flexible coil current sensor 300FA: 10A ~ 6000A
<b>Frequency</b>	40Hz ~ 70Hz
<b>Harmonic</b>	Yes, 2 ~ 51 orders
<b>Total Harmonic Distortion</b>	Yes, 2 ~ 51 orders, each phase
<b>Three-Phase Unbalance</b>	Yes
<b>Communication Interface</b>	USB
<b>Language</b>	Switch between Chinese and English
<b>Battery Power Indication</b>	Battery symbol will display battery power, when the battery power too low, the instrument will automatic shutdown
<b>Automatic Shut Down</b>	During record function acting, the meter will not automatic shutdown During record function off, can setting the automatic shutdown time of 15minutes, 30minutes, 60minutes.
<b>Input Impedance</b>	Test voltage input impedance: 1M $\Omega$
<b>Withstand Voltage</b>	The instrument circuit and the housing can withstand 3700V/50Hz sine wave AC voltage for 1 minute.
<b>Insulation</b>	Between the instrument circuit and housing $\geq$ 10M $\Omega$
<b>Structure</b>	Double insulation, with insulation anti-vibration sheath
<b>Suitable Safety Standard</b>	IEC-61010 CAT III 1000V / CAT IV 600V, IEC-61010-031, IEC-61326, Pollution Degree 2
<b>Working Temperature</b>	- 10 $^{\circ}$ C ~ 40 $^{\circ}$ C; Below 80%RH
<b>Storage Temperature</b>	- 10 $^{\circ}$ C ~ 60 $^{\circ}$ C; Below 80%RH
<b>Instrument Weight</b>	Total weight: Approx. 8kg (include all accessories)
<b>Accessories</b>	Host*1PC; Instrument bag*1PC; Pen probe test lines*4PCS (each 1PC of yellow, green, red, black); Alligator clip*4PCS; Charger*1PC; 4G Memory card*1PC; Clamp current sensor*(optional)

## INSTRUMENT ACCURACY

Measurement specification	Range	Display resolution	Max Error
<b>Frequency</b>	40Hz ~ 70Hz	0.001Hz	$\pm$ (0.01)Hz
<b>Voltage True RMS</b>	2V ~ 600V	Min resolution 0.001V	$\pm$ (0.5 % Fs)
<b>Current True RMS</b>	10mA ~ 6000A	Min resolution 0.001A	$\pm$ (0.5 % Fs)
<b>Active Power</b>	0.0000W ~ 3600kW	Min resolution 0.001W	$\pm$ (1 % + 3dgt); $\text{Cos}\Phi \geq 0.8$ $\pm$ (1.5 % + 10dgt); $0.2 \leq \text{Cos}\Phi < 0.8$
<b>Reactive Power</b>	0.000VAR ~ 3600kVAR	Min resolution 0.001VAR	$\pm$ (1 % + 3dgt); $\text{Sin}\Phi \geq 0.5$ $\pm$ (1.5 % + 10dgt); $0.2 \leq \text{Sin}\Phi < 0.5$
<b>Apparent Power</b>	0.0000VA ~ 3600kVA	Min resolution 0.001VA	$\pm$ (1 % + 3dgt % )
<b>Power Factor</b>	- 1.000 ~ 1.000	0.001	$\pm$ (1.5 % + 3dgt); $\text{Cos}\Phi \geq 0.5$ $\pm$ (1.5 % + 10dgt); $0.2 \leq \text{Cos}\Phi < 0.5$
<b>Phase Angle</b>	- 179 $^{\circ}$ ~ 180 $^{\circ}$	0.001 $^{\circ}$	$\pm$ (3 $^{\circ}$ )

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Voltage Harmonic Ratio 1~50 Orders (Vrms > 50V)	0.0% ~ 99.9%	0.001%	(2 ~ 20 orders) ± (1 % rdg + 5dgt) (21 ~ 30 orders) ± (1 % rdg + 10dgt) (31 ~ 51 orders) ± (1 % rdg + 15dgt)
Voltage Harmonic Angle (Vrms > 50V)	- 179° ~ 180°	0.001°	± (3°) harmonic 2 ~ 25 orders ± (10°) harmonic 26 ~ 51 orders
Current Harmonic Ratio 1~50 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 % )

## CURRENT SENSOR CHARACTERISTICS

Current Sensor Model	Clamp Current Sensor	Current True RMS	Max. Resolution	Current True RMS Max Error	Phase Angle φ Max Error
EM015B CT Size: 17mm x 18mm		10mA ~ 10.0A	1mA	± (1 % rdg + 0.05 % fs)	± (2°)
EM042B CT Size: 35 x 40mm		0.10A ~ 100A	1mA	± (1 % rdg + 0.05 % fs)	± (2°)
EM050B CT Size: Φ50mm		1.0A ~ 1000A	1mA	± (2 % rdg + 0.05 % fs)	± (2°)
EM300FA CT: Φ300mm		10.0A ~ 6000A	1mA	± (1 % rdg + 0.05 % fs)	± (2°)



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