



## GDW-5000A Hand-held Three Phase Electric Power Inspector



### General Information

GDW-5000A Hand-held Three Phase Electric Power Inspector is used to measure error of electric energy, voltage, current, active power, reactive power, phase, frequency, power factor at the same time, display vector diagram and check results. Besides, it measures 2nd~51th harmonics of three-phase voltage, current timely and better know the power quality.

Equipped with 5A, 100A, 500A, 1000A clamp meter, it can directly measure the transformer ratio of low voltage CT. It is convenient to find out faults such as circuit disconnection, poor contact, inter-turn short circuit in CT and whether the CT nameplate ratio is consistent with the actual ratio of CT.

## Features

- With 32 bit high speed digital signal processor.
- TI's 32-bit high speed 120MHz DSP and AD company's high-performance 6-channel 16-bit AD are used to develop a multi-functional and wide-range digital multiplier. Floating point arithmetic is adopted to ensure the accuracy of calculation.
- Wiring simulation function
- Under the condition that the instrument does not access to voltage and current signals, all kinds of wiring in the field can be simulated in the office and corresponding wiring results can be obtained. This function can be used as a tool for line checking training to improve the skills of field workers.
- Error self-check of 5A clamp
- Current signals of 5A and 0.5A generated in the instrument are added to the 5A and 100A clamps to measure the errors of clamps meter.
- The error variation of 5A and 100A clamps after long service time is solved. The closure of clamp meter can be known at any time so that the staff can clean the clamp mouth timely.
- Ultra-wide range of current
- 500 times current range to ensure the measurement index; 10000 times current display range.
- Minimum 1mA starting current. At HV side power supply and HV side metering, connection can also be identified under no-load condition.
- Accumulation of electric energy.
- It can be used to verify electricity meters without output of electric energy pulse, or served as a indicator to energy saving test.
- Wireless checking

- Comprehensively check the fault of the metering system and comprehensive error of high and low voltage.
- 4.7-inch 16:9 industrial TFT color screen, clear display, rich content.
- There is no adjustable resistor in the instrument, all errors are corrected by software.
- All field input parameters and downloading data can be defined by the user freely. It can download data of 1000 groups. It has access to many marketing systems, so data can be downloaded and uploaded.
- Supply voltage 45~480V.

### Specification

Voltage measurement range	30~48 0V	5A clamp	Active electric energy, power	±0.5%
Error of voltage	±0.2%		Reactive electric energy, power	±0.5%
Clamp meter (over-load 1 times)	5A, 100A, 500A, 1000A		Current	±0.5%
Input frequency range	45-55 Hz		Self-check current	5A , 0.5A

Error of frequency			±0.01 Hz		Self-check error	±0.1%
Phase measurement range			-180° ~ +180°	Large current clamp	Active electric energy, power	±0.5%
Max. phase error			±0.1°		Reactive electric energy, power	±0.5%
Harmonic measurement			±0.1%		Current	±0.5%
Harmonic measurement range			2nd~5 1th	Others	Turns ratio measurement	±0.5%
Pulse constant	Low Freq.	5A	3600P /kWh		Influence of voltage	< ±0.01%
		Others	3600* (5/le) P/kW h		Influence of frequency	< ±0.01%
	High Freq.	5A	3.6x10 <sup>7</sup> P/kWh		Influence of temperature	< ±0.005%/°C

		Others	$3.6 \times 10^7 \cdot (5/I_e)$ P/kWh	Deviation in 24 hours	< ±0.04%
				Influence of harmonic	< ±0.01%
Note: $I_e$ -- rated current				Turn-on stabilizing time	<5 minutes
Power supply			AC 45V - 480V	Ambient temperature	-25°C- +45°C
Power consumption			<10W	Relative humidity	40%-95%
Size			190*140*50mm	Weight	<1kg