

# FR2010+ Double clamp digital phase voltmeter



## I. Product Introduction

FR2010+ double clamp digital phase voltmeter, is a high-quality, multi-functional, high-precision, portable handheld measuring instrument designed for on-site measurement of voltage, current, frequency, and phase. Widely used in electrical energy measurement, electricity inspection, power inspection, power meter and relay protection, differential detection, start-up test, industrial and mining enterprises, scientific research institutions and other departments. Instrument testing is precise, fast, simple, stable and reliable.

FR2010+ double clamp digital phase voltmeter has the ability to directly measure the AC voltage, AC current, the phase between voltage, between currents and the phase between voltage and current, it also has other measurement judgment functions, judge the inductive current and capacitive circuit, check the transformer wiring group, check whether the power meter is wired correctly. It is the ideal instrument for checking the use of power and performing secondary circuit inspection. The two common terminals of the meter are not connected together, which is safe and reliable.

## II. Technical Specification

<b>Function</b>	Measure three-phase AC voltage, current, voltage phase, current phase, voltage and current phase, frequency, judging the transformer wiring group, inductive, capacitive circuit, test secondary circuit and busbar protection system, read out the phase relationship between the CTs of the differential protection groups, check the correctness of the wiring of the watt-hour meter, repair the line equipment, etc.		
<b>Power</b>	DC9V alkaline dry battery		
<b>Power consumption</b>	Turn on the backlight and consume up to 30mA. The battery can work continuously for more than 12 hours.		
<b>Display mode</b>	LCD display, 72×55mm		
<b>Instrument size</b>	W/L/T: 187*119*48mm		
<b>Voltage range</b>	AC 0.00V~600V	Resolution: 0.01V	Accuracy: $\pm(0.5\% \text{ FS})$
<b>Current range</b>	AC 0.0mA~20.0A	Resolution: 0.1mA	Accuracy: $\pm(0.5\% \text{ FS})$
<b>Phase range</b>	0.0° ~360.0°	Resolution: 0.1°	Accuracy: $\pm 1^\circ$
<b>Frequency range</b>	45.00Hz~65.00Hz	Resolution: 0.01Hz	Accuracy: $\pm 0.5\text{Hz}$
<b>Detection rate</b>	About 2 second/time		
<b>Data hold</b>	Press <b>HOLD</b> key to hold data during test, "H" symbol display		
<b>Automatic shut-down</b>	About 15 minutes after power on, the meter will automatically shut down to reduce		

	battery consumption
<b>Backlight function</b>	Suitable for dark places and night use
<b>Voltage detection</b>	When the battery voltage is lower than 7V, the battery voltage is low symbol display
<b>Instrument weight</b>	Host: 362g(including battery)
	Tip-shaped current clamp: 180g×2
	Test line: 190g
<b>Voltage test line length</b>	1.5m
<b>Current clamp line length</b>	2m
<b>Working temperature and humidity</b>	-10℃～40℃； below 80%Rh
<b>Storage temperature and humidity</b>	-10℃～60℃； below 70%Rh
<b>Input impedance</b>	Test voltage input impedance is: 1MΩ
<b>Pressure resistance</b>	The withstand voltage of 1000V/50Hz sine wave AC voltage between the instrument circuit and the housing lasts 1 minute
<b>Insulation</b>	Between instrument line and housing≥100MΩ
<b>Structure</b>	Housing insulation
<b>Suitable for safety regulations</b>	IEC61010-1 CAT III 600V, IEC61010-031, IEC61326, pollution level 2

### III、Accessories

<b>Phase voltmeter</b>	1PC
<b>Current clamp</b>	2PCS
<b>Instrument box</b>	1PC
<b>Test line</b>	4PCS (red、black each two)
<b>9V battery</b>	1PC
<b>Manual, certificate</b>	1SET



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