

Volt-ampere phase meter VFM-3

Volt-ampere phase meter VFM-3 is designed for simultaneous measurement of effective value of three phase and three phase-to-phase voltages, value of the strength of three alternating currents with simultaneous calculation of real, reactive, apparent power in the circuit, measurement of frequency and phase-shift angle between phase and phase-to-phase voltages, between currents and voltages, as well as for displaying a vector diagram of the voltages and currents in three-phase systems.

The device has a built-in function of an electrical energy meter (Mode 2).

The device can be used for complex tests of generators protection, transformers, electric lines, in current and voltage transformer circuits, in setting up phase-sensitive relay protection schemes, for checking whether electrical energy meters are connected correctly.



Mode 1



Mode 2



Watch
video
review



Distinctive features



The most compact and the lightest (0,3 kg) of all modern 3-phase volt-ampere and phase meters



All main results of measurements are shown simultaneously on **4.3" color display** and vector diagram is also displayed



Current sensitivity
3 mA, if $U > 50V$,
and 7 mA if
 $U < 50 V$



Function of an electrical energy meter, which allows to check the correct connection of one- and three-phase meters



Save measurement results and vector diagram in internal memory of the device with subsequent transfer to a PC

Specifications

Measurement range of:

RMS of AC voltage, V	0...460
RMS of AC, A	0...30
phase-shift angle between voltage and voltage, current and current, voltage and current, degree	-180...+180
real (reactive, apparent) power, W (VA, VA)	0...13800
frequency of voltage and AC, Hz	45...65

Limits of permissible relative error of measuring:

RMS of AC voltage, %	$\pm [0.2+0.01(U_k / U_i - 1)]$
RMS of AC, %	$\pm [1+0.005(I_k / I_i - 1)]$
frequency of voltage AC, %	$\pm 0.1\%$

Abbreviation: RMS - root mean square

Limits of permissible error of measuring phase-shift angle between voltage and current (at voltage not less than 30 V and current strength not less than 100 mA), degree	± 1
PC communication	USB
The maximum diameter of the wire covered by clamp meters, mm	8
The device determines the sequential order of phases in a three-phase system	
Power supply by four accumulator batteries or batteries of size	AA
Continuous work time from fully charged accumulator batteries with the capacity of 2500 milliampere-hour	8 hours
Weight without accessories, not more than	0.3 kg
Weight with accessories	2.5 kg
Dimensions of carrying bag, not more than	290x225x250 mm
The device is intended for operation in the following conditions:	
ambient temperature	-20...+55 °C
relative air humidity (without condensation of moisture)	not more than 80 % at 25 °C
atmospheric pressure	84...106.7 kPa
Indication of the measured values on the LCD colour screen with diagonal 4.3" and resolution	480x272 pixels

Completeness:

"Standard" kit:

1. Measuring device	1 psc.
2. Clamp meter with a wire for connection	3 psc.
3. Test probes of an 'alligator' type clips with the wires for measuring voltage	4 psc.
4. Power supply unit	1 psc.
5. Operational manual and passport	1 psc.
6. Bag for carrying the device and accessories	1 psc.

Additional accessories:

1. Test probes of an 'alligator' type clips with jaw width of 4 mm	4 psc.
2. Test probes of plug-in type	4 psc.
3. Lengthened test probe of an 'alligator' type clip, 125 mm long	4 psc.
4. Lengthened tweezert probes, 125 mm long	4 psc.
5. Lengthened test probe of a 'pierce' type	4 psc.
6. Magnetic probes with a 6.8 mm diameter	4 psc.



[Device page on the site](#)

