

**AC/DC MULTIMETERS  
TYPE U4312 AND U4313\***

*With taut suspension movements*

These high quality meters incorporate all facilities required for field and laboratory use; knife-edge pointers and 86mm long mirror scales allow the high inherent accuracy of the movements to be utilised fully.

COMPREHENSIVE COVERAGE OF A.C. CURRENT RANGES IN BOTH TYPES IS PROVIDED.

Both instruments are similar in appearance; the main differences are outlined below:—

TYPE U4312 — medium sensitivity movement (667 o.p.v. on both AC and DC ranges). High calibration accuracy —1% on DC and 1.5% on AC ranges. High current and voltage ranges

— up to 6 Amps and 900 Volts AC/DC make the instrument especially suitable for general electrical work, installation work, for use as a field standard for checking accuracy of other meters, etc.

TYPE U4313 is a high sensitivity instrument (20,000 o.p.v. on DC and 2,000 o.p.v. on AC) with an accuracy of 1.5% on DC ranges and 2.5% on AC. Inclusion of three DC and one AC microamp range, as well as provision of output level and capacity ranges makes the meter suitable for general electronic applications, radio repair work and laboratory use.

Both instruments are powered by internal 4.5V battery, Eveready type 1289.



*\*Made in USSR*

**Technical Data**

	Type U4312	Type U4313	102
DC current, Microamps.	300	60-120	
DC and AC current, mA	1.5-6-15-60-150-600	0.6-3-15-60-300	
DC and AC current, Amps	1.5-6	1.5	
DC millivolts	75	75	
DC and AC Volts	0.3-1.5-7.5-30-60-150-300-600-900	1.5-3-7.5-15-30-60-150-300-600	
Frequency range	45-10,000 Hz	45-5,000 Hz	
DC resistance, kilohms	0.2-5-50	1-10-100-1000	
Mid-scale readings	0.02-0.3-3k	0.06-0.6-6-60k	
DC resistance additional ranges using external source of	300Kohms, 3 Megs	5 Megs	
Capacitance, using external source of 220V AC	12.5V 140V	41V	
Transmission level		0.5uF	
Accuracy, DC ranges	1%	-10 to +12 db	
Accuracy, AC ranges	1.5%	1.5%	
Sensitivity, ohms per volt:—		2.5%	
DC ranges	667	20,000	
AC ranges	667	2,000	
Voltage drop at the terminals:—			
in DC current measurements	0.63V	0.3V	
in AC current measurements	0.63V	1.0V	
Power supplies	4.5V dry battery	4.5V dry battery	
Overall dimensions:—			
Instrument only		115 x 215 x 90 mm	
Carrying case		205 x 260 x 105 mm	
Weight, lbs:—			
Instrument only		3.3 lbs	
Instrument with case		6.6 lbs	

The movement can withstand overloads of up to 100 times for short periods without damage. No overload protection is therefore provided. To avoid damage of the movement and associated components it is essential, when measuring voltages and currents, to use highest available range at the start, and switch down until good deflection is obtained. The instrument should be used in horizontal position.

Price, complete with sturdy steel carrying case and test leads

U4312	£14.50	U4313	£17.90
Packing and delivery charges	£1.30		£1.30

**AC/DC MULTIMETERS TYPE U4315\***

*With taut suspension movements.*

This is a cheaper version of U4313 and, apart from the data given, below it differs only in the design of the scale which is not provided with mirror.

Total of 42 ranges are provided. The instrument is powered by an internal battery 4.5V type Eveready 1289.

Weight:	instrument	...	...	1.5kg
	instrument in steel carrying case			3kg
Dimensions:	instrument	...	...	115 x 215 x 90mm
	case	...	...	205 x 105 x 260mm

The movement can withstand overloads of up to 100 times for short periods without damage. No overload protection is therefore provided. To avoid damage of the movement and associated components it is essential, when measuring voltages and currents, to use highest available range at the start, and switch down until good deflection is obtained. The instrument should be used in horizontal position.

*\* Made in USSR*

**Technical Data**

D.C. current ranges	50-100-500µA-1-5-25-100-500mA-2.5A
A.C. current ranges	0.5-1-5-25-100-500mA-2.5A
D.C. voltage ranges	75mV-1-2.5-5-10-25-100-250-500-1000V
A.C. voltage ranges	1-2.5-5-10-25-100-250-500-1000V
Max frequency range when measuring A.C. voltages	45-20,000Hz
D.C. Resistance	300Ω-5-50-500kΩ
Capacitance	30,000pF-0.5 µF
Transmission level	-15 to +2db
Accuracy	D.C. 2.5% F.S.D. A.C. 4.0% F.S.D.
Sensitivity	D.C. 20,000Ω/V A.C. 2,000 Ω/V
Max. voltage drop when measuring current	D.C. 0.5V A.C. 1.5V
Power supplies	4.5V battery type 1289
Power supplies when measuring resistance, up to 5MΩ	42V D.C. external supplies
Power supplies when measuring capacity	220V A.C.

Price, complete with steel carrying case, test leads, and instruction manual	£14.95
Packing and delivery charges	£1.30