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“For more than 25 years, our product range has been dynamically adapting to the constant changes in the industry. We commit to offering first-class quality to our customers while delivering an excellent cost-performance ratio. This philosophy remains the cornerstone of Voltcraft’s success.”

VC820

DIGITAL-MULTIMETER

CE

VERSION 09/14

Nº 123294

The unit comes with optoelectronic interface with beam waveguide technology which enables absolutely safe electric isolation of the measuring instrument from the PC. This protects your PC against any possible damage which otherwise might be caused as a result of measuring voltages. Apart from this, the VC820 offers any functions expected of a good multimeter. In addition to the standard functions such as voltage, current and resistance measurement, the unit enables frequency and capacity measurement. Selfevidently enough, it also offers diode check, acoustic continuity check and Low-Bat function. Switching from one measuring range to the other is performed automatically (Auto Range). In addition, the unit offers other concenient special functions such as DATA-HOLD, REL, duty cycle.

HIGHLIGHTS

CAT IV 600 V //

4000 Counts //

Interface optical //

Diode check //

Acoustic continuity check //

Data-Hold function //

Duty cycle//

TECHNICAL DATA

Display	$3^3/_4$ digit liquid crystal display (LCD), display size of 4000 counts
Speed of measurement	3 measurements per sec.
Input resistance	> 10 MΩ
Over-voltage category	CAT III 1000 V, CAT IV 600 V
Battery replacement symbol	from lower than 7.5 V DC ±0.5 V
Voltage supply	9 V compound battery, type: NEDA 1604 6F22 or 006P or 6LR61
Operating temperature	0 °C to +40 °C
Storage temperature	-10 °C to +50 °C (batteries removed)
Rel. air humidity	< 75 %, non-condensing from 0 °C to +30 °C and < 50%, non-condensing from 31 °C to 40 °C
Operating height	up to max. 2,000 m above MSL
Temperature for guaranteed accuracy	+23 °C ffI5K (=Kelvin)
Weight	ca. 300 g (with battery, without measuring lines)
Dimensions (L x W x H)	177 x 85 x 40 mm

Operating mode	**Measurement range**	**Accuracy**	**Resolution**
Direct voltage	400 mV	±(1.0 % + 5 dgts)	0.1 mV
	4 V	±(0.9 % + 5 dgts)	1 mV
	40 V	±(0.9 % + 5 dgts)	10 mV
	400 V	±(0.9 % + 5 dgts)	100 mV
	1000 V	±(1.4 % + 5 dgts)	1 V
Overload protection: 1000 V DC lower than 10 s			
Alternating voltage	For input voltages < 50 mV not specified		
	4 V	±(1.5 % + 5 dgts)	1 mV
	40 V	±(1.5 % + 5 dgts)	10 mV
	400 V	±(1.0 % + 5 dgts)	100 mV
	750 V	±(2 % + 5 dgts)	1 V
Input resistance > 10 MΩ, frequency of the alternating voltage: 50 Hz to 400 Hz Overload protection: 750V AC rms < 10 s Indication at the VC-840 as true effective value (True Rms), crest factor max. 3			
Direct current	400 µA	±(1.0 % +5 dgts)	0.1 µA
	4000 µA	±(1.0 % +5 dgts)	1 µA
	40 mA	±(1.2 % +5 dgts)	0.01 mA
	400 mA	±(1.2 % +5 dgts)	0.1 mA
	4 A	±(1.5 % +5 dgts)	0.001 A
	20 A	±(1.5 % +5 dgts)	0.01 A
Overload protection see below			
Alternating current	400 µA	±(2.0 % +5 dgts)	0.1 µA
	4000 µA	±(2.0 % +5 dgts)	1 µA
	40 mA	±(2.0 % +5 dgts)	0.01 mA
	400 mA	±(2.0 % +5 dgts)	0.1 mA
	4 A	±(2.5 % +5 dgts)	0.001 A
	20 A	±(2.5 % +5 dgts)	0.01 A

Frequency of the alternating current: 50 Hz to 400 Hz Overload protection see below Indication at the VC-840 as true effective value (True Rms), crest factor max. 3			
Resistance	400 Ω	±(1.2 % +2 dgts)	0.1 Ω
	4 kΩ	±(1.0 % +2 dgts)	0.001 kΩ
	40 kΩ	±(1.0 % +2 dgts)	0.01 kΩ
	400 kΩ	±(1.0 % +2 dgts)	0.1 kΩ
	4 MΩ	±(1.2 % +2 dgts)	0.001 MΩ
	40 MΩ	±(1.5 % +2 dgts)	0.01 MΩ
Continuity tester: acoustic signal for resistance values < ca. 70 Ω			
Capacity C	40 nF	±(3.0 % +10 dgts)	0.01 nF
	400 nF	±(3.0 % +5 dgts)	0.1 nF
	4 µF	±(3.0 % +5 dgts)	0.001 µF
	40 µF	±(3.0 % +5 dgts)	0.01 µF
	100 µF	±(4.0 % +5 dgts)	0.1 µF
Diode test Ge to GaAs 1 mV Test voltage 1 mA max.; emitter diode voltage max. 1.5 V			
Frequency	5 Hz	±(0.1 % +3 dgts)	0.001 Hz
	50 Hz	±(0.1 % +3 dgts)	0.01 Hz
	500 Hz	±(0.1 % +3 dgts)	0.1 Hz
	5 kHz	±(0.1 % +3 dgts)	0.001 kHz
	50 kHz	±(0.1 % +3 dgts)	0.01 kHz
	500 kHz	±(0.1 % +3 dgts)	0.1 kHz
	5 MHz	±(0.1 % +3 dgts)	0.001 MHz
	10 MHz	±(0.1 % +3 dgts)	0.01 MHz
Sensitivity higher or equal to ca. 300 mV eff from 1 Hz to 1 MHz Sensitivity higher or equal to ca. 600 mV eff from 1 MHz to 10 MHz			
Temperature measurement	-40 °C ... 0 °C	±(3.0 % +4 dgts)	1 °C
	0 °C ... +400 °C	±(1.0 % +3 dgts)	1 °C
	+400 °C ... +1000 °C	±(2.0 % +10 dgts)	1 °C
Temperature measurement possible with VC-840			
C Maximum input values			
Voltage measurement: Max. 1000 V DC or 750 V AC rms			
Current measurement: 20 A AC / DC in the A-range, for max. 10 s with a subsequent cool-down phase of min. 15 min., max. 250 V DC / V AC rms, overload protection: quick-acting 10 A - 250 V fuse 400 mA AC / DC in the mA-range, max. 250 V DC / V AC rms, overload protection: quick-acting 0.5 A - 250 V fuse			
Resistance measurement, diode test, continuity check, frequency measurement: max. 1000 V peak			

PACKAGE CONTENT

Digital multimeter // Optical interface cable // Demosoftware // Instrument leads // Battery (9 V block container) // Operating instructions