VICTOR 98A Series intelligent digital multimeter

- The meter is handled, battery-operated tool for measuring electrical parameters. It has all the features of a digital millimeter and measure AC voltage, DC voltage, AC current, DC current, resistance, capacitance, frequency, duty cycle ratio, dBm, TC, RTD, Diode Test, and Continuity Check.
- Large LCD screen could display the three characteristic of one input signals.
- Different reference impedance for dB measure function.
- AUTO HOLD, DISPLAY HOLD and PEAK HOLD to display the measuring value.
- Panel calibration function.
- Three convenient data recording modes: LOG mode, MANUAL mode, and COMP mode.
- USB-IR jack to connect with a PC.

General characters	
Power	4×1.5V AAA alkalescence battery/electricize battery
Working temperature and humidity	0~50℃≤10摄氏度，80%RH/0~30℃
Deposited temperature and humidity	-25~60℃，≤70%RH
Working height	≤2000m，cannot under height
Shake and concussion	Randomicity2g,5~500Hz testing under 1 meter
Proof cycle	1 year
Warm-up time	Boot-strap warm-up time is 10 minute or other
Display	LCD double displaying: 68.0×36.3mm
Backlight	White LED backlight, can set BL time 0~9000s test leads,fuse
Accessory	Instruction manual、CD driver、test leads、carrying case、USB cable
Size and weight	205×95×42(mm), weight about 500g

Technical data

Measuring function	Range	Measuring range	Resolving power	Accuracy	Remark
DC Voltage	4V	-4.000V~4.000V	1mV	0.2%+4	Imput impedance：10mΩ
	40V	-40.00V~40.00V	0.01V		
	400V	-400.0V~400.0V	0.1V		
	1000V	-1000V~1000V	1V	0.5%+4	
AC Voltage (40Hz~500Hz) (5%~100%RANG)	400mV	0~400.0mV	0.1mV	0.5%+10	Imput impedance: 10mΩ< 100pf
	4V	0~4.000V	1mV	0.5%+4	
	40V	0~40.00V	0.01V		
	400V	0~400.0V	0.1V		
	750V	0~750V	1V	1.0%+4	
DC Mv Voltage	40mV	-40.00 mV~40.00mV	0.01mV	0.5%+6	Imput impedance：10mΩ
	400mV	-400.0mV~400.0mV	0.1mV	0.2%+4	
OHM	400Ω	0~400.0Ω	0.1Ω		Plough voltage：0.4V Not including the accuracy of down-lead resistance
	4KΩ	0~4.000KΩ	1Ω		
	40KΩ	0~40.00KΩ	0.01 KΩ		
	400KΩ	0~400.0KΩ	0.1 KΩ	0.5%+4	
	4MΩ	0~4.000MΩ	1 KΩ		
	40MΩ	0~40.00MΩ	0.01 MΩ	1.5%+4	
DC Current	4A	-4.000A~4.000A	0.001A	0.5%+4	Imput impedance：0.01Ω
	10A	-10.00A~10.00A	0.01A	1.0%+4	
AC Current ACA(40Hz~200Hz) (5%~100%RANG)	4A	0~4.000A	0.001A	1.0%+8	
	10A	0~10.00A	0. 01A	2.0%+8	
DCmA	40mA	-40.00mA~40.00mA	0.01mA	0.3%+4	Imput impedance：1Ω
	400mA	-400.0mA~400.0mA	0.1 mA	0.2%+4	
ACmA (40Hz~500Hz) (5%~100%RANG)	40mA	0~40.00mA	0.01 mA	1.5%+8	
	400mA	0~400.0mA	0.1 mA	1.0%+8	
DCuA	400uA	-400.0uA~400.0uA	0.1 uA	0.2%+4	Imput impedance：100Ω
	4000uA	-4000uA~4000uA	1 uA		
ACuA (40Hz~400Hz) (5%~100%RANG)	400uA	0~400.0uA	0.1 uA	1.0%+8	
	4000uA	0~4000uA	1 uA		
Frequency	50Hz	0~50.0Hz	0.01Hz	0.1%+3	Auto range
	500Hz	0~500.0Hz	0.1Hz		
	5kHz	0~5.000kHz	1Hz		
	50kHz	0~50.00kHz	0.01KHz		
	100kHz	0~100.0kHz	0.1KHz		
Duty cycle	0.1%~99%		0.1%	1.0%	
Diode test	1V		0.001V	10%	Ploughvoltage1.1V~1.6V Current of short circuit:0.6mA
Continuity test	≤50ΩBB		0.1Ω	Not Specified	
Capacitance	50nF	0~50.00nF	0.01nF	5%+50	Auto range About need 30s in the range of 100uF
	500nF	0~500.0nF	0.1nF	5%+5	
	5uF	0~5.000μF	0.001uF		
	50uF	0~50.00μF	0.01uF		
	100uF	0~100.0μF	0.1uF		
Thermocouple	K	-200~950	1℃	1.0%+2（≤-100℃） 1.0%+1（>-100℃）	Adopt ITS-90 thermometric scale not including the accuracy of inner temperature compensatory transducer
Thermo resistance	Pt100	-200~700	1℃	0.5%+2	Pt100-385thermometric scale not including the accuracy of down-lead resistance

VICTOR 187/189 Logging of True RMS digital multimeter

Characteristics

- measurements
  AC voltage, DC voltage, AC current ,DC current, OHM, Frequency, Period, Pulse width,Capacitance, Beep, Diode, dBm, Thermocouple (TC), Thermal resistance (RTD), AC+ DC, AC + Hz measurement, Maximum, Minimum, Average measurement (MAX / MIN / AVG), The relative value measurement (REL_%)
- Measurements show that 55,000 words, the basic accuracy 0.02% (VICTOR 189) /0.05% (VICTOR 187)
- Three measurement rate: FAST, SLOW, SMOOTH, the fastest refresh rate of simulation bar: 14 /secretary
- Manual range or automatic range selection
- Measuring data show that hold functional (DIS_HOLD) and automatically hold functions(AUTO_HOLD)
- Peak measurements, 500us peak sampling capture, capable of capturing crest Pulse
- AC voltage and AC current are true rms measurement, AC voltage bandwidth 20Hz～30KHz（VICTOR 187）,20Hz-100KHz(VICTOR 189), AC current bandwidth 20Hz-30KHz
- Option 1 ~ 2400 Ω reference impedance measurement of decibels
- Low pass filter function normally by the RP-raising and the frequency of the electrical waveform measurement results
- Can be configured clamp to measure the large current
- The eight kinds of thermocouple measurement, the two kinds of heat resistance measurement, high-precision cold-automatic compensation, ℃or ℉ temperature display
- Large-screen display and more data can be displayed at the same time that is measurements and other information related to the measurement
- Built-in real-time clock, for the record and provide accurate measurement of time
- Easy to operate multi-parameter data record: manual records and records of the incident, and easy to query the data records
- Adopted panel calibration technology, can be done without opening the case calibration
- Use alkaline batteries, Ni-Hi battery-powered, the battery and fuse can be easily replaced.
- Backlight is automatically closed and automatic power off function
- Large-screen LCD display, with white LED backlighting
- The meter can communicate with computer by isolation interface USB
- Through the friendly interface, users can easily access the data of instrument in a number of parameters, and may be the data storage, processing, management, access to the data tables and other graphics or display
- Simple man-machine operating, delicate, strongly and suitable for field use

Measurements	Range	Measuring range	Resolution
DCV	5.0000V	0.0001V	Input impedance: 10MΩ
	50.000V	0.001V	
	500.00V	0.01V	
	1000.0V	0.1V	
DCmV	50.000mV	0.001mV	Input impedance: approx. 100MΩ
	500.00mV	0.01mV	
	2200.0mV	0.1mV	
ACV	5.0000V	0.0001V	Input impedance: 10MΩ / 50pF CF<3 187：20Hz~30kHz（10~110% Range） 189：20Hz~100kHz（5~110% Range）
	50.000V	0.001V	
	500.00V	0.01V	
	760.0V	0.1V	
ACmV	50.000mV	0.001mV	Input impedance: 1MΩ / 50pF
	500.00mV	0.01mV	
OHM	500.00Ω	0.01Ω	Open circuit voltage<2.5V
	5.0000KΩ	0.0001KΩ	
	50.00KΩ	0.001KΩ	
	500.00KΩ	0.01KΩ	
	5.0000MΩ	0.0001 MΩ	
	50.00MΩ	0.001 MΩ	
	500.0MΩ	0.1 MΩ	
DCA	5.0000A	0.0001 A	Voltage Drop ＜0.04 V/A
	20.000A	0.001 A	
DCmA	50.000mA	0.001mA	Voltage Drop<1.8 mV/mA
	500.00mA	0.01 mA	
DCuA	500.00uA	0.01 uA	Voltage Drop 103uV/uA
	5000.0uA	0.1 uA	
	5.0000A	0.0001 A	
ACmA	50.000mA	0.001mA	
	500.00mA	0.01 mA	
ACuA	500.00uA	0.01uA	
	50000uA	0.1uA	
FREQ	9.9999Hz	0.0001Hz	
	99.999Hz	0.001Hz	
	999.99Hz	0.01Hz	
	9.9999KHz	0.0001KHz	
	99.999KHz	0.001KHz	
	999.99KHz	0.01KHz	
	9.9999MHz	0.0001MHz	
	99.999MHz	0.001MHz	
DUTY	0.1%~99.9%	0.1%	0.5Hz~1KHz，Square Wave
PULSE	199.99ms	0.01ms	
	1999.9ms	0.1ms	
DIODE	2.2000V	0.0001V	Open circuit voltage：<3.5V Short circuit：0.8mA
CHCNT	500.0Ω	0.1Ω	Open circuit voltage：<3.5V Short circuit：<0.8mA Short alarm：approx. <20Ω Open alarm：approx. >120Ω
CAP	9.999nF	0.001nF	
	99.99nF	0.01nF	
	999.9nF	0.1nF	
	9.999μF	0.001uF	
	99.99μF	0.01uF	
	999.9μF	0.1uF	
	9.999mF	0.001mF	
	99.99mF	0.01mF	
TC	R -40℃~1760℃	1℃	ITS-90
	S -40℃~1760℃		
	K -270.0~1370.0	0.1℃	
	E -270.0~720.0		
	J -210.0~850.0		
	T -270.0~400.0		
	N -270.0~1300.0		
	B 400~1800	1℃	
RTD	Pt100 -200.0~850.0	0.1℃	Pt100-385
	Pt1000 -200.0~630.0		