9820

New Model

VICTOR 9820 HIGH-VOLTAGE MULTIMETER

The instrument has the function of measuring DCV, ACV, DCA, ACA, resistance, capacitance, frequency, diode, continuity test, temperature and automatic power off, backlight, and DCV and ACV up to 2000V. The instrument takes dual-integral A/D converter as key point, it is an excellent tool.

Technical Specifications

Basic Function	Range	Accuracy
DC Voltage	600mV	±(0.5%+5)
	6V/60V/600V/1000V	±(0.5%+4)
	2000V	±(1.0%+6)
AC Voltage	6V/60V/600V/750V	±(0.8%+10)
	2000V	±(1.2%+10)
DC Current	600uA/6000uA	±(1.0%+10)
	60mA/600mA	±(1.2%+10)
AC Current	600uA/6000uA/60mA/600mA	±(1.5%+10)
Resistance	600Ω	±(0.8%+5)
	6kΩ/60kΩ/600kΩ/6MΩ	±(0.8%+4)
	60MΩ	±(1.2%+10)
Capacitance	10nF	±(5.0%+40)
	100nF/1uF/10uF/100uF	±(3.5%+20)
	1mF	±(5.0%+10)
	20mF	±(10%+0d)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	±(0.5%+10)
Temperature	(-20~1000)°C /(-4-1832)°F	±(1.5%+15)

Features	
Display method	LCD display
Operation	Auto Range
Max Display	5999 (3 5/6 digits)
Diode	√
Data retention	√
Overload indication	OL
Low voltage prompt	√
On/off buzzing	√
Flashlight	√
NCV	√
Relative value	√
Backlight display	√
work environment	0~40 °C < 75% RH
Sampling rate	3 times/second
Automatic shutdown	√
Unit symbol	√
Input impedance	10MΩ
source	4 AAA batteries
Product size	186*92*52mm
Product weight	395g

EMC LVD CE

2003A/2004A/2006A

Two-channel Function/ Arbitrary Waveform Generator

These series two-channel function/arbitrary waveform generator is equipped with direct digital synthesis (DDS) technology which enables output signal to be stable and accurate.

Key Features

- 3.5-inch 480×320TFT LCD with clear graphic interface
- Chinese / English menu available
- Press key for help and information
- File management supporting USB flash disk and local storage
- Two-channel output with the highest output frequency is “2003A” Model is 25MHz, “2004A ” Model is 40MHz, “2006A” Model is 60MHz.
- Sampling rate: 200MSa/S, vertical resolution: 13 bit and storage depth: 8k
- 5 basic waveforms and 32 arbitrary waveforms in-built
- Pulse wave output set in edge time
- Internal/external AM, FM, PM, ASK, FSK and PSK modulation function
- Output of linear/logarithmic frequency sweep and burst waveform
- Frequency meter of high precision of 100MHz and 32-bit counter
- With RS232 interface, USB Device, USB Host interface supporting USB flash disk storage (USB Host Optional)
- Multi-functional arbitrary waveform editing software equipped

EMC LVD CE

General Technical Specifications

- Supply voltage:220V±10%,45~65Hz,Or 110V±10%,45~65Hz
- Power consumption:< 15W
- Types:3.5-inch TFT LCD screen,Resolution480×320,16M color
- Environment:Operation 10℃ ~ +40 ℃、Non-operation -10℃~+60℃
- Humidity range:Within the range of 0 ~ 40 ℃,≤90% relative humidity
- Interface:RS232,USB Device;USB Host(optional)
- Display: 3.5 inch TFT LCD screen, 480 x 320 resolution
- Size: 265 * 105 * 305 mm (width x height x deep)
- Weight: 2.6 kg

Accessories

Standard accessories:

- 1 piece of 30A51 three-wire power line;
- 1 piece of 33A52 BNC coaxial cable;
- 1 CD-ROM
- 1User guide.

Optional accessories:

- BNC alligator clip line (33P01);
- Cabinet installation suit (32P02);
- RS232 serial line (32P04);
- USB data line (32P05).

Technical Specifications

Frequency Characteristics			
MODEL	2003A	2004A	2006A
Sine	1μHz ~ 25MHz	1μHz ~ 40MHz	1μHz ~ 60MHz
Square	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
Triangle	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
Pulse	100μHz ~ 6MHz	100μHz ~ 6MHz	100μHz ~ 6MHz
Arbitrary	1μHz ~ 6MHz	1μHz ~ 6MHz	1μHz ~ 6MHz
Noise (-3dB)	7MHz Bandwidth		
Frequency Resolution	1μHz		
Frequency Accuracy	±5ppm		
Frequency Stability	±1ppm/3hour		
Frequency Characteristics			
Waveform Types	Sine, square, triangle, pulse, noise and arbitrary waves (including DC). There are 32 kinds of arbitrary waves and 50 kinds of user-defined waves.		
Waveform Length	8192 points		
Waveform Sampling Rate	200 MSa/s		
Waveform Vertical Resolution	13 bits		
Sine Wave Characteristics			
Sine Wave	Harmonic Distortion	≥45dBc(<1MHz);≥40dBc(1MHz~20MHz)	
	Total Harmonic Distortion	<0.8%(20Hz ~ 20kHz, 0dBm)	
Square Wave Signal Characteristics			
Square Wave	Rise/Fall <20ns		
	Overshoot <5%		
	Duty Cycle freq<100kHz: 1%~99%;100kHz≤freq<5MHz: 20% ~ 80%; 5MHz≤freq: 40% ~ 60%(0.1% resolution)		
Pulse Wave Characteristics			
Pulse Wave	Pulse Width	Min 20ns; 1ns resolution	
	Edge Transition Time	Min 20ns;	
	Overshoot	<5%	
	Jitter	6ns+0.1% Period	
Ramp Wave	Linearity Degree	≥98%(0.01Hz~10kHz)	
	Symmetry	0.0 ~ 100.0%(resolution 0.1%)	
Output Characteristics			
Amplitude			
Amplitude Range	freq＜10MHz	10MHz≤freq＜30MHz	30MHz≤freq
	2mVpp ~ 20Vpp	2mVpp ~10Vpp	2mVpp ~5Vpp
Amplitude Resolution	1mV		
Amplitude Stability	±1% set value±1mVpp(1kHz Sine,0 offset,>10mVpp)		
Amplitude Flatness (relative to 1K Sine, 1 Vpp)	±0.4dB <10MHz; ±1.0dB ≥10MHz。		
Output Impedance	50Ω±10%(Typical)		
Protection	All the signal output terminal can be shorted within 60s		
DC Offset			
	Output Amplitude>0.1V	2mV<Output Amplitude≤0.1V	
Offset Adjusting Range	±10Vpk,ac + dc	±0.250Vpk,ac + dc	
Offset Resolution	1mV		

EMC LVD CE

Function Generator
VICTOR®

External Measurement Function			
Frequency Meter	Frequency measurement	1Hz ~ 100MHz	
	range		
	Measurement accuracy	Gate time continuously adjusted between0.01s~10s	
Counter Function	Counting region	0 ~ 4294967295	
	Control mode	Manual operation	
Input Signal Voltage Range	2Vpp~20Vpp		
Coupled Mode	AC or DC		
Pulse Width Measurement	1ns (resolution), 20s (MAX measuring time)		
Period Measurement	1ns (resolution), 20s (MAX measuring time)		
SYNC Output		**Trigger Input**	
Output Channel	CH1 or CH2, default CH1	**Signal Range**	2Vpp~20Vpp
Level	TTL	**Coupling**	AC or DC
Impedance	50Ω	**Pulse Width**	>100ns
Rise/Fall Time	< 25ns	**Reaction Time**	<500ns(Burst)
Maximum Frequency	25MHz		<10μs(Sweep)
Phase characteristics		**Modulation Input**	
Phase Adjusting Range	0~359.9°	**Impedance**	1MΩ
Phase Resolution	0.1°	**Signal range**	±2.5V ac+dc
AM Modulation		**FM Modulation**	
Output Channel	CH1 or CH2, default CH1	**Output Channel**	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	**Carrier Wave**	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External	**Source**	Internal/External
Modulation Wave	Sine, square, triangle and ramp	**Modulation Wave**	Sine, square, triangle and ramp
Modulation Frequency	2mHz~20kHz	**Modulation Frequency**	2mHz~20kHz
Modulation Depth	0%~120%	**Frequency Offset**	0~Maximum carrier frequency
PM Modulation		**ASK Modulation**	
Output Channel	CH1 or CH2, default CH1	**Output Channel**	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	**Carrier Wave**	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External	**Source**	Internal/External
Modulation Wave	Sine, square, triangle and ramp	**Modulation Wave**	Square wave of 50% duty ratio
Modulation Frequency	2mHz~20kHz	**Keying Frequency**	2mHz~1MHz
Phase Offset	0°~ 360°	**Modulation Amplitude**	0~Carrier Amplitude
FSK Modulation		**PSK Modulation**	
Output Channel	CH1 or CH2, default CH1	**Output Channel**	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	**Carrier Wave**	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External	**Source**	Internal/External
Modulation Wave	Square wave of 50% duty ratio	**Modulation Wave**	Square wave of 50% duty ratio
Keying Frequency	2mHz~1MHz	**Keying Frequency**	2mHz~1MHz
Hop Frequency	Carrier frequency range	**Modulation Phase**	0°~ 360°
Frequency Sweep		**Burst Characteristics**	
Output Channel	CH1 or CH2, default CH1	**Output Channel**	CH1 or CH2, default CH1
Types	Linearity/Logarithm	**Carrier Wave**	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Sweep Frequency Time	1ms ~ 500.000s		
Start/Stop Frequency	1μHz~Maximum carrier frequency	**Pulse Count**	1~65535 or infinite, gated
Sweep Direction	Forward, Backward	**Start/Stop Phase**	0~360°
Trigger Source	Manual operating, internal, external	**Internal Period**	1μs~500s
		Gating Source	External
		Trigger Source	Internal, external, manual operating

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