

Protek

Test & Measurement Instruments Catalogue



Protek Instrument Co.,Ltd

www.protekinst.com

Protek is
Korea's Leading
Test & Measurement Instruments
Brand

The test and measuring instruments of “Protek Instrument” have been well known for its reliability for over 50 years.

By introducing network analyzers and handheld spectrum analyzers,

Protek completed its product categories and enhanced its position to compete with major test & measuring equipment vendors.

Protek will make every effort to innovate products and services until customers are fully satisfied.



Prottek Hystory

- 2025** 07 Prottek Instrument Co., Ltd. Relocation of headquarter
- 2023** 02 Korea International Trade association member registration
- 2022** 07 Digital oscilloscope and random waveform/function generator launch new products
- 2021** 08 Development of new products
07 Gwangmyeong & Incheon Plant Establishment Approval
06 Korean government company confirmation certificatio
Established Prottek Instrument Co., Ltd.
- 2016** 05 Developed Korea's first VSWR multiport analyzer
- 2015** 07 Developed Korea's first portable communication measuring device
- 2013** 11 Development of high-performance handheld multimeter
- 2008** 07 Korea's first vector network analyzer development
- 2005** 01 Established Qingdao Heungchang Co.,Ltd. (Prottek China) &US corporation
- 2004** 07 GS Instruments Co., Ltd. (now GS Instech) merged with Heungchang Mulsan Co., Ltd
- 1972** 06 Establishment of Heungchang Mulsan Co., Ltd., a company specializing in measuring instruments



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A333 · A338

RF Vector Network Analyzer

The Protek A333 and Protek A338 vector network analyzers, which have already been proven in practice, are widely used in various communication fields with excellent and stable performance, and are especially optimized for research and development fields such as antennas, filters, and communication cables and production lines.

- 4S parameter, frequency offset, and time domain provided
- USB / LAN / VGA Interface Standard
- Third-party RF CALKIT compatible support
- 10.4" Full touch TFT LCD Display
- Based on WINDOW OS



	A333	A338
Frequency Range	300 kHz ~ 3.2 GHz	300 kHz ~ 8 GHz
Output power level	-45 dBm ~ +10dBm	-60 dBm ~ +10 dBm
Number of test points available	1 ~ 100,001	

Specifications

		A333	A338
Frequency Resolution		1Hz	
CW Frequency Accuracy		$\pm 5 \times 10^6$	
Impedance		50 Ω	
IF Bandwidth Setting		1 Hz ~ 30 kHz (with 1/1.5/2/3/5/7/steps)	
Test point measurement speed		125 μ s	100 μ s
harmonic distortion		-30 dBc	-25 dBc
Non-Harmonic Spurious		-30 dBc	
Output power level accuracy		± 1.0 dB	± 1.5 dB
Transmission measurement accuracy (Magnitude/Phase)	+5 dB ~ +15 dB	0.2 dB / 2°	
	-50 dB ~ +5 dB	0.1 dB / 1°	
	-70 dB ~ -50 dB	0.2 dB / 2°	
	-90 dB ~ -70 dB	1.0 dB / 6°	
Return Measurement Accuracy (Magnitude/Phase)	-15 dB ~ 0 dB	0.4 dB / 3°	
	-25 dB ~ -15 dB	1.0 dB / 6°	
	-35 dB ~ -25 dB	3.0 dB / 20°	
Receiver noise level (IF Bandwidth 10Hz)		-120 dBm	-125 dBm
Tracking noise (IF Bandwidth 3kHz)		0.001 dBrms	
Uncorrected Directivity		25 dB	18 dB
Input Port type		2 ports	

General Characteristics

		A333	A338
Input Power		100 ~240 VAC 50/60 Hz	
Power Consumption		50 W	60 W
Size (W×H×D)		About 439×320×238 mm	About 439×320×280 mm
Weight		About 10.05 kg	About 10.65 kg
Display		10.4 incg Full touch TFT LCD	
OS Base		WINDOW OS base	
Measurement add-on		4S parameter, time domain, frequency offset, screen division support	
Standard Interface		USB 2ea, LAN, VGA	
Standard Accessories		Manual, AC power Cable	
Optional		GPIB interface, VNA RF Calkit, RF Cable	
Environment		Temperature: 5°C~39 °C / Humidity : ~ ~ RH+80 % Atmospheric pressure: 84 ~ 106.7 kPa / Altitude: ~ 3000 m	

A434L

Handheld RF Cable&Antenna Analyzer

The Protek A434L portable RF antenna & cable analyzer, which is widely used in Korea and foreign communication equipment and facility maintenance sites, is a product specialized in measuring the communication environment of basic railway emergency disaster network communication or communication base station facilities. This product has already been tested.

- Measure VSWR, DTF, Return Loss, Cable Loss
- 7" Full touch TFT LCD Display
- USB, LAN Interface Standard
- User intuitive button arrangement
- Smart battery for up to 4 hours of continuous use



A434L	
Frequency range	5 MHz ~ 4 GHz
Frequency Accuracy	< ±3 ppm
Number of test points	up to 2,001

Specifications

		A434L
Max input power		+25 dBm Damage level
Frequency Resolution		10 kHz
Impedance		50 Ω
Scan speed		< 1 ms / data point
GUI screen display		Single & Dual mode
Test Curve · Screen · Setup		Internal: 512MB External: USB disk (Screen Storage Max : 32G)
VSWR	Number of test points	1 ~ 126, 251, 501, 1001, 2001
	Return Loss Range	0 ~ -60 dB
	Display VSWR Range	1 ~ 65
Cable Loss	Cable Loss Range	0 ~ -30 dB (Resolution: 0.01 dB)
Interference introspectio	On-Frequency	+ 10dBm
	On-Channel	+ 20 dBm
DFT	Return Loss Range	0 ~ 60 dB
	Distance Range	0 ~ 1250 m (4125ft)
	Display VSWR Range	0 ~ 65

General Characteristics

Size (W×H×D)	About 260×193×67 mm
Weight	About 2.45 kg (include battery)
Display	7Inch Full touch TFT LCD (800×480)
Input Power	(100 ~ 240 V AC, 1.5 A) DC 12 V, 5 A AC Adaptor
Battery	Li-ion Battery 8.4V DC, 7800mAh
Standard Interface	USB, LAN
Standard Accessories	Manual, AC Adaptor, Carrying bag, Battery
Optional	RF CALKIT, RF CABLE, charging cradle
Environment	Temperature : 0 ~ 39 °C / Humidity : ~ ~ RH+70 %

A733

Handheld RF Spectrum Analyzer

Protek A733 Portable Spectrum Analyzer is a specialized instrument for measurement of wireless communication systems and communication devices such as drones, facility. It can be applied to perform measurements in more diverse environments. In particular, the new A733 has a Tracking Generator, Auto-Tune function, and VSWR measurement function.

- Tracking generator, AUTO Tune Function (VSWR optional)
- AM·FM Function (Audio listening)
- USB, LAN Interface Standard
- 5.7" TFT LCD VGA Display
- User intuitive button arrangement
- Smart battery for up to 8 hours of continuous use



A733	
Frequency Range	9 kHz ~ 3.2 GHz
Frequency accuracy	±1 PPM

Specifications

A733			
RBW	10 Hz ~ 1 MHz		
Span Type	Center Freq + Span / Start Freq + Stop Freq		
Span	Zero Span, 1 Hz~ 3.2 GHz		
Measurement Range	DANL ~ 1.5 dB Gain Compression		
	1 dB Gain Compression (atten: 10 dB, preamp off)		
	+10 dBm Typical, 9 kHz~ 2 MHz		
	+20 dBm Typical, 2 MHz~ 3.2 GHz		
DANL (Displayed Average Noise Level)	DANL : 0 dB ATT / 1 Hz RBW		
	frequency	Preamp OFF	Preamp ON
	9 kHz ~ 100 kHz	-108 dBm	-131 dBm
	100 kHz ~ 500 kHz	-128 dBm	-148 dBm
	500 kHz ~ 10 MHz	-128 dBm	-148 dBm
	10 MHz ~ 100 MHz	-142 dBm	-161 dBm
	100 MHz ~ 1 GHz	-141 dBm	-161 dBm
	1 GHz ~ 2.6 GHz	-141 dBm	-159 dBm
2.6 GHz ~ 3.2 GHz	-140 dBm	-158 dBm	
Tracking generator	5 MHz ~ 3 GHz		
Amplitude unit	dBm, dBmV, dBuV, Watt, V		
Max Input Power Level	+33 dBm		
DC Voltage Level	50 Vdc		
Zero Span Sweep Time	2 ms ~ 1,000 s (±0.1%)		
Sweep Trigger	Freerun, Single, External		
Trace	4 Trace		
Detector	min, max, sample, avg (power, voltage, log)		
Marker	4 Marker		
Marker Function	peak, next peak, center=marker frequency		
Audio Demodulation	AM & FM		

General Characteristics

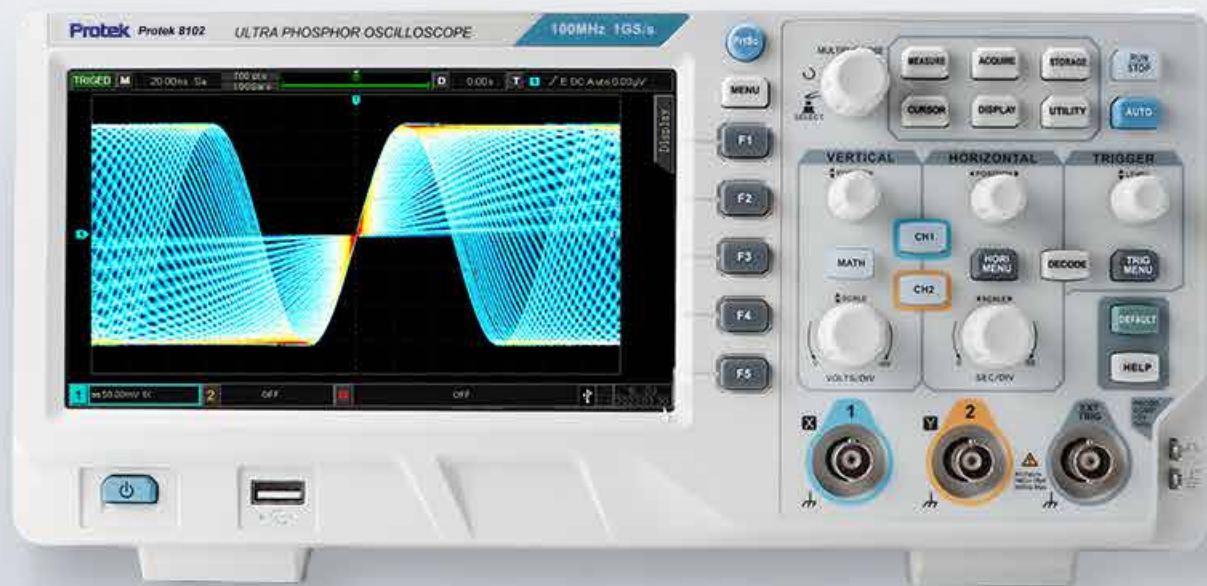
Size (W×H×D) and Weight	265×265×71 mm / 2.9 kg
Display	5.7InchTFT LCD (640×480)
Input Power	DC 12 V / 3.0 A Adaptor (100 ~ 240 V AC, 1.5 A) / Power Consumption : About 32W
Input Connector	RF Signal IN, N type Female 50 Ω
Reference Connector	10MHz in, BNC type Female
Battery	2600 mAh 18650 lithium ion Battery (4 ea)
Standard Interface	USB, LAN, OTG
Standard Accessories	Battery pack, Manual, AC Adaptor, Carrying bag
Optional	RF CALKIT, RF CABLE, charging cradle, VSWR Measure KIT
Environment	Temperature : 0 ~ 39 °C / Humidity : ~ RH+70 %

8002 Series

Digital Storage Oscilloscope

The Protek 8002 series is a mid-level device recommended for those who are efficient and practical. It is equipped with a TFT high-resolution wide display, a high memory of 56MPts, and a digital trigger, enabling clean and fast signal analysis. It is a reasonable product that allows customers to use it effectively in various measurement environments.

- Record up to 100,000 frame waveforms
- Direct Help and Digital Trigger Features
- Decoding function options
- 7" TFT LCD WVGA Display
- USB, LAN, P/F Interface Standard



	8102	8202
Bandwidth	100 MHz	200 MHz
Real-Time Sampling	1 GSa/s (Each Channel : 500 MSa/s)	
Memory Depth	56 Mpts	
Waveform Capture Rate	Max 500,000 wfms/s	

Specifications

	8102	8202
Analog input	2 Channel + EXT	
Rise Time	≤ 3.5 ns	≤ 1.8 ns
Input Impedance	(1 MΩ±2 %) // (16 pF±3 pF) / Input Voltage : 400 V MAX (DC+Vpeak)	
Vertical resolution	8 bit	
Vertical axis range	1 mV/div ~ 20 V/div (1-2-5 base)	
Bandwidth limit	20 MHz	
DC Gain	≤ ±3 % (Sampling or average sampling method)	
Time base	range	2 ns/div ~ 1000 s/div
	accuracy	≤ ± (50+ 2×Service Life) ppm
	mode	YT, XY, ROLL, ZOOM
Input coupling	AC, DC, GND	
Frequency meter	7 bit	
Acquisition Mode	Sampling, peak detection, high resolution, envelope, and average	
Waveform format	sin(x)/x	
Trigger mode	Edge, Pulse Width, Runt, Nth Edge, Delay, Duration, Setup/Hold, Slope, Video, Pattern, RS232/UART, I2C, SPI (Optional)	
Decode (Optional)	I2C, SPI, UART, CAN, RS232, LIN	
36 Measure Parameters	Max, Min, Peak-Peak, Top, Bottom, Amplitude, Cycle Mean, Mean, Middle, Cycclerms,rms, Overshoot, Pre shoot, Frequency, Cycle, Rise Time, Fall Time, Positive Pulse, Negative Pulse, Positive Duty Ratio, Negative Duty Ratio, Delay A→B, Delay A←B, Phase A→B, Phase B→A, Area, Cycle Area, etc.	
Cursor mode	Manual, Tracking, Cursor Display	
Math	A+B, A-B, A×B, A/B, FFT advanced	

General Characteristics

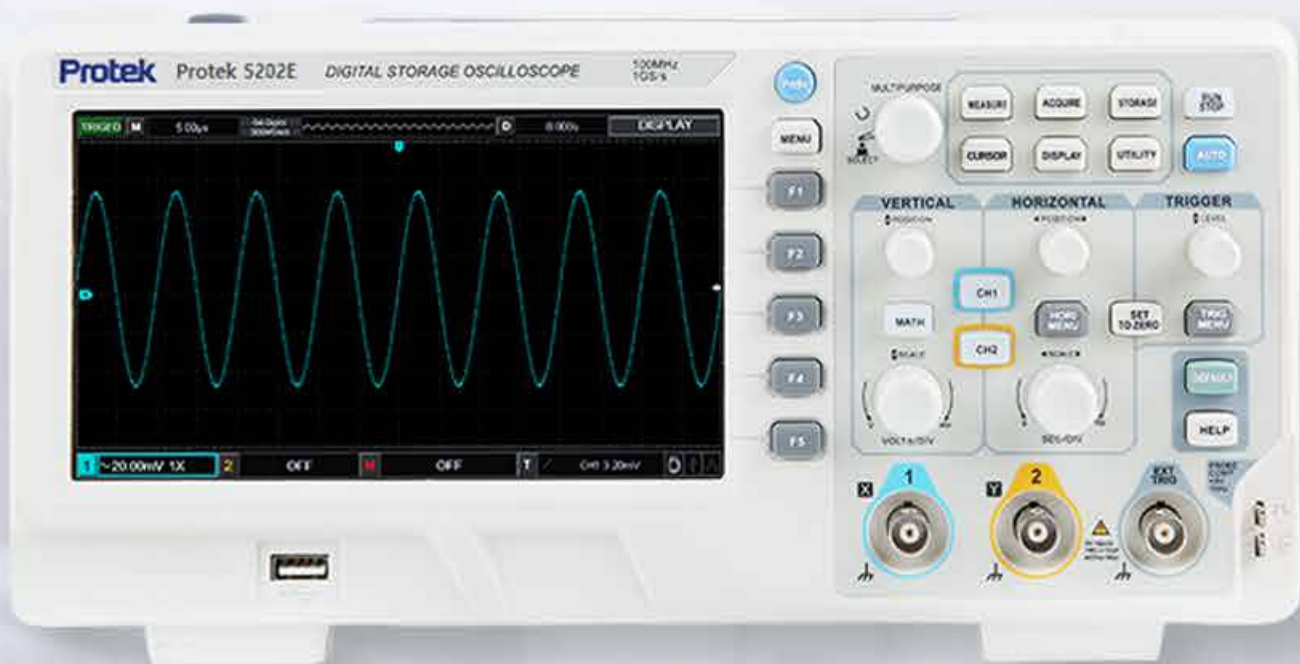
Size (W×H×D) and Weight	300×138×107 mm / 3 kg
Display	7 Inch TFT LCD (800×480), 24 bit True Color
Input Power	AC 100 V ~ 240 VACrms, 45 Hz ~ 440 Hz (2.5 A, T 250 V Fuse)
Storage	Include: 256 JH / Exclude: USB Disk Storage(BMP,etc) Waveform Recording : ~100,000 Frames
Standard Interface	USB-Host, USB-Device, EXT Trig, VGA, P/F
Standard Accessories	Probe kit, AC power cable, USB cable, CD
Optional	Digital Decode & Trigger Function / LAN Interface
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 80 % / Altitude : 3000 m

5002E Series

Digital Storage Oscilloscope

The Protek 5002E series has been the most popular basic model among Protek's oscilloscope lineup for a long time since its launch and has been loved by many customers. It is an economical and reasonable product composed of the most faithful functions.

- Direct Print
- USB, P/F Interface Standard
- 7" TFT LCD WVGA Display
- User intuitive button arrangement



	5062E	5102E	5202E
Bandwidth	50 MHz	100 MHz	200 MHz
Real Time Sampling rate	1 GSa/s (Each Channel : 500 MSa/s)		
Memory Depth	64 kpts		
Waveform capture rate	5,000 wfms/s		

Specifications

	5062E	5102E	5202E
Analog Input Channel	2 Channel + EXT		
Rise Time	≤ 7 ns	≤ 3.5 ns	≤ 1.7 ns
Input Impedance	(1 MΩ±2 %) // (18 pF±3 pF)		
Vertical resolution	8 bit		
Vertical axis range	1 mV/div ~ 20 V/div (1-2-5 base)		
Bandwidth limit	20 MHz		
DC Gain accuracy	≤ ±3 % (Sampling or average sampling method)		
Time base	range	2 ns/div ~ 50 s/div (1-2-5 base)	
	accuracy	≤ ± (50+ 2×Service Life) ppm	
	mode	YT, XY, ROLL	
Input coupling	DC, AC, GND		
Frequency Counter	6 Digit		
Acquisition Mode	Sampling, peak detection, high resolution, envelope, and average		
Waveform format	sin(x)/x		
Trigger mode	Edge, pulse, alternate, Slope, video		
Waveform Recording	~ 1,000 Frames		
34 Measurement Parameter	Max, Min, High, Low, Ampl, Pk-Pk, Middle, Mean, CycMean,rms, C ycRMS, Period, Freq,Rise, Fall, RiseDelay, FallDelay, +Width, -Width, FRR, FRF, FFR , FFF, LRF, LRR, LFR, LFF, +Duty, -Duty, Area, CycArea, OverSht, PreSht, Phase. etc		
Cursor mode	Manual, Tracking cursor display		
Math Mode	A+B, A-B, A×B, A/B, FFT		

General Characteristics

Size (W×H×D) and Weight	About 336×164×108 mm /About 3.2 kg
Display	7 Inch TFT LCD (800×480), RGB
Input Power	AC 100V ~ 240 VACrms, 45 Hz ~ 440Hz (2.5 A, T 250 V Fuse)
Storage	Internal : 20 data, External : USB Disk Storage (Bitmap file)
Standard Interface	USB-Host, USB-Device, P/F
Standard Accessories	Passive Probe kit, USB Interface Cable, AC Power Cable, GUI CD (in manual)
Optional	DSO Education Board
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 80 % Altitude : ~ 3000 m

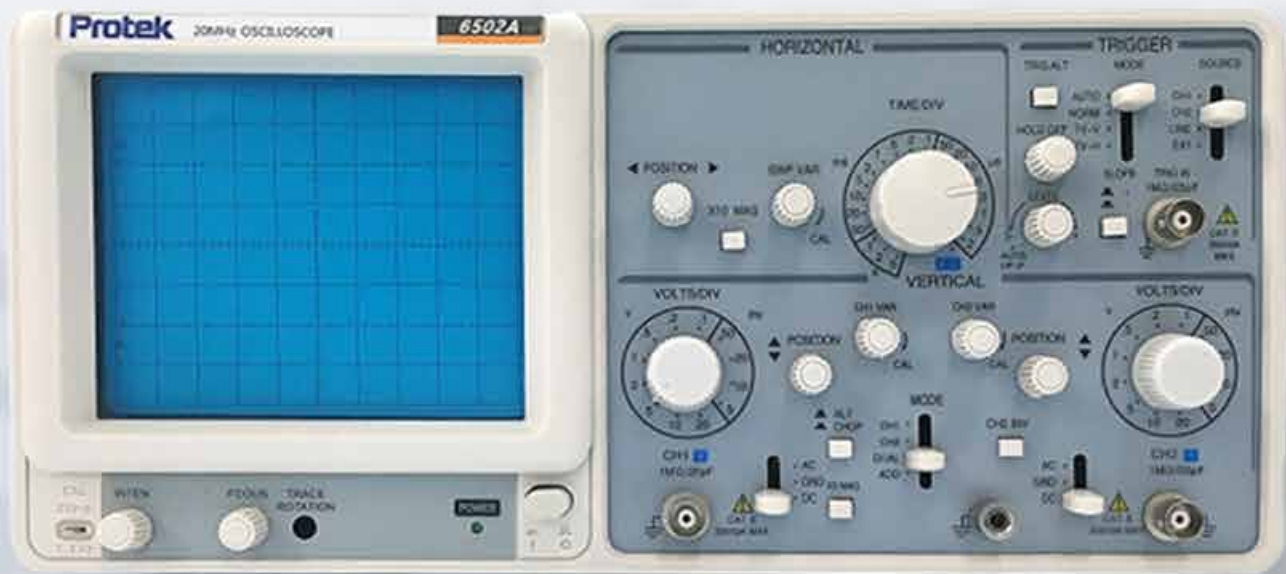
6500A Series

Analog CRT Oscilloscope

The analog oscilloscope Protek 6500A series is a product with a fast measurement response speed by applying a 5" 12kV class high-definition CRT.

You can check more accurate measurement values by applying.

- Trigger Lock Support
- AUTO, NORMAL, TV-V, TV-H Trigger
- Individual control rotary by channel
- 5" 12 kV CRT Display
- User intuitive button arrangement



	6502A	6504A	6506A
Bandwidth (-3 dB)	DC ~ 20 MHz	DC ~ 40 MHz	DC ~ 60 MHz
Operating Mode	CH A, CH B, DUAL, ADD, CHB Inverse		

Specifications

	6502A	6504A	6506A
Analog Input Channel	2 Channel		
Rise Time	17.5 ns	15 ns	12.5 ns
Input Impedance	1 M Ω \pm 2%, 25 pF \pm 3 pF		
Vertical axis range	1 mV/DIV~1 V/DIV(10 MHz, -3 dB), x5 gain selected, 5 mV/DIV~ 5 V/DIV		
Horizontal Type	Main, Mix, Delay, Hold off Time (5:1 Variable)		
X-Y mode	Switch Selectable Using X-Y Switch; CH 1= X axis \pm 3 %; CH 2= Y axis \pm 6 %		
Horizontal sensitivity	X axis \pm 6 %; Y axis \pm 3 %, X-Y Phase Difference: <3 $^{\circ}$ (50 kHz)		
Sweep magnification	\times 10, \pm 10 %, Extend Sweep Speed up to 20~50 nS/DIV		
Sweep Type	0.2 μ S/DIV~ 0.5 S/DIV in 1-2-5 Sequence, 20 Step ; Accuracy \pm 3 %		
Trigger	Type	AUTO, NORMAL TV-V, TV-H	
	source	INT, CH2, Line, EXT	
	sensitivity	Int: 2 division(2 division with TV Coupling), Ext: 0.3 V / (1 Vpp)	
coupling	AC, DC, GND		
Slope	+ / -		
CAL	Square Wave About 1kHz, 2Vp-p \pm 3%		
probe magnification	1 \times , 10 \times		

General Characteristics

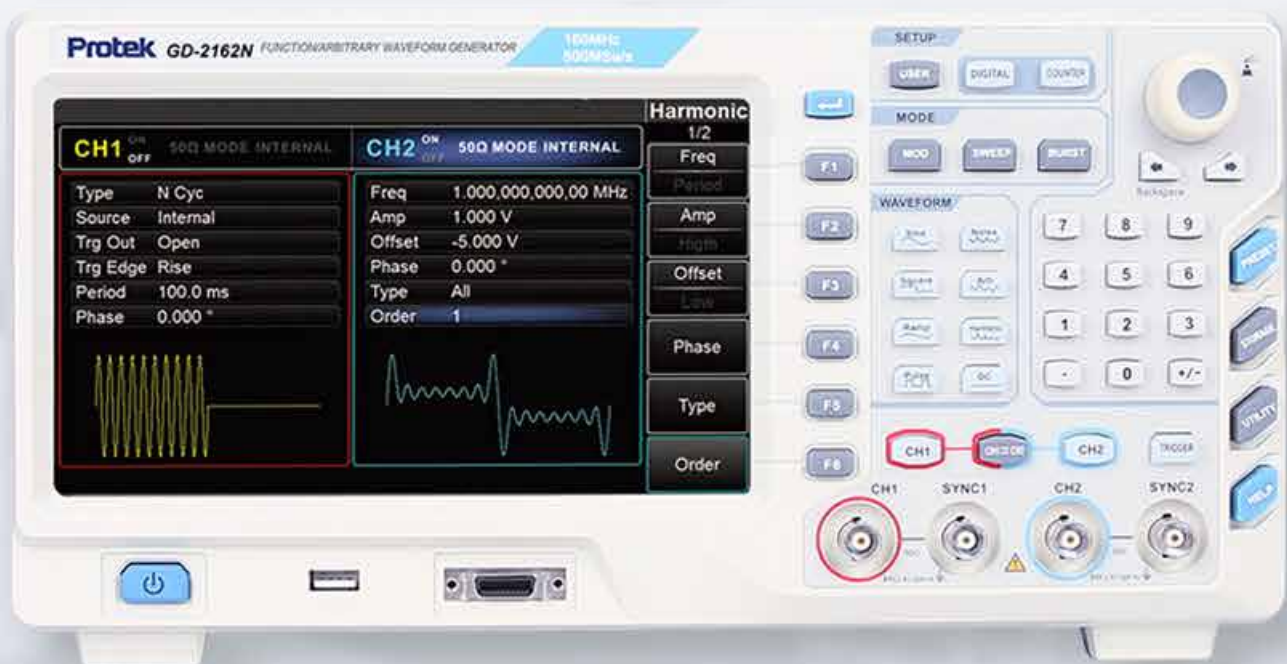
Size (W×H×D)	About 316×132×410 mm
Weight	About 7.8 kg
CRT Display	12 kV, 5 Inch Diagonal, 8x10 DIV (1 DIV=1 cm), P31 phosphor
Input Power	110 ~ 127 VAC or 220~240 VAC \pm 10% 50~60 Hz \pm 2Hz Approximately 35 W
Standard Accessories	Passive Probe kit, AC Power Cable, Manual
Environment	Temperature : 0 $^{\circ}$ C ~ +40 $^{\circ}$ C / Humidity : ~ RH 80 % Altitude : ~ 3000 m

GD-2000N Series

DDS Arbitrary/Waveform Function Generator

The new Protek GD-2000N series is a multifunctional signal generator that combines various functions such as function generator, arbitrary waveform generator, pulse generator, harmonic generator, analog/digital modulator, digital signal output, and frequency counter. A clean and accurate signal output is possible. In addition, with perfect dual output through the same performance and design, by implementing a fast sampling rate of 500 MSa/s and arbitrary waveforms of 32 Mpts, adopting an 8" inch large wide display, along with various interfaces, provides application developers with new measurement capabilities. environment.

- 2 Channel All Sync Terminal
- AM, FM, PM, ASK, FSK, PSK, PWM, QAM, BPSK, QPSK, OSK, SUM etc.
- HIGH RESOLUTION 8" TFT LCD WVGA Display
- Digital Signal (I2C, SPI, RS232, UART) Output function support (Separate Options)



	GD-2082N	GD-2122N	GD-2162N
Output Channels	2 Channel + ALL SYNC Terminal		
Frequency Output	~ 80 MHz	~ 120 MHz	~ 160 MHz
Real Time Sampling rate	500 MSa/s		
Memory Depth	32 Mpts		
Vertical resolution	16 bit		

Specifications

		GD-2082N	GD-2122N	GD-2162N
Impedance		50 Ω , typical / Isolation : 42 Vpk maximum to earth (Protection in case of short circuit and overload)		
Frequency Resolution		1 μ Hz (accuracy : \pm 50 ppm)		
Modulation Function		AM, FM, PM, ASK, FSK, PSK, PWM, QAM, BPSK, QPSK, OSK, SUM, SWEEP, Burst, GateTime		
Wave	Sine	1 μ Hz ~ 80 MHz	1 μ Hz ~ 120 MHz	1 μ Hz ~ 160 MHz
	Square	1 μ Hz ~ 30 MHz	1 μ Hz ~ 40 MHz	1 μ Hz ~ 50 MHz
	Pulse	1 μ Hz ~ 30 MHz	1 μ Hz ~ 40 MHz	1 μ Hz ~ 50MHz
	Ramp	1 μ Hz ~ 2 MHz	1 μ Hz ~ 3 MHz	1 μ Hz ~ 4 MHz
	Harmonic	1 μ Hz ~ 40 MHz	1 μ Hz ~ 50 MHz	1 μ Hz ~ 80 MHz
Noise (-3 Db)		80 MHz Bandwidth	120 MHz Bandwidth	160 MHz Bandwidth
Arbitrary Wave		Memory : 32Mpts, Resolution : 16bit, Fall/Rise : 5ns, Jitter : 6ns+30ppm Volatile memory 7GB		
Duty Ratio		0.01 % ~ 99.99 %		
Amplitude Range (50 Ω)		\leq 20 MHz : 1 mVpp ~ 10 Vpp / \leq 80 MHz : 1 mVpp ~ 5 Vpp \leq 120 MHz : 1 mVpp ~ 2.5 Vpp / \leq 160 MHz : 1 mVpp ~ 1 Vpp (High-Z : \times 2 Increase)		
Amplitude Accuracy		\leq 10 MHz : \pm 0.1 dB / \leq 100 MHz : \pm 0.2 dB / \leq 120 MHz : \pm 0.4 dB / \leq 160 MHz : \pm 0.8 dB (1 kHz sine wave, 5 Vpp, ~ 1 Vpp accuracy)		
DC Offset		\pm 5 V(50 Ω) ; \pm 10 V (High-Z) / \pm (2 % of Offset setting+0.5 % of amplitude+2 mV)		
External Modulation Input		\pm 5 Vpk full-scale ; 5 k Ω input impedance, Frequency Range : 10 MHz \pm 500 Hz I/O level : 80 mVpp ~ 10 Vpp/0 dB, (typical), 2 k Ω /50 Ω , typical, AC coupled Lock time : <1 s, Exclude Trigger : TTL Compatible, Phase deviation : 0 $^\circ$ ~ 360 $^\circ$		
Trigger Input		Input Level : TTL Compatible, Slope : Rise or Fall, Pulse width : >50ns Input Impedance : >10 k Ω , DC-coupled, Linear Sweep : <100 ns, Burst Delay : <300 ns		
Trigger Output		TTL Compatible, 50 Ω , Pulse width : >60 ns, Max Frequency : 1 MHz		
Sync Output		TTL Compatible, 50 Ω		
Frequency Counter		range : 100 mHz ~ 800 MHz, TTL Compatible (200 mVpp ~ 9 Vpp), accuracy : 51 ppm Resolution : 7 bit, Trigger sensitive : 0 ~ 100 %, coupling mode : AC, DC		
Digital Interface		I2C, SPI, RS232, UART digital protocol signal output (Optional)		

General Characteristics

Size (W×H×D) and Weight	About 336×164×108 mm / About 3.5 kg
Display	8 Inch TFT LCD WVGA (800×480), RGB
Input Power	AC 100 V ~ 240 VACrms, 45 Hz ~ 440 Hz (2 A, T 250 V Fuse)
Standard Interface	USB-Host, USB-Device, LAN
Standard Accessories	Output Cable kit, USB Interface Cable, AC Power Cable, GUI CD (in manual)
Optional Accessories	Digital protocol signal output Module (Optional, Factory Only)
Environment	Temperature : 0 $^\circ$ C ~ +40 $^\circ$ C / Humidity : ~ RH 80 % / Altitude : ~ 3000 m

GD-1002N Series

DDS Arbitrary/Waveform Function Generator

The new Protek GD-1002N Series Arbitrary Waveform/Function Generator is a middle lineup model added by greatly improving the performance of the already proven GD-1000N Series. It generates high-precision, stable, low-distortion, and clean signals, and it is a product that can perform various tasks in various measurement environments through its powerful modulation function and waveform graphic design function.

- Fast sampling rate of 300MS/s and high memory of 2Mpts
- High-resolution 4.3" TFT LCD WVGA Display
- USB 2.0 Host & Device Interface Standard
- AM, DSB - AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3 FSK, 4 FSK, OSK, PWM
- Rich Modulation Function Supports



	GD-1012N	GD-1022N	GD-1042N	GD-1062N
Frequency Output	~ 15 MHz	~ 25 MHz	~ 40 MHz	~ 60 MHz
Sampling Rate	300 MSa/s			
Vertical resolution	16 bit			
Frequency Resolution	1 μ Hz (accuracy : ± 1 ppm)			

Specifications

		GD-1012N	GD-1022N	GD-1042N	GD-1062N
Output Channels		2 Channel			
Memory Depth		2 Mpts			
Impedance		50 Ω , typical			
Modulation function		AM, DSB-AM, FM, ASK, FSK, PSK, BPSK, QPSK, 3FSK, 4FSK, OSK, PWM			
wave	Sine	1 μ Hz ~ 15 MHz	1 μ Hz ~ 25 MHz	1 μ Hz ~ 40 MHz	1 μ Hz ~ 60 MHz
	Square	1 μ Hz ~ 10 MHz	1 μ Hz ~ 15 MHz	1 μ Hz ~ 15 MHz	1 μ Hz ~ 15 MHz
	Pulse	1 μ Hz ~ 10 MHz	1 μ Hz ~ 15 MHz	1 μ Hz ~ 15 MHz	1 μ Hz ~ 15 MHz
	Ramp	1 μ Hz ~ 2 MHz	1 μ Hz ~ 2 MHz	1 μ Hz ~ 2 MHz	1 μ Hz ~ 2 MHz
	Harmonic	1 μ Hz ~ 5 MHz	1 μ Hz ~ 10 MHz	1 μ Hz ~ 20 MHz	1 μ Hz ~ 30 MHz
Noise (-3 dB)		100 MHz Bandwidth			
Carrier		Sine, square, triangular, pulse, harmonic, arbitrary (except DC)			
Carrier Frequency		1 μ Hz ~ 15 MHz	1 Hz ~ 25 MHz	1 μ Hz ~ 40 MHz	1 μ Hz ~ 60 MHz
Arbitrary wave		Frequency : 15 MHz, Memory : 2 Mpts, Resolution : 16 bit Fall/Rise : 9 ns, Jitter : 10 ns+30 ppm			
Duty ratio		0.001 % ~ 99.999 % (Depends on the frequency range)			
Amplitude range		~ 10 MHz : 1 mVpp ~ 10 Vpp (50 Ω) / 2 mVpp ~ 20 Vpp (High-Z) ~ 55 MHz : 1 mVpp ~ 5 Vpp (50 Ω) / 2 mVpp ~ 10 Vpp (High-Z)			
Amplitude accuracy		\pm (1% of set value+1 mVpp) (1 kHz sine wave, 5 Vpp, ~ 1 Vpp ; accuracy (1 kHz sine)			
DC offset		\pm 5 V(50 Ω) ; \pm 10 V (High-Z) / \pm (2.5 % of Offset setting+ 0.5 % of amplitude +2 mV)			
modulation characteristics		Modulation Frequency : 2 mHz~1 MHz (Depth : 0 ~ 120 %), Impedance : 50 Ω , Phase deviation : 0° ~ 360° Sweep time : 1 ms~ 50 ks, Hold Return time : 1 ms~ 50 ks, Burst coupling : 1 ~ 20,000,000,000			
Trigger Input		TTL Compatible, Slope : Rise or Fall, Pulse width : >100 ns Input Impedance : >50 Ω , DC-coupled			
Trigger output		TTL Compatible, 50 Ω , Pulse width : >60 ns, Max frequency : 1 MHz			
SYNC output		TTL (50 Ω)			
Frequency counter		Range : 2 mHz ~ 80 MHz, Accuracy : 51 ppm, Resolution : 6 bit Coupling mode : DC, Level : 0 ~ 3.3 V			

General Characteristics

Size (W×H×D) and Weight	About 310×110×260 mm / About 3 kg
Display	4.3 Inch TFT LCD WVGA (480×272), RGB
Input Power	AC 100 V ~ 240 VACrms, 45 Hz ~ 440 Hz (0.5 A, T 250 V Fuse)
Standard Interface	USB-Host, USB-Device
Standard Accessories	Output Cable kit, USB Interface Cable, AC Power Cable, GUI CD (in manual)
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 80 % / Altitude : ~ 3000 m

9205A, 9205C Series

Function Generator

Function generator 9205A/C Series is a proven Analyst type that has been used for basic electrical, electronic, and communication training over the past 30 years, which is a practical product that can help you understand the underlying signals.

- Sine wave, Triangle wave, Pulse wave, Square wave output
- External modulation and VCF, TTL support
- Analog control type output
- User intuitive button arrangement



	9205A	9205C
Frequency Output	0.2 Hz ~ 2 MHz	
Frequency Resolution	0.1 Hz / 1 Hz	
Display	6 Digit Single Display	6 Digit + 3 Digit Dual Display
Sweep	X	0

Specifications

	9205A	9205C
Waveforms	Sine wave, Triangle wave, Pulse wave, Square wave	
Display	6 Digit Single Display	6 Digit + 3 Digit Dual Display
Display Accuracy	6 Digits $\pm 2\%$ ± 1 word	
Impedance	50 Ω	
Square fall time	100 ns	80 ns
I/O port	Output, TTL, CMOS port	
Modulation Function	Not Support	Exclude FM Modulation Exclude Frequency : 2 Hz ~ 10 MHz Impedance : 50 Ω
Sweep Function	Not Support	Linear / Log
Duty ratio	10 ~ 90 %	20 ~ 80 %
Amplitude	range	2 mVpp ~ 10 Vpp (50 Ω) / 2 mVpp ~ 20 Vpp (1 M Ω)
	error	$\pm 15\%$ ± 1 word
	Resolution	3 Digits, 1 m Vpp
DC offset	± 10 V (1 M Ω) / ± 5 V (50 Ω)	
TTL/CMOS Amplitude	"0" : ≤ 0.4 V "1" : ≥ 3.5 V	"0" : ≤ 0.6 V "1" : ≥ 2.8 V
TTL Output Impedance	600 Ω	
VCF Function	Supported	
Frequency counter	range : 2 Hz ~ 10 MHz (Amplitude $\pm 15\%$ ± 1 word)	

General Characteristics

	9205A	9205C
Size (W×H×D)	About 225×90×270 mm	About 225×105×285 mm
Weight	About 2.5 kg	About 3 kg
Display	LED Segments type	
Input Power	AC 100 V ~ 240 VACrms, 45 Hz ~ 440 Hz (0.5 A, T 250 V Fuse)	
Standard Accessories	Output Cable kit, AC Power Cable, Manual	
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 70 % / Altitude : ~ 3000 m	

U3003A

Digital Frequency Counter

The frequency counter U3003A enables intelligent measurement using microprocessor technology and provides mutual counter technology, high measurement precision, wide frequency measurement range (1 Hz to 3,000 MHz), and selectable high-sensitivity gate time. In addition, low pass filter and attenuator are applied to the front circuit, making it suitable for communication research and development.

- Wide Frequency Band of 3 GHz
- Application of MCU technology with high reliability
- Reliable frequency counting of 8 digit segments and high precision
- Adopt frequency counter component element LSI, CPLD
- Supports 2 Input Channel
- User Intuitive Button Arrangement



		U3003A
Max input Frequency		1 Hz ~ 3 GHz
Input Impedance	Channel A	1 M Ω // 40 pF
	Channel B	50 Ω

Specifications

		U3003A
Period Range		10 ns ~ 1 s
Count accuracy		$10^8 - 1$
Terminal type		BNC Female
Coupling		AC
Dynamic input power	Channel A	30 mVrms ~ 250 Vpp
	Channel B	30 mVrms ~ 1 Vrms
Frequency measurement range per channel	Channel A	1 Hz ~ 100 MHz
	Channel B	100 MHz ~ 3 GHz
Channel A Low Pass Filter		~ 3 dB bandwidth is about 100 kHz
Channel A attenuation		×1 or ×20
Measurement error rate		± time base error ± trigger error ± LSD LSD = 100 ns/(Strobe time)×measured frequency (or measured period)
Trigger error rate		≤0.3 % (When the measured signal noise is 40 dB)
Strobe time		10 ms, 100 ms, 1 s, 10 s
Count display		0 ~ 99,999,999
Crystal vibration frequency		10 MHz
Crystal Frequency Stability		$1 \times 10^{-5}/d$
Exclude Input frequency		10 MHz
Exclude Input frequency voltage		>1 Vpp

General Characteristics

Display	8 Digits high bright, 0.5 Inch numeral tube, 3 units LED indicator, a strobe LED indicator and a EXT FREQ mark LED indicator
Size (W×H×D)	About 280×90×240 mm
Weight	About 1.5 kg
Input Power	AC 110 V ~ 250 V (1±10 %), 50 Hz ~ 60 Hz (1±5 %), 20 VA
Standard Accessories	BNC Cable, AC Power Cable, Manual
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 70 % / Altitude : ~ 3000 m

9216A, 9216B Series

Bench type Digital LCR Meter

The Protek 9216 series, a bench-type digital LCR meter, is a multi-purpose instrument that can be used more precisely and reliably in various electronic parts development and production environments, with Protek Instrument's measurement know-how applied. The 9216B consists of two lineups, so you can choose a reasonable and economical choice depending on the purpose you want to use.

9216A

- Dual LED Segments Display
- RS232C Interface Standard

9216B

- High-definition 4.3" TFT LCD Display
- USB, RS232C, Handler Interface Standard



	9216A	9216B
Frequency	100 Hz, 120 Hz, 1 kHz, 10 kHz, 100 kHz	20 Hz ~ 200 kHz
Test Accuracy	Max 0.05 % ~ 0.1 %	
Test Functions	Auto, R+Q, L+Q, C+D, C+R	Z , Y , C, L, X, B, R, G, D, Q, θ , DCR

Specifications

	9216A	9216B
FREQ Accuracy	±100 ppm	±50 ppm
Equivalent circuit		Serial or Parallel
Signal impedance	Not support	30 Ω, 100Ω Selected (±1% @ 1 kHz)
Parameter	Value, Deviation, % Deviation or Bin Number, selected display	All parameter display
Averaging	2 ~ 10 Measurement	1 ~ 255 Measurement
Calibration Environment	Warm up time : ≥30 minutes / Environment temperature : 23±5°C Signal Level : 1 Vrms / Correction: after OPEN, SHORT Testing cable length : 0 m	
Measurement Range	R+Q R 0.0001 Ω ~ 2000 MΩ L+Q L 0.0001 μH ~ 99999 H Q 0.00001 ~ 50 C+D C 0.0001 pF ~ 99999 μF D 0.00001 ~ 10 C+R C 0.0001 pF ~ 99999 μF R 0.00001 ~ 99999 kΩ	I ZI, R, X 0.00001 Ω ~ 99.9999 MΩ I YI, G, B 0.00001 μs ~ 99.9999 s C 0.00001 pF ~ 9.99999 F L 0.00001 μH ~ 99.9999 KH D 0.00001 ~ 9.99999 Q 0.00001 ~ 99999.9 θ(DEG) -179.999° ~ 179.999° θ(RAD) -3.14159 ~ 3.14159 Ω Δ % -999.999 % ~ 999.999 %
DCR Range	0.00001 Ω ~ 99999 kΩ	0.00001 Ω ~ 99.9999 MΩ
Operating voltage	0.1 V, 0.25 V, 1 Vrms	10m V~ 2 Vrms
Voltage Accuracy	±2 %	±1 %
DC Bias Voltage	Include: 0~2 VDC±2 % Exclude: 0~+40 VDC	Include: 0 V~ ±5 VDC ±1 %
Trigger mode	EXT Trigger & RS232C Trigger	INT, EXT, MANUAL, BUS Trigger Support
Range Setting	Auto or Manual	Auto, Manual, Hold
Scan Speed	Slow : 500 ms Medium : 100 ms Fast : 50 ms	Fast : 75 meas/sec (13 ms) Medium : 11 meas/sec (90 ms) Slow: 2.7meas/sec (370 ms)
Math	Not support	Direct reading, Δ ABS, Δ %
Trigger Delay	Not support	0 ~ 60,000 s 1 ms steps
Data Storage	Setup 9 Data	LCRZ Value, Setup Include 100 data 201 hout test & Exclude USB 16 GB
Comparator Function	External control only via RS-232C	Internal self-control possible 10 bins, BIN1-BING9, NG, AUX Bin count function, Pass/Fail
List Sweep	지원 안 함	- 10 point Sweep list - FREQ, ACV/ACA, INT/EXT BIAS V/A SWEEP. (Each sweep point is individually aligned)
Calibration	Open, Short, Load	

General Characteristics

Display Type	Dual LED Segments	4.3 Inch TFT LCD (480 x 272), RGB
Size (W×H×D) and Weight	About 363×109×386 mm / About 5.8 kg	About 235×105×360 mm / About 3.6 kg
Input Power	AC 100 V ~ 240 VACrms, 45 Hz ~ 440 Hz (1 A, T 250 V Fuse)	
Standard Interface	RS232C	RS232C, USB, HANDLER
Standard Accessories	Test Fixture, AC Power Cable, Manual	
Optional	Kelvin Clip, SMD Tweezer, Short Bar, GPIB, RS485 interface card	
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 80 % / Altitude : ~ 3000 m	

4000

Bench type Digital Multimeter

“Protek 4000” series 4½ digital multimeter is a product with a simple design and significantly improved specifications compared to existing products. In addition, by adopting a highbrightness VFD dual measurement display with excellent measurement efficiency such as AC/DC voltage, current, or frequency, measurement parameters are clearly displayed for easy viewing by users, and the internal SMD has been greatly improved to support RS-232C interface, etc.

It is an economical, high-efficiency, and high-performance product that satisfies various control environments through SCPI commands.

- Up to 30 fast measurements per second
- Quick measurement alignment for coverage-free calibration and restrictive features
- Up to 20A wideband current measurement support
- Built-in 12 measurement functions and calculation functions
- Supports %, dB, dBm, REL measurement function
- Supports remote control and SPCI commands through RS232C interface



Specifications

4000			
	Range (Max)	Resolution	Accuracy
DC V	500 mV (510.00)	10 μ V	0.02+0.016 (10 M Ω)
	5 V (5.1000)	100 μ V	0.02+0.008 (11.1 M Ω)
	50 V (51.000)	1 mV	0.02+0.008 (11.1 M Ω)
	500 V (510.00)	10 mV	0.02+0.008 (10 M Ω)
	1000 V (1000.0)	100 mV	0.02+0.008 (10 M Ω)
AC V (1.0+0.08~) (True RMS)	500 mV (510.00)	10 μ V	1.0+0.08 (20 Hz~50 Hz)
	5 V (5.1000)	100 μ V	0.5+0.06 (50 Hz~20 kHz)
	50 V (51.000)	1 mV	1.5+0.1 (20 kHz~50 kHz)
	500 V (510.00)	10 mV	3.0+0.3 (50 kHz~100 kHz)
	750 V (750.0)	100 mV	(Input Impedance : 1 M Ω +2 %, <100 pF)
DCA	5 mA (5.1000)	0.1 μ A	0.05+0.01 (<0.6 V/100 Ω)
	50 mA (51.000)	1 μ A	0.05+0.008 (<0.06 V/1 Ω)
	500 mA (510.00)	10 μ A	0.05+0.008 (<0.6 V/1 Ω)
	5 A (5.1000)	100 μ A	0.25+0.01 (<0.1 V/10 m Ω)
	20 A (21.000)	1 mA	0.25+0.01 (<0.6 V/10 m Ω)
ACA (Max 20 sec) (True RMS)	5 mA (5.1000)	0.1 μ A	1.5+0.16~2.0 (20 Hz~50 Hz, <0.6 V/100 Ω)
	50 mA (51.000)	1 μ A	0.5+0.08~0.5+0.1 (50 Hz~2 kHz, <0.06 V/1 Ω)
	500 mA (510.00)	10 μ A	2.0+0.12~2.0+0.12 (2 kHz~20 kHz <0.6 V/1 Ω)
	5 A (5.1000)	100 μ A	
	20 A (21.000)	1 mA	
Resistance Ω	500.00 Ω (510.00)	10 m Ω	0.10+0.01 (0.5 mA)
	5.0000 k Ω (5.1000)	100 m Ω	0.10+0.008 (0.45 mA)
	50.000 k Ω (51.000)	1 Ω	0.10+0.008 (45 μ A)
	500.00 k Ω (510.00)	10 Ω	0.10+0.008 (4.5 μ A)
	5.0000 M Ω (5.1000)	100 Ω	0.15+0.008 (450 μ A)
	50.000 M Ω (51.000)	1 k Ω	0.3+0.01 (45 μ A)
Continuity	500 Ω ~50 M Ω (<10 Ω ~<1 M Ω)	100 m Ω	0.1+0.04 (DC <5.5 V, 0.5 mA)
Diode	2 V (2.3000)	100 μ V	0.1+0.04 (0.5 mA)
Frequency / Period (AC V)	5 Hz~10 Hz (1~10 μ s)	100 μ Hz (0.1 ns)	0.05 %+0.02(0.01+0.008) 200 mVrms
	10 Hz~ 100 Hz (10 μ s~10 ms)	1 mHz (1 ns)	0.01 %+0.02(0.01+0.008) 200 mVrms
	100 Hz~100 kHz (10 m~100 ms)	10 mHz (1 μ s)	0.01 %+0.008(0.01+0.02) 200 mVrms
	100 kHz~1 MHz (100 ms~200 ms)	10 Hz (10 μ s)	0.01 %+0.008(0.05+0.02) 200 mVrms
Scan speed	HIGH, MED, SLOW	Error within >5% range for each (Max crest factor 3.0at (full scale)	
Triggering	Reading hold sensitivity: 0.01 %, 0.1 %, 1 % or 10 % of reading		
Math	Rel, Max/Min, dBm, dB, Compare Limit Test and %, HOLD, AC+DC		
dBm Ref Ω	1 Ω ~9999 Ω	(1 Ω step size), default is 75 Ω	
Overload protection	Max Input : 1 A / 250 V fuse		

General Characteristics

Standard Interface	RS232C (SCPI command support)
Display	51,000 count VFD dual indication display
Size (W×H×D) and Weight	About 225×100×355 mm / About 2.5 kg
Input Power	AC 110 V ~ 250 V(1 \pm 10 %), 50 Hz ~ 60 Hz (1 \pm 5 %), 10 VA
Standard Accessories	Testlead kit, AC Power Cable, Manual
Optional	6 in 1 Testlead kit set, USB and GPIB interface (Factory Optiona
Environment	Temperature : 0 $^{\circ}$ C ~ +40 $^{\circ}$ C / Humidity : ~ RH 80 % / Altitude : ~ 3000 m

Specifications

	PL-3000S			PL-3000T	
	PL-3003S	PL-3005S	PL-5003S	PL-3003T	PL-3005T
Power	90 W	150 W		90 W	150 W
Output Voltage	0 ~ 30 V		0 ~ 50 V	0 ~ 30 V	
Output Current	0 ~ 3 A	0 ~ 5 A	0 ~ 3 A	0 ~ 3 A	0 ~ 5 A
Display Resolution	Voltage 100mV, Current 10mA (3-digit display, Accuracy $\pm 0.05\%$)				
Output type	Variable 1CH (+EXT output 2CH)			Variable 2CH + Fixed 1CH (+EXT output 4CH)	
Fixed Output	Not support			5 A, 3 A Fixed output terminal	
Current Stepwise	30 mA \pm 3 mA	30 mA \pm 5 mA	30 mA \pm 3 mA	30 mA \pm 3 mA	30 mA \pm 5 mA
Line stability	CV $\leq 0.02\%$ + 2 mV / CC $\leq 0.05\%$ + 5 mA				
Load stability	CV $\leq 0.02\%$ + 2 mV / CC $\leq 0.05\%$ + 5 mA				
Ripple & Noise	CV ≤ 0.5 mV / CC ≤ 2 mA				

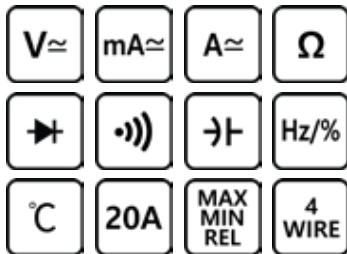
General Characteristics

	PL-3000S		PL-3000T	
	Function	CC & CV mode, Tracking mode		CC & CV mode, Tracking mode, Parallel Mode
Display	Single Back light LCD (3Digit)		Dual Back light LCD (3Digit)	
Size (W×H×D)	About 130×190×270 mm		About 270×180×310 mm	
Weight	4.8 kg	5.6 kg	11.5 kg	13.5 kg
Input Power	AC 110~ 250 V (1 \pm 10 %), 50 Hz~60 Hz(1 \pm 5 %), 20 VA, within protective fuse (250 V, 1 A)			
Standard Accessories	Output lead kit, AC Power Cable, Manual			
Optional	Output lead wire for fixed output terminal			
Environment	Temperature : 0 °C ~ +40 °C / Humidity : ~ RH 80 % / Altitude : 3000 m			

Portable Measuring Instrument



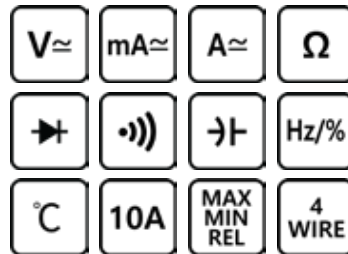
D707T (6,000 Count)
Digital Multimeter



DCV: 1000V / ACV:750V



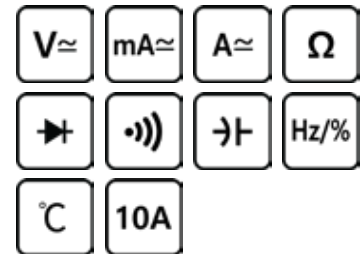
D708T (8,000 Count)
Digital Multimeter



DCV: 1000V / ACV:750V



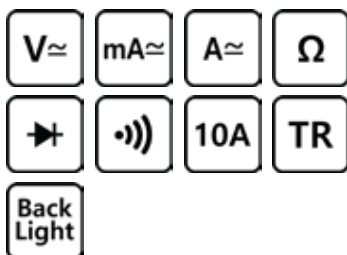
D706T (6,000 Count)
Digital Multimeter



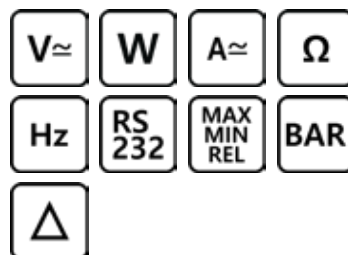
DCV: 1000V / ACV:750V



HC-260TR
AC Socket Tester



307 (4,000 Count)
Clamp Meter



DCV: 600V, AC/DCA: 1000V
(Power analyzer mode)



JT-11 (2,000 Count)
Digital Pocket Tester

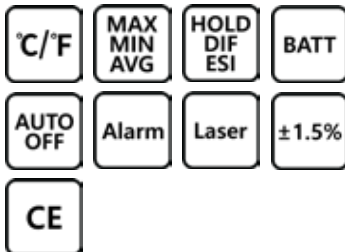


AD/DC 500V MAX



T101 (-50~°C+550°C)

Infrared Thermometer



T1M (19,200 Pixel)

Thermal imaging Camera

- -20°C~+250°C
- 8~14μm, 60Hz
- 4.4 mrad spatial resolution
- Visible image support
- 3.2" TFT LCD
- USB-C Interface
- Rechargeable Battery (3 hours work)
- Data report (Excel)



S1 (KO, EU Plug)

AC Socket Tester

- AC 250V Test
- NCV, GND, Polarity, Livewire
- RCD Test (30mA)
- Battery & Beep Indicator
- LCD status indication



ADM288 (For car)

Auto Motive Tester

- Battery Test (0~30V)
- Start motor test
- Ramp test
- Relay, window motor test
- Short breaker
- Work light, Buzzer



TRB-01 (5 Dial type)

Decade Resistance Box

- 0 ~ 9999.9Ω Variable
- Protect: ~12V, ~3A (10sec)
- Accuracy ±3 %
- 5 Dial variable type
- Banana type Terminal
- Basic science education

Matters to be considered when purchasing measuring equipment

- ① For detailed specifications and standards, please contact the sales representative or Protek customer support center.
- ② The driving specifications of each product are based on our test environment and may vary depending on the user's environment
- ③ Product specifications and design may be changed without prior notice for reasons of quality and performance improvement.

Measuring Instrument Accessories

	Products	Model	Features
For Oscilloscope	Passive Probe	PT-P03	10X, 1X, 60 MHz
		PT-P04	10X, 1X, 100 MHz
		PT-P05	10X, 1X, 200 MHz
		PT-P06	10X, 1X, 300 MHz
	High Voltage Probe	PT-P20	100:1, 250 MHz, AC/DC 1.5 kV
		PT-P21	1000:1, 50 MHz, DC 15 kV, AC10 kV
	Differential Probe	PT-P30	100X, 10X, 100 MHz, AC/DC 800 Vpp
	High Differential Probe	PT-P31	1000X, 100X, 100 MHz, AC/DC 1.5 kV
		PT-P32	1000X, 100X, 50 MHz, AC/DC 3 kV
		PT-P33	1000X, 100X, 120 MHz, AC/DC 14 kV
	Current Probe	PT-P40	DC-100 kHz, 60 A, DC
		PT-P41	DC-100 kHz, 100 A, DC
		PT-P42	DC-100 kHz, 200 A, DC
		PT-P43	DC-25 MHz, 20 A, AC/DC
		PT-P44	DC-50 MHz, 40 A, AC/DC
Impedance Matching Pad	TLB-01	50 Ω to 1 M Ω , BNC	

	Products	Model	Features
For Generator	BNC to BNC Cable	TBN-01	50 Ω , 90 cm
	BNC to Alligator Cable	TBNA-02	50 Ω , 90 cm
	GD-2000N Digital Module	GD2000N-D01	Digital output interface

	Products	Model	Features
For RF Instrument	SMA Type Cable	TSMA-01	Male Type, 90 cm
	N Type Cable	TN-01	
	SMA to N Type Cable	TSMN-01	
	9 GHz 4 in 1 VNA Calkit	WW39MT	9 GHz, Open+Short+Load+Through, SMA Type
	6 GHz 3 in 1 VNA Calkit	WW36MT	6 GHz, Open+Short+Load N Type
	9 GHz Electronic VNA Calkit	GK39T	9 GHz, Open+Short+Load+Through, N Type
	A733 RF Test kit	RF-KIT1	315 MHz~ 2.4 GHz Antenna and Adapter set
		RF-KIT2	315 MHz~ 2.4 GHz Antenna and Adapter set
	A734, A434L Charger	C122R5	Battery charger cradle
	A333, A338 GPIB	A33X-GPIB	GPIB Interface Module

	Products	Model	Features
For Multimeter	10A TESTLEAD	TLM-01	10 A DMM TEST LEAD
	20A TESTLEAD	TLM-02	20 A DMM TEST LEAD
	6 in 1 Multi Tester kit	TLM-03	5 types including 10A test leads

	Products	Model	Features
For Power Supply	10A Banana Alligator cable	TBN-01	AC/DC 50V, 10A, length : 60cm
	50A Banana Alligator cable	PWC-02	AC/DC 600V, 50A, length : 90cm

	Products	Model	Features
For LCR Meter	Kelvin Clip	9216 Kelvin	Clip Testlead
	SMD Tweezer	9216 SMD	SMD Testlead
	GPIB Interface	9216B GPIB	9216B GPIB Interface Module

	Products	Model	Features
ETC. Acc	RS-232C Cable	RS232C	General USB Interface cable
	USB Cable	USB TMC	
	AC power cable	EU, KO	EU & KC & US Certificate
	GPIB Cable	GPIB TMC	General GPIB Interface cable
	K-type thermocouple cable	TP-60	-50°C~ +600°C, 60 cm K-type
	Cable for extended output	PWC-03	PL-3000series DC-PWS Cable
	RS232 to USB Cable	RS232-USB	RS232C to USB conversion adapter cable
	Print Port Cable	PRINT PORT	Print Port USB Cable
	Impedance Matching Pad	TLB-02	50 Ω to 1 MΩ, BNC to Alligator type
	50A Banana power testlead	PWC-01	AC/DC 600V, 50A, 90cm, Banana terminal
	50A Alligator power testlead	PWC-03	AC/DC 600V, 50A, 90cm, Alligator terminal
	Old HC-260TR Testlead	AMM Cord	OLD HC-260TR Testlead
	Wound variable bar resistance 30	200W 30Ω	tolerance ±5%(J), ceramic rod
	Wound variable bar resistance 100	200W 100Ω	
	Wound variable bar resistance500	200W 500Ω	
	Wound variable bar resistance1000	200W 1kΩ	
	Wound variable bar resistance	Custom order	100W~ 1kW 30Ω~ 1kΩ Custom order
	Pen type Electroscop	VC1010	AC12V~1000V Detector, LCD Display
	DSO Passive Probe	PP-80	10X, 1X, 60 MHz, General Oscilloscop
		PP-150	10X, 1X, 100 MHz, General Oscilloscop
		PP-200	10X, 1X, 200 MHz, General Oscilloscop
	DMM SMD Tweezer	SMD-TL01	AC/DC 250 V, 2 A, 65 cm
	Digital vernier caliper	TLV-01	Range : ~150mm, ±0.05%, MONO LCD
	Non-contact tachometer	AR928	Range : 2.5~99,999 RPM Laser type
	Contact tachometer	AR925	Range : 0.5~19,999 RPM Rotation type
	Anemometer	AS816	1sec 0~58knots; 0~108km/h, 0~67mph
	Light meter	AS803	1~200,000 Lux, (Lux, FC unit)
	Sound level meter	AS150	30~150dBA, Resolution 0.1dBA, Accuracy ±2%
	Vehicle brake fluid tester	BF100	DOT3, DOT4, DOT5.1 test support
	Wood Moisture Meter	AS971	Range : RH+2%~70%, Accuracy : ±0.5%
Combustible gas meter	HT601A	18 volatile gas bar graph measurements sensitivity <50ppm	

Certification



ISO9001, TL9000



CE Certification



KC Certification



Direct Production Certification



Certified Corporate R&D Center



Registered Trademark (KIPO)



KITA Membership Certification

Customer Support

Based on Protec Instruments' accumulated product technology know-how, it provides customer-friendly and reliable technical services.



Quick Customer Support (AS)



Technical Training Services



Global Standard Warranty

Protek Technical Support **+82-70-8866-8244**

Protek Instrument Official Website



<https://www.protekinst.com>

Protek

The product-specific features and data listed in this catalog are subject to change at any time in accordance with our policies without prior notice for product improvement and modification.

In addition, the technical terms listed in the catalog are trying to use standard terms, but there may be some differences or errors.

Protek

Korea's Leading Test & Measuring Brand

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