

Programmable DC Electronic Loads

Models	Power	Voltage	Current	Frequency	High frequency option	Slew Rate	High slope option	Voltage ReadBack	Current ReadBack	Readback resolution option	Interface	PC Software
DL3021	200W	150V	40A	15kHz	FREQ-DL3	2.5A/us	SLEWRATE-DL3	0.1mV	1mA	HIRES-DL3	USB Host, USB Device, RS232, LAN (Option, LAN-DL3)	Ultra Load
DL3031	350W		60A									
DL3021A	200W		40A	30kHz	Standard	3.0A/us	Standard		0.1mA	Standard		
DL3031A	350W		60A									

Digital Multimeters

Models	Resolution	Accuracy	Functions	Interface
DM3058E	5.5 digits	150ppm	DCV, DCI, ACV, ACI, 4WR, 2WR, Capacitance, Period, Frequency, Diode, CONT, Temperature, Sensor	USB host, USB Device, RS232
DM3058	5.5 digits			USB host, USB Device, RS232, GPIB, LAN
DM3068	6.5 digits	35ppm	DCV, DCI, ACV, ACI, 4 WR, 2 WR, Capacitance, Period, Frequency, Diode, CONT, Temperature, Sensor	

Programmable Linear DC Power Supplies

Models	Outputs	Output Range	Max. Power	Ripple & Noise	High resolution option	Monitoring & analysis	Timing Output	Trigger input and output channels	Interface
DP711	1	30V/5A	150W	<500 μVrms	HIRES-DP700	N/A	TIMER-DP700	N/A	RS232
DP712	1	50V/3A	150W						
DP811	1	20V/10A or 40V/5A	200W						
DP813	1	8V/20A or 20V/10A	200W						
DP821	2	8V/10A 60V/1A	140W	≤ 350 μVrms	HIRES-DP800	AFK-DP800	Standard	DIGITALIO-DP800	USB Host, USB Device (RS232, LAN, Option INTERFACE-DP800)
DP822	2	20V/5A 5V/16A	180W						
DP832	3	30V/3A 30V/3A,5V/3A	195W						
DP831	3	8V/5A 30V/2A,-30V/2A	160W						
DP811A	1	20V/10A or 40V/5A	200W		Standard	Standard	Standard	Standard	USB Host, USB Device, RS232, LAN
DP813A	1	8V/20A or 20V/10A	200W						
DP821A	2	8V/10A 60V/1A	140W						
DP822A	2	20V/5A 5V/16A	180W						
DP832A	3	30V/3A 30V/3A,5V/3A	195W						
DP831A	3	8V/5A 30V/2A,-30V/2A	160W						



DL3000 Series Programmable DC Electronic Load



DM3000 Series Digital Multimeter



DP800 Series Programmable Linear DC Power Supply



DP700 Series Programmable Linear DC Power Supply

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Electronic Measurement Instruments Selection Guide



TRANSFORMING THE TEST AND MEASUREMENT INDUSTRY

Our premium line of products includes Digital and Mixed Signal Oscilloscopes, Spectrum Analyzers and RF Signal Generators, Arbitrary waveform Generators, Sensitive Measurement Products, and Data Acquisition Systems. Our test solutions combine uncompromised product performance, quality, and advanced product features; all delivered at extremely attractive price points. Our solutions delight customers in many applications such as technical education, embedded design, WiFi integration, EMC, and manufacturing. Across all markets and products we deliver our customers with unprecedented value for their investment, reduce their overall cost of test, and help speed time to completion of their designs or projects.

UNCOMPROMISED QUALITY

There are no compromises when you choose a Rigol product. We provide all of the performance and features you need to quickly complete your tasks along with the quality and ease of use you demand. We are so confident you will be delighted with our products & the outstanding value they provide that they are all backed with a 3 year warranty and a 30 day no questions asked return policy.

WORLDWIDE PRESENCE

RIGOL's headquarter is in Suzhou China with a R&D center in Beijing. There are three international subsidiaries in Beaverton, OR, United States, Munich, Germany and Tokyo, Japan. Some 400 employees are serving our customers in more than 60 countries and regions worldwide.





DS70000 Series Digital Oscilloscopes



DS8000-R Series Digital Oscilloscopes



MSO8000 Series Digital Oscilloscopes



MSO/DS7000 Series Digital Oscilloscopes



MSO5000 Series Digital Oscilloscopes



MSO/DS2000A Series Digital Oscilloscopes



DS1000Z Series Digital Oscilloscopes

Mixed Signal/Digital Oscilloscopes

Oscilloscope Configuration Table

Series	Bandwidth Range(MHz)													Analog Channels	Digital Channels (MSO)	Max. Sample Rate	Max. Memory Depth	Built-in Waveform Gen.	Serial Bus Trigger/Decoding	Dsiplay
	50	70	100	150	200	300	350	500	600	1000	2000	3000	5000							
DS70000 ^①												DS70304	DS70504	4	N/A	20GSa/s	2Gpts (Option.)	N/A	RS232/UART,I2C,SPI, CAN, FlexRay, LIN,I2S,MIL-STD-1553, CAN-FD	15.6 inch 1920×1080
DS8000-R ^①							DS8034-R			DS8104-R	DS8204-R			4	N/A	10GSa/s	500Mpts	1CH,25MHz (Option.)	RS232/UART,I2C,SPI, CAN,LIN, FlexRay, I2S,MIL-STD 1553	N/A
MSO8000									MSO8064	MSO8104	MSO8204			4	16	10GSa/s	500Mpts	2CH,25MHz (Option.)	RS232/UART,I2C,SPI, CAN,LIN, FlexRay, I2S,MIL-STD 1553	10.1 inch 1024×600
MSO7000			MSO7014		MSO7024			MSO7034	MSO7054					4	16	10GSa/s	500Mpts (Option.)	2CH,25MHz (Option.)	RS232/UART,I2C,SPI, CAN,LIN, FlexRay, I2S,MIL-STD 1553	10.1 inch 1024×600
DS7000			DS7014		DS7024		DS7034	DS7054						4	N/A			N/A		
MSO5000			MSO5152-E ^②											2	16	4GSa/s	100Mpts	1CH,25MHz (Option.)	RS232/UART,I2C,SPI, CAN,LIN, FlexRay, I2S,MIL-STD 1553	9 inch 1024X600
		MSO5072 ^②	MSO5102 ^②											2		8GSa/s	200Mpts (Option.)	2CH,25MHz (Option.)		
		MSO5074	MSO5104		MSO5204		MSO5354									4				
MSO2000A ^③			MSO2102A		MSO2202A	MSO2302A								2	16	2GSa/s	56Mpts	N/A	RS232,I2C,SPI,CAN	8 inch 800×480
			MSO2102A-S		MSO2202A-S	MSO2302A-S												2CH,25MHz		
DS2000A ^③			DS2102A		DS2202A	DS2302A								2	N/A	2GSa/s	56Mpts	N/A	RS232,I2C,SPI,CAN	
DS1000Z ^②			DS1102Z-E ^③		DS1202Z-E ^③									2	N/A	1GSa/s	24Mpts	N/A	RS232/UART,I2C,SPI	7 inch 800×480
	DS1054Z												4							
		DS1074Z PLUS	DS1104 PLUS											16	2CH,25MHz					
		DS1074Z-S PLUS	DS1104Z-S PLUS																	

Note: ① Not support upgrade bandwidth
② Support upgrade to 4 channels
③ Dedicated for online sale

Scope Considerations

Bandwidth

Oscilloscope Bandwidth determines the frequency range that the oscilloscope can accurately measure. A general rule of thumb is you want scope bandwidth to be 5 times the highest frequency you wish to measure.

Sample Rate

Sample Rate describes the frequency at which the instrument samples the data. Higher the sample rate provides better resolution and finer detail of the signal being captured.

Record Length

Record Length describes the number of points that can be captured and stored. Generally speaking larger record length provides for longer captures. The time duration is directly related to the sample rate with higher sample rates consuming more memory resulting in shorter time capture.

Digital Channels

Mixed Signal Oscilloscopes (MSO's) allow users to not only look at the analog behavior of up to 4 channels but also trigger, capture, and analyze the behavior of up to 16 digital channels at the same time.

Serial Trigger & Decode

Serial Trigger allows the user to trigger the oscilloscope based on a specific pattern or word found in a serial data stream. Serial Decode allows the user to convert the waveform into a decoded readable format which allows for quick determination of problems on a serial bus.

Analysis Software

Analysis Software allows the user to link their oscilloscope to an external PC and utilize the acquired data to complete application specific measurement tasks such as Ultra Power Analyzer software for engineers designing SMPS who need to make power quality, harmonics, and inrush current measurements.



Function/Arbitrary Waveform Generators

Function/Arbitrary Waveform Generator Configuration Table

Series	Max. Frequency (in MHz)													Output Channels	Max Sample Rate	Arb Memory Depth	Technology	Modulations
	10	25	30	35	50	60	70	100	160	200	250	350	5000 ^①					
DG800	●	●		●										1/2	125MSa/s	2Mpts(8M Opt.)	SiFi II	AM,FM,PM,ASK,FSK,PSK,PWM
DG900					●		●	●						2	250MSa/s	16Mpts	SiFi II	AM,FM,PM,ASK,FSK,PSK,PWM
DG1000		●												2	100MSa/s	4kpts	DDS	AM,FM,PM,FSK
DG1000Z		●	●			●								2	200MSa/s	8Mpts/2Mpts(DG1022z) (16MOpt.)	SiFi	AM,FM,PM,ASK,FSK,PSK,PWM
DG2000					●		●	●						2	250MSa/s	16Mpts	SiFi II	AM,FM,PM,ASK,FSK,PSK,PWM
DG4000						●		●	●	●				2	500MSa/s	16kpts	DDS	AM,FM,PM,ASK,FSK,PSK,BPSK,QPSK,3FSK,4FSK,OSK,PWM
DG5000							●	●			●	●		1/2	1GSa/s	128Mpts	DDS	AM,FM,PM,ASK,FSK,PSK,PWM,IQ
DG70000													●	4	10GSa/s(real) 12GSa/s(plural)	1.5Gpts	SiFi III	IQ (Option.)

Note: ① The RF mode supports the highest output signal frequency of 5GHz, and the real-time mode supports the highest output frequency of 2GHz

Function/Arbitrary Waveform Generator Models & Options

	DG800 Series		DG900 Series		DG1000 Series		DG1000Z Series		DG2000 Series		DG4000 Series		DG5000 Series		DG70000 Series	
	DG800-DCH	Dual Channel	UltraStation Adv.	Advanced PC Software	PA1011	Power Amplifier	PA1011	Power Amplifier	UltraStation Adv.	Advanced PC Software	PA1011	Power Amplifier	PA1011	Power Amplifier	DG70000-3RL	1.5G sample points per channel upgrade option
Options	DG800-ARB8M	8M Arb Memory					Arb16-MDG1000Z	16M Arb Memory							DG70000-SEQ	Complex sequence function
	UltraStation Adv.	Advanced PC Software					UltraStation Adv.	Advanced PC Software							DG70000-DC	DC Amplifier
															DG70000-DIGUP	Digital up-conversion and IQ modulation

Spectrum Analyzers

Series	Frequency Range								RBW	RTBW	Software Options										Hardware Options			
	0.5	1	1.5	3	3.2	4.5	6.5	7.5			VSA	EMI	Advanced Meas.	ASK/FSK	SSC	EMI	VSWR	Tracking Generator	VNA	Preamplifier	OCXO	Standard	N/A	OCXO-C08
DSA700	•	•							100Hz~1MHz	N/A	N/A	N/A		N/A	SSC-DSA	EMI-DSA800	N/A	N/A	N/A	Standard	N/A			
DSA800E/-TG					•				10Hz~1MHz	N/A	N/A	S1220	AMK-DSA800	S1220	N/A	EMI-DSA800	VSWR-DSA800	-TG model	N/A	Standard	N/A			
DSA800/-TG			•		•			•							N/A						Standard	N/A		
RSA3000E/-TG			•	•					1Hz~3MHz	10MHz			RSA3000E-EMI	RSA3000E-AMK	RSA3000E-ASK/FSK	Standard	RSA3000E-EMC	Standard	-TG model	N/A	RSA3000E-PA	OCXO-C08	Standard	N/A
RSA3000/-TG				•		•			1Hz~3MHz (10MHz Opt.)	10MHz (25/40MHz Opt.)		N/A	RSA3000-EMI	RSA3000-AMK	N/A	Standard	RSA3000-EMC	Standard		N/A	RSA3000-PA			
RSA3000N			•	•		•									N/A	Standard		Standard	Standard	Standard	RSA3000-PA			
RSA5000/-TG					•		•		1Hz~10MHz	25MHz (40MHz Opt.)	RSA5000-VSA	RSA5000-EMI	RSA5000-AMK	RSA5000-VSA	Standard	Standard	Standard	Standard	-TG model	N/A	RSA5000-PA			
RSA5000N					•		•									Standard	Standard	Standard	Standard	Standard				

RF Signal Generators

Series	Frequency(GHz)						Amplitude Level	Reference Clock Stability	SSB Phase Noise	Modulation	OCXO	Pulse Train	I/Q Modulation, Baseband Output	DSG IQ Function PC Software
	1.5	2.1	3	3.6	6.5	13.6								
DSG800	●		●				-110dBm ~+13dBm	<2ppm <5ppb(Option B08)	-112dBc/Hz@1GHz, 20 KHz offset (typical)	AM/FM/PM/ Pules Train (Option.)	OCXO-B08	DSG800-PUG	N/A	N/A
DSG800A		●		●			-110dBm ~+13dBm						Standard for A type model	Ultra IQ Station
DSG3000B					●	●	-110dBm ~+20dBm	<1ppm <5ppb(Option B08)	-116dBc/Hz@1GHz, 20 KHz. offset(typical)	AM/FM/QM/Pulse		DSG3000B-PUG	N/A	N/A
DSG300B-IQ					●	●	-110dBm~+20dBm (13.6G Model is-110dBm~+13dBm)						Standard	Ultra IQ Station



DG70000 Series Arbitrary Waveform Generator



DG2000 Series Function/Arbitrary Waveform Generator



DG4000 Series Function/Arbitrary Waveform Generator



RSA5000 Series Spectrum Analyzer



RSA3000 Series Spectrum Analyzer



DSG3000B Series RF Source