

WK5400L Series LCR Meter for High Current Test System



The latest release

Model selection:

WK5400L5	10Hz~5MHz
WK5400L8	10Hz~8MHz
WK5400L10	10Hz~10MHz

Product features:

- ❖ Designed for high current inductance testing systems.
- ❖ External DC bias current source up to 250A/1MHz or 300A/500kHz using 10 or 12 x 3265B DC Bias Units.
- ❖ Three modes of operation with independent calibrations to cover all test requirements.
- ❖ High Test Speed.
- ❖ Basic Accuracy: 0.05%
- ❖ Measurement Frequency: 10Hz~10MHz
- ❖ AC signal source: 5Vrms/200mArms. Step size < 1% of setting.
- ❖ Rdc measurements with 10uΩ resolution and drive levels up to 5V/200mA.
- ❖ Allows up to 4 different parameters to be measured, each at up to 3 different spot frequencies at the same time, totalling 12 measurement results.
- ❖ Automatic level control (ALC) maintains constant voltage or constant current at Device Under Test.
- ❖ Two settings for source resistance: 25Ω and 50Ω.
- ❖ Fixture Calibration only needed once. Does not need to be repeated if the fixture is not changed.
- ❖ Data logger firmware option /D allows measurement and results storage in real time.
- ❖ Accurate and stable testing down to pico Henry inductance level.
- ❖ Accurate testing below 100mV AC Drive Level.
- ❖ Design allows accurate testing at any testing frequency point.
- ❖ Best in Class correlation between Boost Mode and Normal Mode measurements.
- ❖ Multi-point Multi Bias with ΔL, high-speed testing
- ❖ Diagnostic Status Page indicates status of each 3265 DC Bias Unit connected in the system.
- ❖ Remote control via GPIB, LAN and USB interfaces.
- ❖ Energy-saving smart switching mode: When operating in Standalone Mode, the 3265B bias source units automatically shut down.
- ❖ Made in the UK and serviced globally.

Functional description:		
Meter Mode, MultiBias Mode and Calibration Mode as standard. Graph Mode is an option. UI operation interface is very simple.	Saturation I(Sat) testing can be done using curve sweeping or using MultiBias fast test mode.	Single trigger can produce both AC parameter and DC Resistance measurements displayed at the same time.
Bias Status displays the working indicators of each 3265B bias source.	Open/Short Circuit Trims, HF Compensation and Load Compensation in Boost/Normal mode, with comprehensive correction to ensure accuracy and stability.	Field upgradeable software. Technical support available which is easy to follow, fast and convenient. Made in the UK and fast local service.



WK5400 is the test system controller. The DC Bias Current source WK3265B machines are connected to the Bias Adapter of the 5400 directly with a dedicated wiring system. This makes it easier to set up and maintain the system.

5400 Product Specifications:

Function	Parameter	5400L5	5400L8	5400L10
Measurement Frequency	Minimum Frequency	10Hz		
	Maximum Frequency	5MHz	8MHz	10MHz
	Frequency Resolution	$\leq 1\text{mHz}$		
AC Drive	AC Voltage Range	10mV~5Vrms		
	AC Voltage Resolution	<1% of setting		
	AC Current Range	200uA~200mAmps		
	AC Current Resolution	<1% of setting		
	Automatic Level Control (ALC)	ON or OFF Maintains constant voltage or constant current at the Device Under Test		
	Source Resistance	Normal Mode : 50 Ω ; Boost Mode : 25 Ω		
Basic Accuracy		0.05%		
DC Resistance (Rdc)	DC Voltage Range	10mV~5V		
	DC Voltage Resolution	1mV		
	DC Resistance Resolution	10u Ω		
Built-in DC Bias	Maximum current	Reserved temporarily		
External DC bias	Maximum voltage	Reserved temporarily		
External DC Bias Current using 3265B or 3265BQ* DC Bias Units	Maximum Current and Frequency	300A at 500kHz 250A at 1MHz 50A at 3MHz*		
	DC Bias Current Resolution	25mA		



Test Mode	Ac Test Parameter	Z θ C D L Q Rac B G X Y
	DC Test Parameter	Rdc
	Trigger type	Internal, Manual, External, Remote control
	Equivalent Circuit	Parallel/Series
	Pass/Fail Test	Yes
	Type	Meter Mode, MultiBias Current Mode & Calibration Mode Analysis Mode (option), Bin Handler Mode (option)
External connection	GPIB	Yes
	LAN	Yes
	USB Host Port	x3 (Front Panel: x1, Rear Panel: x2) Suitable for USB Flash, Keyboard, Barcode scanner etc
	USBTMC Interface Port:	Yes
	Bin Handler PLC interface	Option
Test parameter display	Four parameters can be displayed for a single test setting. Three separate test condition settings possible. Up to 12 parameters displayed	
Calibration Mode	Open Circuit & Short Circuit Trim HF Load Compensation Normal/ Boost Mode	
Test Setup Memory	Internal storage	
Saving Test Results	Internal storage	
General	AC Power Input:	90VAC~264VAC Automatic switching 47Hz~63Hz
	Display screen:	7-inch WVGA 800 x 480 pixels
	Height:	3U
	Size (H x W x D):	150 x 440 x 520mm
Compliance	Weight:	11kg
	Temperature:	0°C~40°C (Operating) -20°C~+60°C (Storage) 18°C~28°C (Normal Accuracy)
	Relative Humidity:	<80%
	CE Marking:	Low Voltage Directive EMC Directive RoHS Directive
	UKAS Marking:	UK Regulations



Optional equipment list:

Order Code	Item
Firmware:	
1J5400OPG	Analysis Function (Graphs)
1J5400OPD	Data Logging. Measurement and results storing in real time
Internal Hardware:	
1J5400DCBIASKIT	One interface board and cables to control 6 x 3265B DC Bias Units
/5B1	Bin Handler: Non-isolated 5V signals
/5B2	Bin Handler: Isolated 24V signals
/5B3	Bin Handler: Universal optical coupling card
External Hardware:	
1J1041	300A High current two-wire DIP fixture
1J1031	High current two-wire SMD adaptor for 1J1041 fixture
1J1054	1054 DIP fixture replacement (for 1054 supplied as standard with 5400).