

# Model F1500-Dynamic

PROVEN AUTOMATIC ELECTRICAL TESTING SOLUTIONS



## GENERAL ELECTRICAL PARAMETERS

### Continuity

Current	0.1mA to 1000mA	Programmable in 0.01mA steps (to 1mA), 1mA steps (>1mA)
Voltage Limit	1Vdc to 30Vdc	Programmable in 1V steps

### High Voltage DC

Voltage	25Vdc to 1500Vdc	Programmable in 1V steps
Current	Up to 4mA	

### High Voltage AC

Voltage	25Vrms to 1000Vrms	Programmable in 1V steps
Current	Up to 5mA	
Frequency	50Hz fixed	

## TYPICAL TEST PERFORMANCE

Continuity	0.05s per established connection 0.05s shorts test per point
Insulation and Hi-Pot	Programmable Ramp, Pre Dwell and Measure Dwell. Minimum 0.01s per point.

## MEASUREMENT

Continuity 4-Wire Mode	0.002Ω to 100kΩ	Accuracy 0.5% ±0.002Ω @ 1000mA	Resolution 0.001Ω
DC Insulation	5kΩ to 1000MΩ	Accuracy 5% ±0.5μA	

## OPTIONAL MODULES

AC Hi-Pot	1μA to 5000μA	Accuracy 10% including parasitic current	
Capacitance & Inductance	0.001pF to 99,999μF	Basic Accuracy 0.02%	
Module "LCR"	0.01μH to 99,999H	Basic Accuracy 0.02%	
Temperature & Humidity Probe	1°C to 70°C 0% to 100% RH	Accuracy ±0.5°C Accuracy ±2% RH	Resolution 0.01°C Resolution 0.03%
External Excitation Module (functional test switching)	EEMC5 (Changeover) EEMD12 (Dual Bus) Mswitch	Current 5A Current 12A Multibus architecture - See Model M1500	Points per card 16 Points per card 64
	For Software controlled PSU options contact MK		

## SLIP RING TEST MODULE

Oscilloscope	Integrated 2 Channel 250MHz Oscilloscope delivers Dynamic Resistance trace per ring.		
Static Resistance	0.002Ω to 100kΩ	Accuracy 0.5% ±0.002Ω @ 1000mA	Resolution 0.001Ω
Dynamic Resistance	See Page 2 for Voltage v Current settings and Measurement range.		
Noise	Automatic calculation of dynamic noise. Resolution as Dynamic Resistance.		

## SYSTEM OPTIONS

Continuity Current up to 2A, 5A or 10A  
Continuity Range to 1MΩ  
HV Resistance Range up to 5GΩ, 10GΩ or 50GΩ  
HVAC Frequency 60Hz fixed or to 400Hz variable  
Fixed or Floating Earth Options.

## INTERFACE

32 off 2-Wire test points per board.  
Maximum 512 Test Points per sub-rack.  
Connection via high specification 37 way D-type sockets  
Safety Interlock connection on front panel.  
For custom front end connector options contact MK

## SUPPLY OPTIONS

115Vac 50/60Hz 1Ø  
230Vac 50/60Hz 1Ø  
415Vac 50/60Hz 3Ø

## LAYOUT OPTIONS

Standard 19" Rack Housing  
Static Desktop or Mobile Ruggedised Cabinet  
Single Station or Distributed Satellite Switching.

Under MK Test Systems Continuous Improvement Programme, Specifications are subject to change.

## Oscilloscope Dynamic Resistance Measurement Performance - Setting Dependent

Maximum Measurable Resistance Ohms						
		Measurement Current (A)				
		0.1	0.2	0.5	1	5
Scope Voltage Setting	0.02	0.02	0.01	0.004	0.002	0.0004
	0.05	0.05	0.025	0.01	0.005	0.001
	0.1	0.1	0.05	0.02	0.01	0.002
	0.2	0.2	0.1	0.04	0.02	0.004
	0.5	0.5	0.25	0.1	0.05	0.01
	1	1	0.5	0.2	0.1	0.02
	2	2	1	0.4	0.2	0.04
	5	5	2.5	1	0.5	0.1
10	10	5	2	1	0.2	

Measurable Resolution mOhms						
		Measurement Current (A)				
		0.1	0.2	0.5	1	5
Scope Voltage Setting	0.02	0.010	0.005	0.002	0.001	0.00020
	0.05	0.024	0.012	0.005	0.002	0.00049
	0.1	0.049	0.024	0.010	0.005	0.001
	0.2	0.098	0.049	0.020	0.010	0.002
	0.5	0.244	0.122	0.049	0.024	0.005
	1	0.488	0.244	0.098	0.049	0.010
	2	0.977	0.488	0.195	0.098	0.020
	5	2.442	1.221	0.488	0.244	0.049
10	4.884	2.442	0.977	0.488	0.098	

Scope Background Noise mOhms						
		Measurement Current (A)				
		0.1	0.2	0.5	1	5
Scope Voltage Setting	0.02	0.8	0.4	0.16	0.08	0.016
	0.05	0.9	0.45	0.18	0.09	0.018
	0.1	1.05	0.525	0.21	0.105	0.021
	0.2	1.4	0.7	0.28	0.14	0.028
	0.5	2.6	1.3	0.52	0.26	0.052
	1	4.2	2.1	0.84	0.42	0.084
	2	22	11	4.4	2.2	0.44
	5	36	18	7.2	3.6	0.72
10	67	33.5	13.4	6.7	1.34	

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