



POWER METER

7110



MICROTEST 7110 applied unique outlet panel design to save the rack cost.

Simplified outlet panel design could save extra rack which is used for connecting object under testing.

MICROTEST 7110 applied DSP method to increase testing speed.

Compared to traditional analog measurement process, digital signal process (DSP) method will increase speed and accuracy between high and low frequency ranges.

Key Features	Applied Fields
0.1% basic accuracy - Simplified outlet panel avoided connecting extra rack - High speed auto range ability - The orders of total harmonic distortion could reach 50 - High speed testing process with high accuracy - Options for standard RS232/GPIB remote control - Applied for standby power measurement such as Energy Star measurements and the resolution of power could reach 1m watt	Applied for power saving devices 、 switching power supply 、 adapter 、 uninterruptible power supply (UPS) 、 household appliances and so on. Measured items included: AC/DC voltage and current 、 real power(W) 、 reactive power(var) 、 apparent power(VA) 、 power factor(PF) 、 crest factor(CF) 、 frequency(Hz) 、 total harmonic distortion(THD) 、 inrush current.

Measurement Range		Accessories
Vrms	0.1V ~ 600V	   Power cord 、 Testing report 、 Manual 、 Outlet rack
Vdc	0.1V ~ 600V	
Irms	1mA ~ 20A	
Idc	1mA ~ 20A	
W	1mW ~ 12kW	
PF	0.000 ~ ±1.000	
Deg	-180 ~ 180	
THD	0.01% ~ 99.99%	
Hz	15Hz ~ 100kHz	

Specifications

Voltage (V)		Current (A)	
Ranges (Auto or Manual) (8 ranges)	0.3V、1V、3V、10V、30V、100V、300V、600V	Ranges (Auto or Manual) (7 ranges)	0.01A、0.1A、0.3A、1A、3A、10A、20A
Display Resolution	4-1/2 digits	Display Resolution	4-1/2 digits
Operating Principle	True RMS or mean value rectification	Operating Principle	True RMS
Frequency Range	DC and 15Hz to 100KHz	Frequency Range	DC and 15Hz to 100KHz
Accuracy (23°C±5°C)	±0.1% reading ±0.1% range ±10mV ±(0.01×f kHz)%	Accuracy (23°C±5°C)	±0.1% reading ±0.1% range ±1mA ±(0.01×f kHz)%
Maximum Input	600V RMS/1000Vpk	Maximum Input	20A RMS/50Apk
Input Impedance	1M ohm on all ranges	Input Impedance	2.5m ohm on all ranges
Real Power (W)		Total Harmonic Distortion (THD)	
Ranges (Auto or Manual) (56 ranges)	0.003W to 12kW	Display Resolution	4 digits (0.01% ~ 99.99%)
Display Resolution	4-1/2 digits	Frequency Range	45Hz ~ 440Hz
Operating Principle	Digital multiplier method	Source Input	Voltage or Current
Frequency Range	DC and 15Hz to 100KHz	Frequency (Hz)	
Accuracy (23°C±5°C)	±0.2% reading ±0.2% range ±(0.01×f kHz)% ±(V reading×0.2+A reading×10)mW	Display Resolution	4 digits
Peak Voltage (Vpkp、Vpkn、Vpp)		Operating Principle	Digital counting method
Ranges (Auto or Manual) (8 ranges)	0.3V(0.495V)、1V(1.65V)、3V(4.95V)、10V(16.5V)、30V(49.5V)、100V(165V)、300V(495V)、600V(1000V)	Accuracy (23°C±5°C)	±0.1% reading ±1Hz
Display Resolution	4-1/2 digits	Source Input	Voltage or Current
Frequency Range	15Hz to 100kHz	Peak Current (Ipkp、Ipkn、Ipp)	
Accuracy (23°C±5°C)	±1% reading ±1% range ±(0.01×f kHz)%	Ranges (Auto or Manual) (7 ranges)	0.01A(0.0165A)、0.1A(0.165A)、0.3A(0.495A)、1A(1.65A)、3A(4.95A)、10A(16.5A)、20A(50A)
Crest Factor (CF)		Display Resolution	4-1/2 digits
Display Range	1.000 to 9.999	Frequency Range	15Hz to 100kHz
Operating Principle	Peak/RMS	Accuracy (23°C±5°C)	±1% reading ±1% range ±(0.01×f kHz)%
Frequency Range	15Hz to 100kHz	Inrush current	
Accuracy (23°C±5°C)	±1% reading ±1% range ±(0.01×f kHz)%	Ranges (Auto or Manual) (7 ranges)	60mApk to 50Apk (20A)
Source Input	Voltage or Current	Accuracy (23°C±5°C)	±3% of selected range
Phase Angle (DEG)		Power Factor (PF)	
Display Range	-180 ~ 180	Display Range	0.000 to ±1.000
Operating Principle	Arc Cos(PF)/PI×180	Operating Principle	W/(V×A)
Reactive Power (var)		Apparent Power (VA)	
Ranges	V A Range	Ranges	V A Range
Operating Principle	$\sqrt{VA^2 - W^2}$	Operating Principle	V × A
Accuracy (23°C±5°C)	±0.2% reading ±0.2% range ±(0.01×f kHz)%	Accuracy (23°C±5°C)	±0.2% reading ±0.2% range ±(0.01×f kHz)%

General Specifications

Rated supply voltage	100 ~ 240Vac、50/60Hz
Display	7 segments LED
External Interfaces	RS-232(Standard)、GPIB(Optional)
Storage memory	6
Operating method	Auto/GPIB
Operating environment	Temperature: 10°C ~ 40°C Humidity: 20% ~ 80% RH
Size	W×H×D: 335×103×335 (mm)
Weight	3.8 (Kg) Except accessories



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