

GPM-8213 Specifications

The specifications apply when warmed up for at least 30 minutes and operates under the slow rate & 18~28 °C.



(with optional GPIB)

Input

Item	Spec.		
Input voltage	600 Vrms		
Input current	20 Arms		
Input impedance(50/60 Hz)	Voltage	2.4MΩ	
	Current	5mA - 200mA	500mΩ
		0.5A - 20A	5mΩ
Maximum display voltage	700 Vrms		
Maximum display current	25 Arms		
Maximum allowable isolation voltage	300 V		
Low frequency filter	Cut-off frequency	500 Hz	

Display

Synchronization frequency		45Hz~ 6kHz
Refresh rate		10 times/sec
Average		1, 2, 4, 8, 16, 32, 64
Displayed mode	Standard	8 items simultaneously.
	Simple	4 items simultaneously.
Displayed digits		5
Voltage converter	PT ratio	1 to 9999.999
Current converter	CT ratio	1 to 9999.999
Measurement items	Voltage	Vdc, Vrms, V+pk, V-pk,
	Current	Idc, Irms, I+pk, I-pk,
	Power	P, P+pk, P-pk, VA, VAR,
	Crest Factor	CFV, CFI,
	Power Factor	PF,
	Frequency	VHz, IHz,
	Angle	DEG,
	Total Harmonic Dist.	THDV, THDI,
	Integration	Time, WP, WP+ WP-, q, q+, q-

Voltage Measurement

Measurement range	CF=3 :	15V, 30V, 60V, 150V, 300V, 600V
	CF=6 :	7.5V, 15V, 30V, 75V, 150V, 300V
Crest factor	3, 6	
Accuracy	Effective range	1 % to 105 % of range
	DC	±(0.2 % reading + 0.2 % range)
	45 Hz ≤ f ≤ 66 Hz	±(0.1 % reading + 0.1 % range)
	66 Hz < f ≤ 1kHz	±(0.1 % reading + 0.2 % range)
	1 kHz < f ≤ 6kHz	± 3 % of range
	The filter is ON	Increase 0.3 % reading@ 45Hz to 66Hz

Temperature effect	5-18 °C / 28-40 °C	Increase $\pm 0.03\%$ reading / °C
Residual noise		0.5 % of range

Current Measurement

Measurement range	CF=3 :	5mA, 10mA, 20mA, 50mA, 100mA, 200mA, 500mA, 1A, 2A, 5A, 10A, 20A
	CF=6 :	2.5mA, 5mA, 10mA, 25mA, 50mA, 100mA, 250mA, 0.5A, 1A, 2.5A, 5A, 10A
Crest factor		3, 6
Accuracy	Effective range	1 % to 105 % of range
	DC	$\pm(0.2\% \text{ reading} + 0.2\% \text{ range})$
	45 Hz $\leq f \leq$ 66 Hz	$\pm(0.1\% \text{ reading} + 0.1\% \text{ range})$
	66 Hz $< f \leq$ 1kHz	$\pm(0.1\% \text{ reading} + 0.2\% \text{ range})$
	1 kHz $< f \leq$ 6kHz	$\pm 3\%$ of range
	The filter is ON	Increase 0.3 % reading@ 45Hz to 66Hz
Temperature effect	5-18 °C / 28-40 °C	Increase $\pm 0.03\%$ reading / °C
Residual noise		0.5 % of range

Power Measurement

Accuracy	Effective range	1 % to 110 % of range
	DC	$\pm(0.2\% \text{ reading} + 0.2\% \text{ range})$
	45 Hz $\leq f \leq$ 66 Hz	$\pm(0.1\% \text{ reading} + 0.1\% \text{ range})$
	66 Hz $< f \leq$ 1kHz	$\pm(0.1\% \text{ reading} + 0.3\% \text{ range})$
	1 kHz $< f \leq$ 6kHz	$\pm 3\%$ of range
	The filter is ON	Increase 0.3 % reading@ 45Hz to 66Hz
Temperature effect	5-18 °C / 28-40 °C	Increase $\pm 0.03\%$ reading / °C

Frequency Measurement

Measurement range	The filter is ON	30.000Hz to 499.99Hz
	The filter is OFF	30.000Hz to 9.9999kHz
Measurement items		Voltage, Current
Effective input range		10% to 105% of voltage input range
Accuracy		$\pm(0.06\% \text{ reading})$

Integrator Measurement

Integrator	Accuracy	$\pm(\text{Accuracy of voltage or current} + 0.1\% \text{ reading})$
Time	Range	0 hour 0 minute to 9999 hours 59 minutes
	Accuracy	$\pm 0.01\% \pm 1\text{second}$

General

Display	4" TFT LCD
Interfaces	Standard: RS-232C, USB device, LAN Optional: GPIB
Power Source	AC 100-240V, 50-60Hz
Power Consumption	25VA max.
Dimensions & Weight	270(W) x 110(H) x 350(D) mm, Approx. 2.9kg