

PCS-1000

Precision Current Shunt Meter

New Product Presentation

GW INSTEK

Made to Measure

GOOD WILL INSTRUMENT CO., LTD.





PCS-1000 Precision Current Shunt Meter

PCS-1000 Introduction

- PCS-1000 is a High-Precision D.C. and A.C. Current Shunt Meter which carries built-in current shunts and high-accuracy current measurement circuits. PCS-1000 not only measures current in five current levels —300A, 30A, 3A, 300mA and 30mA, but also measures voltage at 6 1/2-digit resolution simultaneously. PCS-1000, a verification-lab level current and voltage measurement equipment, is suitable for the R&D, quality verification and testing jobs of all power products such as power supply, communications system power, server power and electronic load.

Specification (1 of 2)

DC Voltage Characteristics				
	Range		23°C±5°C(1 Year)	Temperature Coefficient / °C
	200.0000mV		0.0050+0.0035	0.0005+0.0005
	2.000000V		0.0050+0.0010	0.0005+0.0001
	20.00000V		0.0050+0.0010	0.0005+0.0001
	200.0000V		0.0050+0.0010	0.0005+0.0001
	1000.000V		0.0050+0.0020	0.0005+0.0001
Accuracy	±(% of reading +% of Range); Voltage input Resistance:10MΩ for all DC Voltage ranges			
DC Current Characteristics				
	Range	Burden Voltage	23°C±5°C(1 Year)	Temperature Coefficient / °C
	30.00000mA	<0.4V	0.01+0.005	0.001+0.002
	300.0000mA	<0.5V	0.01+0.005	0.001+0.002
	3.000000A	<0.8V	0.01+0.005	0.001+0.002
	30.00000A	<0.8V	0.01+0.005	0.001+0.002
	300.0000A	<0.8V	0.02+0.005	0.001+0.002
Accuracy	±(% of reading +% of Range)			
True RMS AC Voltage Characteristics				
	Range	Frequency	23°C±5°C(1 Year)	Temperature Coefficient / °C
	200.0000mV	45Hz-2KHz 2KHz-10kHz 10kHz-20kHz	0.5+0.05 1.0+0.05 2.0+0.10	0.005+0.005
	2.000000V			0.005+0.005
	20.00000V			0.005+0.005
	200.0000V			0.005+0.005
	600.000V			0.005+0.005
Accuracy	±(% of reading +% of Range) °C			

Specification (2 of 2)



True RMS AC Current(AC+DC) Characteristics				
	Range	Frequency	23°C±5°C(1 Year)	Temperature Coefficient / °C
	30.00000mA	45Hz-2KHz 2KHz-10kHz	0.5+0.05 1.0+0.05	0.03+0.006
	300.0000mA			0.03+0.006
	3.000000A			0.03+0.006
	30.00000A	45Hz-400Hz	0.5+0.05	0.03+0.006
	300.0000A			0.03+0.006
Accuracy	±(% of reading +% of Range)			
Current Monitor Accuracy				
Range	Shunt Value	DC Accuracy	AC Accuracy ≤ 400Hz	Max Input DC/ AC RMS
	10Ω	0.01%	0.1%	30mA
	1Ω	0.01%	0.1%	300mA
	0.1Ω	0.01%	0.1%	3A
	0.01Ω	0.01%	0.1%	30A
	0.001Ω	0.02%	0.1%	300A
General				
Power Source	100V/120V/220V/240V±10%			
Power Line Frequency	50/60Hz			
Operating Environment	Full Accuracy for 0°C to 50°C, Full accuracy to 80% R.H. at 40°C			
Storage Environment	-40°C to 70°C			
Power Consumption	Max 35VA			
Dimensions	210 mm (W) x 80mm(H) x 390 mm(D)			
Weight	Approx 6kg			

Product FAB

Features (Product Characteristics)	Advantages (Advantages to customers provided by us)	Benefits (Benefits to customers provided by users)
6 1/2 digit measurement resolution	Compared with competitor's 4 1/2 digits, it is more competitive.	Reduce customer's cost to purchase an extra high resolution DMM.
Simultaneous voltage and current measurement	Non common grounding isolation design can measure different voltage and current levels.	Reduce customer's cost to purchase an extra 6 1/2 DMM. Simplifying connection to reduce the risk of the connection and disconnection of large current measurement.
Maximum 300A measurement level	Wide current measurement range	Satisfy large current product development, verification and measurement purposes.
USB、GPIB interface	Provide remote test and monitoring.	Facilitate users in retrieving programs and monitoring measurement data.

Comparison Chart

PCS-1000 VS Prodigit 7550A

Brand	GWINSTEK PCS-1000	Prodigit 7550A
Model Number		

DC Voltage Characteristics			
Range	23°C ±5°C (1 Year)	Temperature Coefficient / °C	
200.0000mV	0.0050+0.0035	0.0005+0.0005	-----
2.000000V	0.0050+0.0010	0.0005+0.0001	
20.00000V	0.0050+0.0010	0.0005+0.0001	
200.0000V	0.0050+0.0010	0.0005+0.0001	
1000.000V	0.0050+0.0020	0.0005+0.0001	
Accuracy	±(% of reading + % of Range); Voltage input Resistance: 10MΩ for all DC Voltage ranges		

DC Current Characteristics			
Range	Burden Voltage	23°C ±5°C (1 Year)	Temperature Coefficient / °C
30.00000mA	<0.4V	0.01+0.005	0.001+0.002
300.0000mA	<0.5V	0.01+0.005	0.001+0.002
3.000000A	<0.8V	0.01+0.005	0.001+0.002
30.00000A	<0.8V	0.01+0.005	0.001+0.002
300.0000A	<0.8V	0.02+0.005	0.001+0.002
Accuracy	±(% of reading + % of Range)		

True RMS AC Voltage Characteristics			
Range	Frequency	23°C ±5°C (1 Year)	Temperature Coefficient / °C
200.0000mV	45Hz-2KHz 2KHz-10kHz 10kHz-20kHz	0.5+0.05	0.005+0.005
2.000000V		0.005+0.005	
20.00000V		1.0+0.05	0.005+0.005
200.0000V		2.0+0.10	0.005+0.005
600.000V		0.005+0.005	
Accuracy	±(% of reading + % of Range) °C		

True RMS AC Current(AC+DC) Characteristics			
Range	Frequency	23°C ±5°C (1 Year)	Temperature Coefficient / °C
30.00000mA	45Hz-2KHz 2KHz-10kHz	0.5+0.05	0.03+0.006
300.0000mA		1.0+0.05	0.03+0.006
3.000000A		0.03+0.006	
30.00000A		0.03+0.006	
300.0000A		0.03+0.006	
Accuracy	±(% of reading + % of Range)		

Current Monitor Accuracy									
Range	Shunt Value	DC Accuracy	AC Accuracy ≤ 400Hz	Max Input DC/ AC RMS	Shunt Value	DC Accuracy	AC Accuracy ≤ 400Hz	Max Input DC/ AC RMS	
	10Ω	0.01%	0.1%	30mA	10Ω	0.01%	0.1%	40mA	
	1Ω	0.01%	0.1%	300mA	1Ω	0.01%	0.1%	400mA	
	0.1Ω	0.01%	0.1%	3A	0.1Ω	0.01%	0.1%	4A	
	0.01Ω	0.01%	0.1%	30A	0.01Ω	0.01%	0.1%	30A	
	0.001Ω	0.02%	0.1%	300A	0.001Ω	0.02%	0.1%	250A	

General	
Power Supply	100V/120V/220V/240V±10%
Power Line Frequency	50/60Hz
Operating Environment	Full Accuracy for 0°C to 50°C, Full accuracy to 80% R.H. at 40°C
Storage Environment	-40°C to 70°C
Power Consumption	Max 35VA
Dimensions	210 mm (W) x 80mm(H) x 390 mm(D)
Weight	Approx 6kg

	115/230V ±10%
	50/60Hz
	0°C to 50°C
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	Max 30VA
	400 mm (W) x 88mm(H) x 325 mm(D)
	Approx 7kg

Features

- Wide DC/AC voltage measurement range
DC : 200mV, 2V, 20V, 200V, 1000V
AC : 200mV, 2V, 20V, 200V, 600V → 20kHz (Maximum)
- Wide DC/AC current measurement range
DC : 30mA, 300mA, 3A, 30A, 300A
AC : 30mA, 300mA, 3A, 30A, 300A → 10kHz (Maximum)
- Measurement voltage or current at same time
- 6 ½ display resolution for all measurement range
- Auto Zero Circuit
- Standard interface : USB (VCP) / GPIB
- Half rack design
- Automatic fan speed control function

Market

- Switching D.C Server Power Supply Dedicated for the Cloud System
- Switching D.C Power Supply for Communications Equipments
- A.C Power Supply
- D.C Electronic Load
- Others Power Supply
- Calibration Lab