



6314A PRECISION CURRENT DIVIDER



Featuring

- ▶ 1000:1 Range
- ▶ No stabilization period
- ▶ No power coefficient
- ▶ No temperature coefficient
- ▶ DC and AC operation
- ▶ 3000 A Max Current DC

Overview

Measurements International has developed the 6314A Precision Current Divider with the aim to replace/improve the outdated and often inaccurate Current Shunts being used. The 6314A is a 1000:1 Current Divider that works on the principal of the world-renowned MI Resistance Bridge and Extenders. Traditional Current Shunts suffer from temperature stability and power coefficient issues that greatly affect the users ability to make accurate measurements. The current transformer used in the 6314A has no such issues. The 6314A uses the windings on the DC Current Comparator (DCC) to divide the input current by 1000. The 6314A minimum current is 150 A, and the maximum current is 3000 A. The 6314A can

accept both DC and AC current with the uncertainty of approximately 20 times less than a DC Current Shunt.

The 6314A can also be combined with the 6311A to reduce very large currents down to mA. For instance, a 6314A can be used to divide up to 3000 A down to 3 A, which can be further divided to 30 mA using a 6311A. In this way a 1 Ω standard resistor and an 8 ½ digit DMM can be used to measure 3000 A with uncertainties of a few ppm.

Since 1993, MI has earned a worldwide reputation for Dependability, Quality, and Performance.

Feature	Benefit
No temperature coefficient	Reduces uncertainty
No stabilization period	Measurements can be made immediately
No power coefficient	No error difference from 5% to 100% of the range
AC/DC	DC or AC Operation
CT/Current Divider	Current In is divided by 1000
< 5 ppm (DC) / < 20 ppm (AC)	~20 times less than a traditional Current Shunt
Low cost of ownership	Without the need for routine calibration, it saves on calibration and shipping costs



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Specifications: Rev 1

DC Mode	
Maximum Input Current (A)	3000
Maximum Output Current (A)	3
Accuracy ($\mu\text{A}/\text{A}$)	< 5
Stability 1 year ($\mu\text{A}/\text{A}$)	< 0.05
Temperature Coefficient ($\mu\Omega/^\circ\text{C}$)	0
Power Coefficient ($\mu\Omega/\text{W}$)	0

AC Mode	
Maximum Input Current (A)	1000
Maximum Output Current (A)	1
Maximum AC Frequency (Hz)	60
Accuracy ($\mu\text{A}/\text{A}$) *	< 50
Stability 1 year ($\mu\text{A}/\text{A}$)	< 0.05
Temperature Coefficient ($\mu\Omega/^\circ\text{C}$)	0
Power Coefficient ($\mu\Omega/\text{W}$)	0

* with 1 Ω burden

Dimensions (L × W × H):
(mm)

Weight:
36 kg

Shipping Weight:
46 kg

Mains Power:
100 to 120 V_{ac}, 220 to 240 V_{ac}
50/60 Hz

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