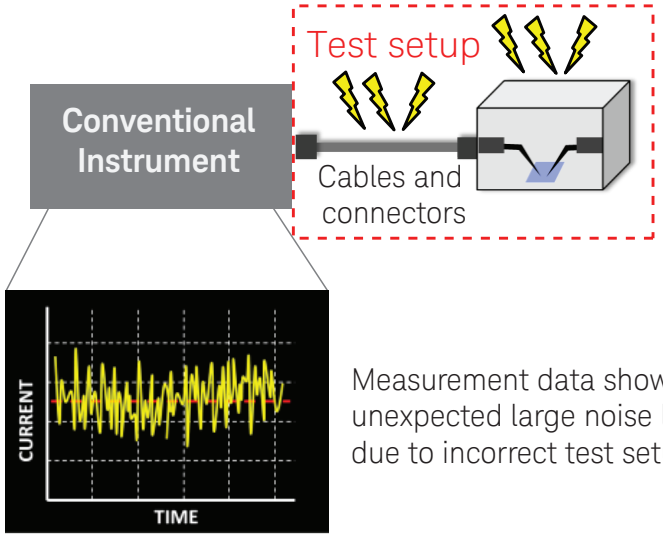
Application Brief

N1420A Setup Integrity Checker Function Maximizes Sensitive Measurement Confidence

Optional software for the Keysight B2980A Series Femto/Picoammeters & Electrometers

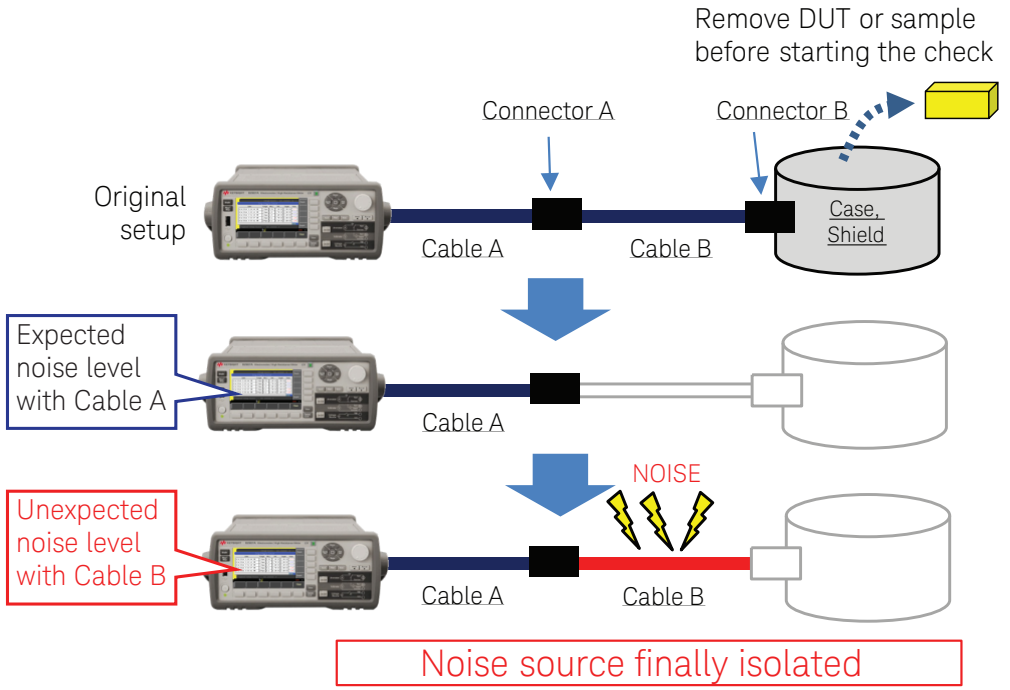
The Keysight N1420A Setup Integrity Checker is optional software that allows you to compare, evaluate and record noise emanating from external test setup elements. It enables you to isolate noise caused by exterior cables, connectors, shields, test chambers, etc. The Setup Integrity Checker function permits you to compare a baseline noise with no external elements connected against the system noise characteristics with different external setup elements connected. The results are displayed statistically on the front panel in a convenient tabular format.

Problem: Noise caused by external elements prevents accurate measurement, but conventional instruments do not provide any means to identify and quantify their effect.



Measurement data shows unexpected large noise level due to incorrect test setup.

Solution: The N1420A System Integrity Checker can identify and isolate noise created by external elements in your test setup.



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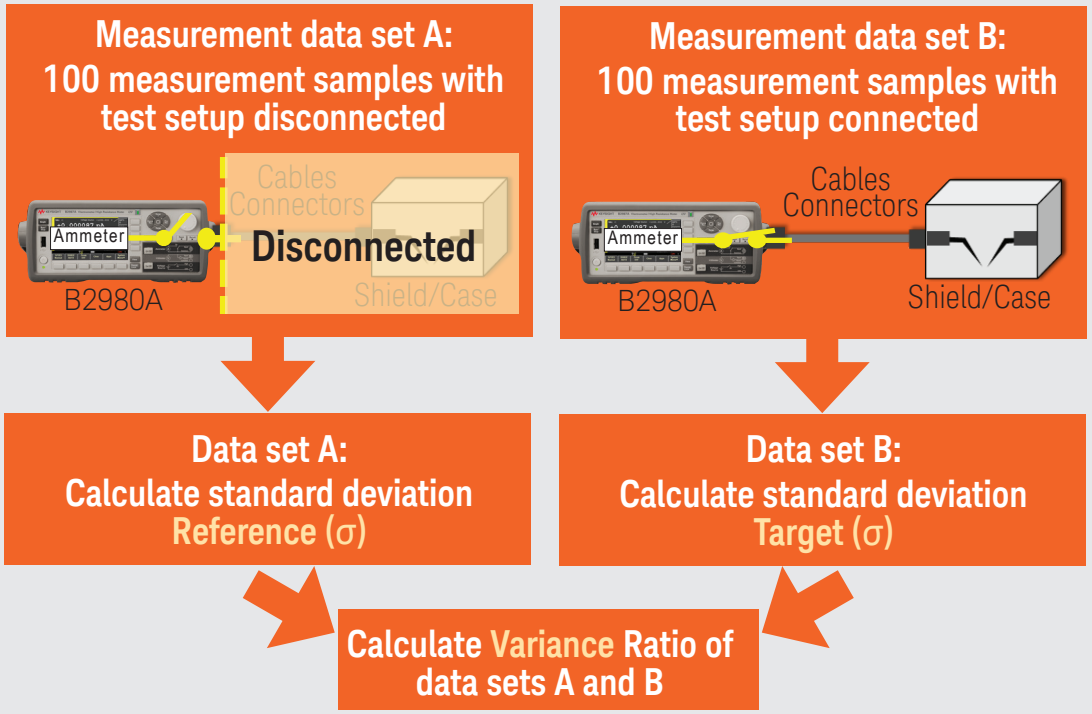
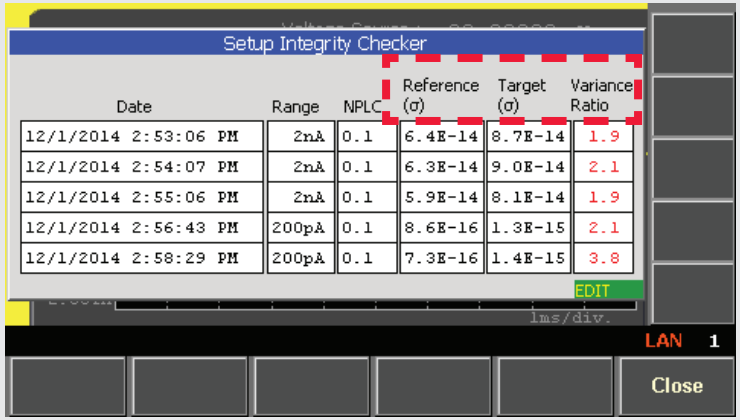
How does the N1420A System Integrity Checker work?



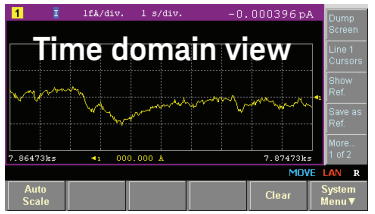
The N1420A Setup Integrity Checker displays the standard deviation of the instrument's noise level with the external test setup both disconnected and connected in addition to their variance ratio. By comparing the variance ratios obtained with different external elements connected against the ideal case of no external elements connected, you can identify the effect of external noise sources on your test setup.

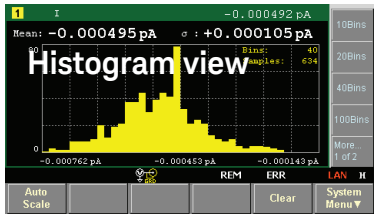


Keysight B2980A Series Femto/Picoammeters & Electrometers

The world's only graphical Picoammeter/Electrometer that can confidently measure down to 0.01 fA and up to 10 PΩ

- Best-in-class 2 pA range and 0.01 fA resolution provide unprecedented performance
- Integrated 1000 V source supports resistance measurements up to 10 PΩ
- Battery model eliminates AC power line noise
- Graphical time domain and histogram views facilitate quick debug and analysis





Refer to Keysight.com website for product details, technical overviews and other information.
Visit: B2980A product page: **www.keysight.com/find/b2980a**
Sensitive measurement knowledge portal: **www.keysight.com/find/sensitivemeasurement**

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