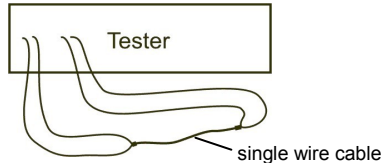


Using the Header Strip with 4-Wire Kelvin Test Points

What are 4-Wire Test Points

- Using 4-wire Kelvin test points eliminates the resistance of the fixturing in the measurement, thereby allowing a more accurate measurement. The CR Tester can make 4-wire measurements from .010 ohm to 75 ohms $\pm 3\% \pm 0.010$ ohm. The CH2Tester can make 4-wire measurements from .001 ohm to 100 ohms $\pm 2\% \pm 0.001$ ohm.
- Two test points from the tester are required for each 4-wire test point on the mating adapter.
For example, to test the single wire cable in the diagram at right, four test points are used.
- A 4-wire test point should be made on or as close to the DUT pin as possible. While it is not practically feasible, the best 4-wire test point has two independent connections to the DUT pin.



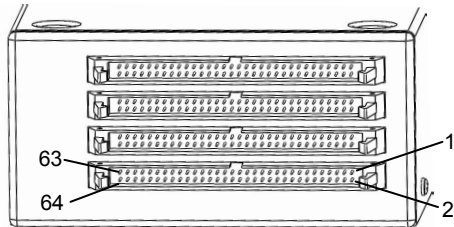
For more information type "4-Wire Kelvin Testing" in the Cirris web site search engine.

To Make 4-Wire Measurements with the CR Tester

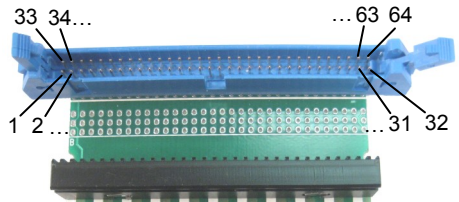
Adapters with 4-wire test points can be used on either the CR or CH2 testers. If you want to use the adapters to make 4-wire measurements with the CR tester, you need to wire from the CR tester to the Header Strip as shown below. You also need to change the easy-wire.ini as described below.

Wiring from the CR to the Header Strip to make 4-wire measurements

The pin count on the CR tester is as shown here.



Note: The tester points must wire to the Header Strip in the pattern shown at right. Usually discrete wiring with poke-and-crimp connectors (TE Connectivity P/N 1-102387-2) are used to wire from the tester to the Header Strip board. **DO NOT** attempt to use these poke-and-crimp connectors for adapter connectors. Cirris clips will not attach to these connectors.



Change in easy-wire.ini Setting for 4-wire measurements

To use this alternate wiring pattern you must use a text editor to edit the easy-wire.ini file. The path to this file varies depending on your Windows version.

For Windows Vista and later versions the path is:

C:\Users\Public\Documents\Cirris\Common\easywire.ini

For earlier versions of Windows the path is:

C:\Documents and Settings\All Users\Documents\Cirris\Common\easywire.ini

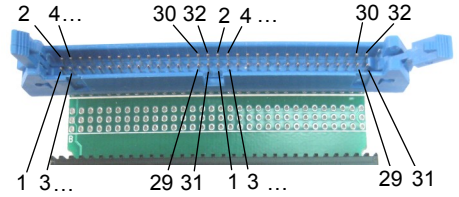
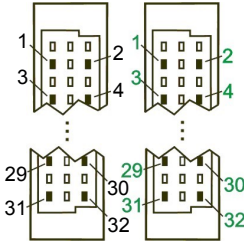
In the easywire.ini file, add a line that says: SmartLightsInterleaveCRTTestPoints=True

While this line is in the file, you must maintain the wiring pattern to the Header Strip as described above.

CH2 to Header Strip Wiring

Wiring from the CH2 is the same regardless if you are using 2-wire or 4-wire test points.

Two adjacent CH2 Eurodin connectors must be wired to one header strip connector as shown.

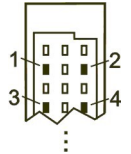


When making 4-wire test points from a CH2

Four-wire points must be made from CH2 test points that are side-adjacent to each other on a CH2 connector. For example at right, the CH2 connector pins 1 and 2 could make a 4-wire test point. Pins 3 and 4 could also be a 4-wire test point.

As a rule any odd number system test point and the following even numbered test point could be a 4-wire pair. For example 95 and 96 could make a 4-wire test point, but 96 and 97 could not.

CH2 Connector



4-Wire Pins on the Header Strip Mate

If you wire from a CR or CH2 to the Header Strip as described in this document, alternating pins on the Header Strip mate can be used for 4-wire test points such as those circled at right.

