

WP100: WIRING PLATFORM

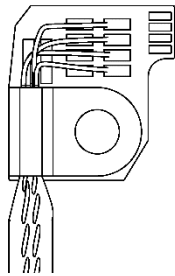
The WP100 series wiring platforms are designed to make it easier to perform electrical measurements in a Razorbill Instruments strain cell. They are compatible with the CS1x0 series and the FC100. Each platform provides four gold plated (ENIG) contact pads next to the sample, ideal for soldering and suitable for some wirebonding methods. These are connected to a convenient cryogenic mini-connector by 6 cm of twisted pair (other lengths available on request). Each platform also includes a copper heatsink which helps to ensure the wires are the same temperature as the cell and provides strain relief.

VARIANTS

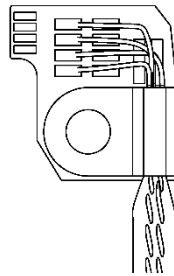
Razorbill instruments can provide any combination of ‘left’ or ‘right’ variant, wired for resistivity or susceptibility, and with or without thermometers or heaters.

‘Left’ and ‘Right’ Variants

The wiring platforms are designed to fit the cells using the M2 accessory holes on the top surface of the cell. There are two such holes, and the wiring platform is available in two mirror-image versions to suit the two holes. It is also possible to fit both platforms, one on each side, for a total of 8 wires available at the sample.



‘Left’ variant



‘Right’ variant

If only one wiring platform is required, the ‘left’ variant is preferred to maximise compatibility with future accessories which may be offered, and is generally a little easier to use for right-handed sample mounting.

Resistance and susceptibility versions

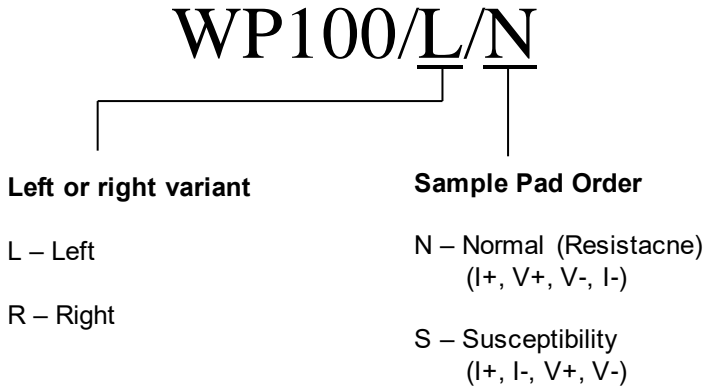
For four-terminal resistance measurements, it is generally preferable to have two twisted pairs, one for current and one for voltage. These are then connected to the sample in I+, V+, V-, I- order. For susceptibility measurements, it is preferred to have two twisted pairs each connected to a coil and with minimal inductive coupling outside the coils. This leads to a I+, I-, V+, V- ordering.

The only difference between these two versions is the ordering of the pads adjacent to the sample. It is possible for a user to convert one to the other by desoldering and moving the wires connected to the row of four pads close behind the sample pads.

Optional thermometer or heater

It is possible to custom order wiring platforms with a heater or thermometer embedded in the copper clip. Please contact Razorbill Instruments if you require this option.

PART NUMBERING



USE OF LEAD AND SAFE DISPOSAL

The WP100 wiring platforms are designed for use in a cryogenic environment, and as such use a tin-lead solder for most of the electrical connections (some models also use a bismuth-tin alloy). As lead is toxic, care should be taken to dispose of them properly at the end of their working life.

For products sold to and owned by institutions based within the EU, Razorbill Instruments will be happy to arrange for this product to be



picked up and disposed of properly at the end of this products life. This is providing that the product has not been disassembled or contaminated. This is part of Razorbills commitment to the Waste Electrical and Electronic Equipment (WEEE) Directive of the European Community and the corresponding national laws.

For products outside the EU, please dispose of the product using a specialised waste recovery, not in ordinary commercial or household waste.

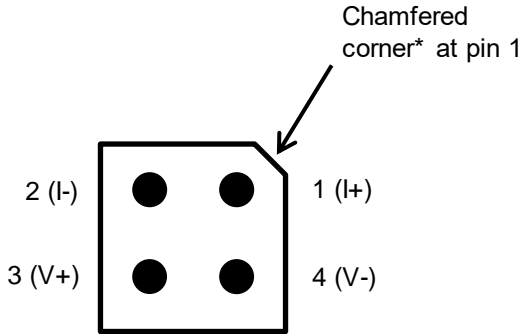
CONNECTORS

The wiring platform uses standard 1.27 mm pitch headers (Preci-Dip part number 852-80-004-10-001101). Mating connectors will be provided with every order. They will mate with any 2 x 2 header with 1.27 mm pitch designed for round pins (ideally, Preci-Dip part number 853-87-004-10-001101). Additional connectors are available from Razorbill Instruments or most electronics suppliers.

Pinout and pad allocation are shown overleaf.

PINOUT

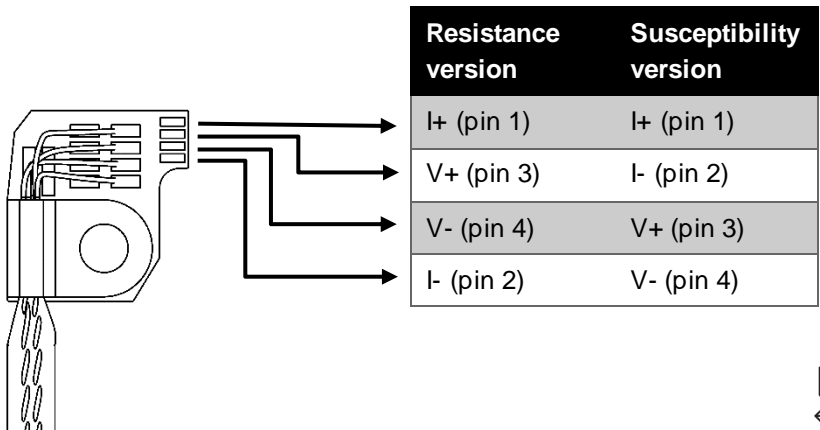
View onto the mating surface of the male connector:



* Early versions may use yellow paint to identify pin 1

PAD ALLOCATION

Pad allocation for sample connection pads. Left version shown, right version is mirror image (I+ is always furthest from screw hole)



NOTES

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