

WP101: WIRING PLATFORM

The WP101 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 FC1X0 series and UC200. 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.

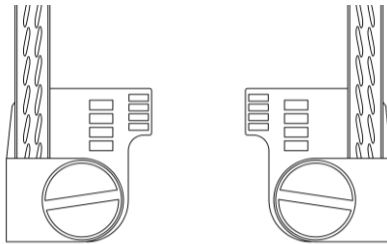
WP100

The WP101 replaces the WP100. The new version is smaller and has better heat sinking and strain relief for the wiring, but some rarely used options have been removed. Customers requiring an embedded thermometer, embedded heater, or 8 way connections can still order the WP100. The reduced height of the WP101 is particularly helpful when bringing the sample close to a microscope objective or cryostat window.

‘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.

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.



‘Left’ variant

‘Right’ variant

MOUNTING THE PLATFORM

The platform is mounted using the supplied M2 brass screw. The arrangement is the same for all cells. For short samples, where the sample plates are very close together, it may be necessary to slightly

rotate the platforms. The edge of the platform is tapered to allow for this without overhanging the edge of a CS1X0 series cell or colliding with the bump guard of the FC1X0 series cells

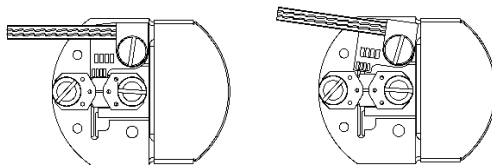
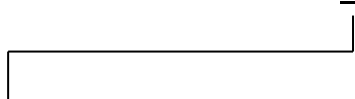


Figure 1: Illustration of mounting two platforms on a CS100, Longer samples (left) allow the pads to be very close to the sample. With shorter samples(right), the pads may have to be moved back to make way for the sample plates

PART NUMBERING

WP101/L



Left or right variant

L – Left

R – Right

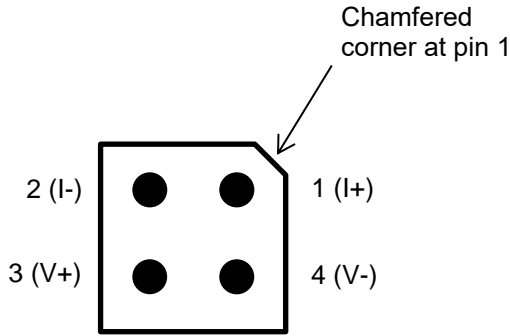
CONNECTORS

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.

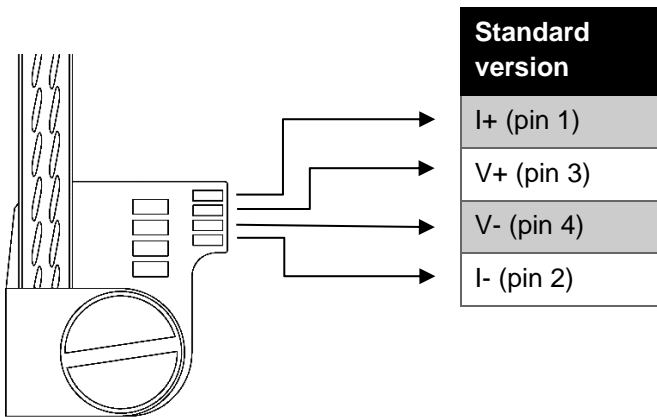
PINOUT

View onto the mating surface of the male connector:



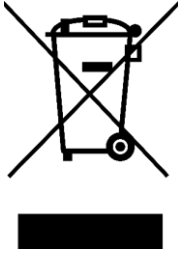
PAD ALLOCATION

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



USE OF LEAD AND SAFE DISPOSAL

The WP101 wiring platforms are designed for use in a cryogenic environment, and as such use a tin-lead solder for the electrical connections. 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 or UK, 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, corresponding national laws, and the UK's The Waste Electric and Electronic Equipment (WEEE) Regulations 2013.

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