DC Resistance
DynaCool (D400) / PPMS (P400) / VersaLab (V400)

DC transport for up to three channels on a standard puck can be measured using the DC Resistivity Option for the PPMS. Bridge channels can be individually configured for various levels of current excitation or power limitation, as well as enabling automated polarity-switch averaging to remove static DC offset voltages.

Key Features:
- Three multiplexed four-probe measurement channels accessible on a single puck
- Optional fourth channel for customized measurements
- Configurable bridge parameters to limit the voltage, current, or power at the sample for protecting sensitive devices, films, etc.
- Resistivity can be calculated using measured resistance from user-provided sample geometry parameters

DC Resistivity Specifications (for zero-field)

<table>
<thead>
<tr>
<th>Resistance [R]</th>
<th>DC</th>
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</thead>
<tbody>
<tr>
<td>Range:</td>
<td>10 μΩ to 5 MΩ</td>
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<tr>
<td>Sensitivity:</td>
<td>15 nV RMS typical*</td>
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</tbody>
</table>

Drive Parameters
- Current Range: 2 nA to 8 mA
- Compliance Voltage: 4 V, maximum
- Frequency: 5 Hz square wave

Operational Range
- 1.8 to 400 K; 0 to 16 T

*This corresponds to 2 μΩ at 8 mA excitation.
Specifications are subject to change without notice.

The superconducting transition in a NbTi alloy is shown for a number of fixed magnetic fields demonstrating the field-dependence of Tc.