

MIDS-20X mutual inductance detection system

- dedicated, ultra-low noise mutual inductance detection system for measuring the SRD1000 and CMN1000 sensors;
- design ensures minimal rf-heating of ultra-low temperature experiments;
- (remotely) adjustable preamplifiers are positioned close to cryostat, the control unit is near the user for optimal signal performance and ease of use;
- 'plug and play': sensors and electronics are matched, no adjustments are required to measure the full range 10 mK to 10 K;
- primary currents sensors: 50 or 125 μA @ 976.5 Hz;
- DC system output voltage: 0 - 2 V, proportional to the sensor signal level;
- two 24-bit ADC's with optical USB interface (galvanically isolated from the system) to sample the output signals;
- system comes with software tools (DLL interface and LabVIEW VI) for data acquisition and processing;
- overall temperature coefficient of the electronics is better than 50 ppm/ $^{\circ}\text{C}$;
- the MIDS-202 is a 2-channel detection system for simultaneous measurement of an SRD1000 and CMN1000 sensor;
- the MIDS-201 is a 1-channel version of the MIDS-202, an optional multiplexer unit (SSB-01) allows switching between 2 measurement channels.

MIDS-200 preamplifier (front and back side)



MIDS-202 2-channel control unit, front side (system includes 2 preamplifiers)



MIDS-202 2-channel control unit, back side



MIDS-201 1-channel control unit, front side (system includes 1 preamplifier)



MIDS-201 1-channel control unit, back side

