



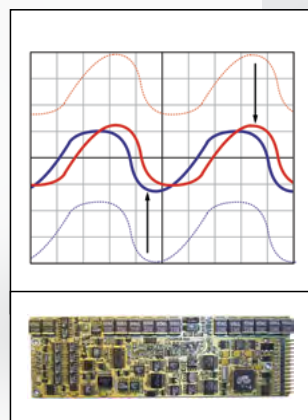
SEL-1 SQUID Electronics

MAGNICON

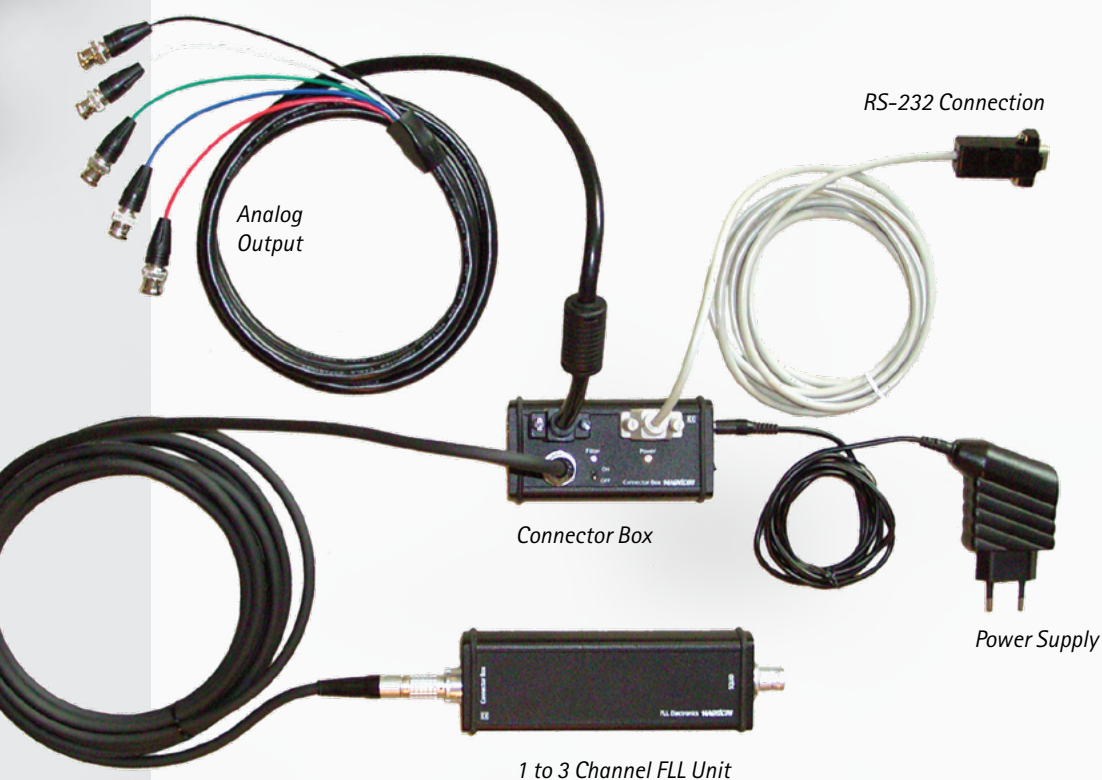
physical research and instrumentation

SEL-1 – dc SQUID electronics for high- T_c and low- T_c SQUIDs

- Fully computer-controlled
- 6 MHz maximum FLL bandwidth
- High-quality bias reversal option for high- T_c SQUID operation
- Optional integrated low-noise high-range current source for magnetic field compensation
- Auto-voltage bias to increase system stability in harsh magnetic environments
- Dynamic field compensation allows magnetically unshielded SQUID operation



A Ready-To-Use System:





Technical Data

General	<ul style="list-style-type: none"> ■ usable for high-T_c and low-T_c SQUIDS and magnetometers ■ high quality bias reversal option ■ 1 to 3 channels per electronics unit ■ scalable up to 254 channels ■ controlled via optically isolated RS-232/RS-485 interface ■ LabView® software SQUIDViewer™ included ■ built-in 10 bit A/D converter ■ automatic reset, overload detection ■ automatic bias voltage tuning (AVB) ■ dynamic field compensation (DFC) 	<ul style="list-style-type: none"> ■ optional anti-alias filter 10 kHz ±2.5% ■ power consumption per channel 1.3 W @ 18 V
Bias	<ul style="list-style-type: none"> ■ bias current range (low/high) ■ bias voltage range <i>(other bias current and bias voltage ranges on request)</i> 	<ul style="list-style-type: none"> ±63 µA / ±250 µA ± 300 µV
Preamp	<ul style="list-style-type: none"> ■ low noise bipolar input stage ■ white voltage noise ■ voltage noise @ 0.1 Hz ■ white current noise ■ current noise @ 0.1 Hz 	<ul style="list-style-type: none"> 0.4 nV/√Hz 0.6 nV/√Hz 4 pA/√Hz 50 pA/√Hz
FLL Mode	<ul style="list-style-type: none"> ■ maximum FLL bandwidth ■ fast external integrator reset ■ ac bias frequency ■ analog output signal range 	<ul style="list-style-type: none"> 6 MHz <1 µs < 250 kHz ±13 V
Amp Mode	<ul style="list-style-type: none"> ■ adjustable gain ■ bandwidth 	<ul style="list-style-type: none"> 500 to 4000 7 MHz
Heater	<ul style="list-style-type: none"> ■ voltage ■ maximum current 	<ul style="list-style-type: none"> +16 V 300 mA
Integrated high-range low-noise current source	<ul style="list-style-type: none"> ■ range <i>(other ranges up to ± 100 mA possible)</i> ■ bandwidth <i>(low-noise mode/fast settling)</i> ■ current noise @ 1 kHz ■ current noise @ 1 Hz ■ current noise @ 0.1 Hz ■ field noise with coil (± 70 µT range) ■ max. slew rate 	<ul style="list-style-type: none"> ± 25 mA 0.016 Hz / 160 Hz 7 pA/√Hz 17 pA/√Hz 800 pA/√Hz 20 fT/√Hz @ 1 kHz 4.6 A/s



SQUIDViewer™ software included
For more information please visit our website