

SPECIFICATIONS

No. of Channels	Eight independent SQUID channels, remotely controllable.
Remote Control	PC-based, proprietary Serial Control Code (SCC) interface 5-bit internally configurable hardware address Up to 28 eight-channel PFLs (224 SQUID channels) may be controlled independently
Sensor Types	LTS
SQUID Inputs	Via 68-pin SCSI connector
Input Coupling	Single (warm) or Dual (warm plus cooled) input transformer options, configurable via internal solder jumpers
Bias	0 – 160 μ A DC, 1 part in 4096 resolution
Modulation	0 – 200 μ A _{p-p} , 1 part in 4096 resolution, provided by internal 256 kHz generator referenced to external clock signal from PC Interface
Feedback	Internal or External
Ranges	Four feedback ranges, remotely configurable \pm 10 μ A, HIGH Sensitivity Mode, max. 0.5 nA/°C drift \pm 100 μ A, MEDIUM Sensitivity Mode, max. 5 nA/°C drift \pm 1 mA, LOW Sensitivity Mode, max. 50 nA/°C drift \pm 10 mA, COARSE Sensitivity Mode, max. 2 μ A/°C drift
Integrator	5 μ s, 50 μ s, 500 μ s, 5 ms time constants, remotely configurable
Reset	Via software or external TTL signal External reset time <5 μ sec Optional auto-reset function
DC Offset	160 μ A, 1 part in 8192 resolution, max. 2.5 nA/°C drift 1 nA _{p-p} drift over 24 hours typical.
Bandwidth	Up to 100 kHz depending on SQUID transfer coefficient $dV/d\Phi$
SQUID Outputs	\pm 10 V differential analog outputs for each channel
Test Signal Inputs	Differential; 1 mV/ μ A, 10 mV/ μ A, 100 mV/ μ A, 1V/ μ A, remotely configurable for each channel, 10 mA maximum current, 10 k Ω input impedance
Remote Interface I/O	Via 68-pin SCSI connector; includes all SQUID outputs, test signal inputs, SCC data, power, and grounds
Indicators	SCC DATA OK/Fault Status LEDs, Heater LED
Heater Supply	100 mA current source for heater resistances up to 75 Ω

Power Requirements	+12 VDC, 436 mA (+100 mA per activated heater), -12 VDC, 376 mA, +5 VDC, 45 mA (+11 mA per activated heater)
Size	(W×H×D) 9.88 × 7 × 0.94 (inch) (251 × 178 × 24 (mm))
Weight	2.8 lb (1270 g)

PC Interface Model PCI-1800

No. of Channels	Supports one 8-Channel Model PFL-800 Programmable Feedback Loop
Clock	Internal generator provides clock signal for PFL Master/Slave mode supported to synchronize clock signal for multiple PFLs Slave PCI-1800 auto-recognizes slave mode
Communications	From PC: RS-232 or parallel port To PFL: STAR Cryoelectronics Serial Control Code
Analog Outputs	±10 V buffered PFL output Front panel BNC: Wideband or Filtered, remotely configurable for each channel Rear panel DB-25: Eight differential analog outputs for each SQUID channel, Wideband or Filtered, remotely configurable
Test Signal Input	Front panel BNC: Differential, remotely configurable for each channel, ±10 V max., 50 Ω Rear panel DB-25: Eight differential inputs for each SQUID channel, ±10 V max., 10 k Ω
Test Signal Generator	0 – 2 V _{p-p} , 50 – 5,000 Hz, remotely controllable
External Reset Inputs	TTL (HI resets feedback loop), via rear-panel DB-9 connector
Filters	6, 10, 20, 60 kHz plug-in 4-pole Butterworth per channel (optional)
Power Requirements	120 or 240 VAC (selectable), 50/60 Hz, 40W (excl. filters); or external battery
Cable Length	At least 5 m to Programmable Feedback Loop
Size	(W×H×D) 16.7 × 1.69 × 12.7 (in) (424 × 44 × 323 (mm))
Weight	7.8 lb (3545 g)

All specifications are subject to change without prior notice.