XXF-1 SQUID Electronics

XXF-1 – ultra-high bandwidth dc SQUID electronics

- Fully computer-controlled

- 20 MHz maximum FLL bandwidth and 50 MHz maximum open-loop bandwidth

- Provides adjustable bias current and calibration pulses for TES applications

- Ready for convenient two-stage SQUID operation

- Enlarged bias voltage range for SQUID series array readout

- Adaptable to virtually all measurement tasks

A Ready-To-Use System:

Analog Output

Connector Box

RS-232 Connection

Power Supply

1 to 3-Channel FLL Unit
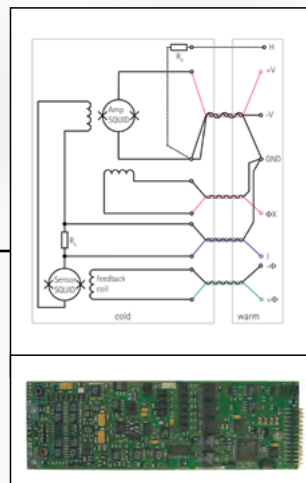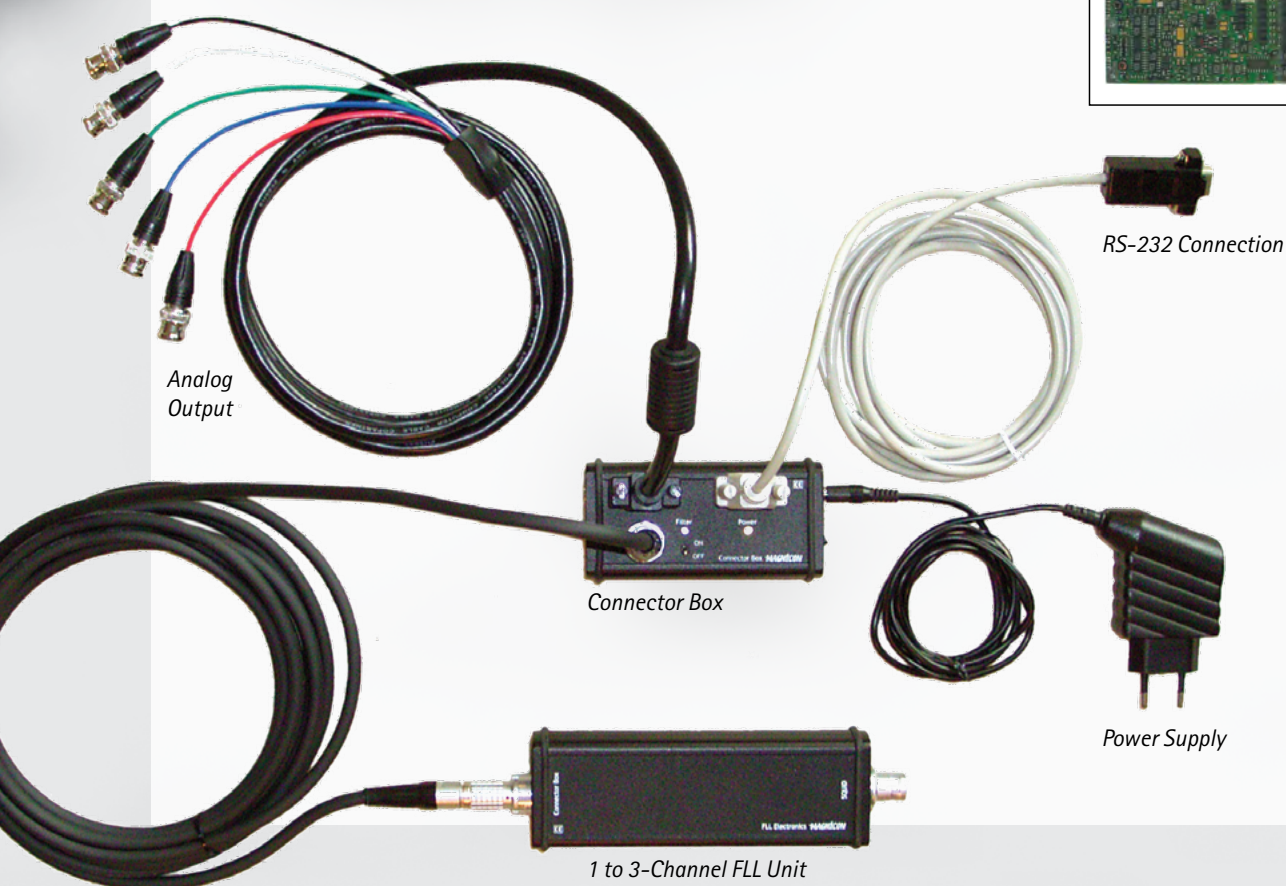
Technical Data

General	■ optimum choice for all types of low-Tc SQUIDs including SQUID series arrays and two-stage SQUIDs	
	■ available in a standard version and a high-speed version	
	■ 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	
	■ optional anti-alias filter:	10 kHz ±2.5%
	■ power consumption per channel	1.8 W @ 15 V
Bias	■ bias current range	0-180 µA
	■ bias voltage range *(other bias current and bias voltage ranges on request)*	0-1300 µV
Aux Current Source 1	■ range (high/low) *(other ranges up to ± 5 mA possible)*	± 500/125 µA
Aux Current Source 2	■ range *(other ranges up to ± 5 mA possible)*	± 125 µA
	■ calibration pulse option	
	■ pulse duration time	1-2000 µs
	■ time between pulses	0.1-6258 ms
Preamp	■ low noise bipolar/JFET input stage	
	■ selectable noiseless 50 Ω input impedance	
	■ white voltage noise	0.33 nV/√Hz
	■ voltage noise @ 0.1 Hz	0.8 nV/√Hz
	■ white current noise	2.6 pA/√Hz
	■ current noise @ 0.1 Hz	40 pA/√Hz
FLL Mode	■ maximum FLL bandwidth	20 MHz (6 MHz in standard version)
	■ fast external integrator reset	<1 µs
	■ output coupling	ac or dc
	■ analog output signal range	±10 V
Amp Mode	■ adjustable gain	1100 to 2000
	■ adjustable bandwidth	dc-0.2 MHz to dc-50 MHz (dc-0.2 MHz to dc-6 MHz in standard version)
Heater	■ voltage	+13 V
	■ maximum current	300 mA

SQUIDViewer™ software included
Easy access to all parameters
For more information please visit our website