

S700X SQUID Specifications

Field Range	±7.5 tesla
Field Stability	0.1 ppm/hr
Central Field Uniformity	0.01% over 4 cm
Field Set Resolution (16-bit)	
Standard	1.1 x 10 ⁻⁵ tesla
Low-Field Option	1.0 x 10 ⁻⁷ tesla
Remnant Field	~ 7 x 10 ⁻⁴ tesla (7 gauss)
Maximum Current	85 amps
Maximum Sample Size	< 8.5 mm
DC Magnetization (1, 2 & 3 axes)	
Differential Sensitivity	1x10 ⁻⁸ EMU in 1T 5x10 ⁻⁷ EMU in 7T
Range of Measurement	
Standard	10 ⁻⁸ to 10 ⁻² EMU
Extended	10 ⁻⁸ to 5 EMU
AC Susceptibility	
Frequency Range	0.01 Hz to 500 Hz
Sensitivity	1 x 10 ⁻⁸ EMU in 1T / 3 x 10 ⁻⁷ EMU in 7T
Temperature Range	
Standard	1.6 K to 300 K
Extended	200 K to 700 K
Temperature Calibration	
Number of Sensors	2
Accuracy of Calibration	0.3%
Temperature Stability at Sample	
@ 10 K	2 mK
@ 100 K	3 mK
@ 300 K	10 mK
Temperature Resolution	1 mK @ all temperatures
Spatial Variation in Temperature in Sample Region	
@ 20 K	±5 mK over 4 cm length
@ 100 K	±25 mK over 4 cm length
@ 100 K	±80 mK over 12 cm length
Rate of Temperature Change (including stabilization)	
± 5 K	5 minutes
± 100 K	20 minutes
± 295 K	30 minutes
Helium Capacity:	45 litres
Liquid Nitrogen Capacity:	45 litres
Consumption*	
Liquid Helium	3-4 litres per day
Liquid Nitrogen	4-5 litres per day

*varies according to usage