

attoSHPM xs

Art.Nr.: 1008034

Technical Specifications

Modes of Operation	
imaging modes	constant height
slope compensation	2 axis scan plane correction
z feedback	STM distance tracking (usually only for autoapproach)
Resolution	
size of Hall cross on sensor	400 nm (high resolution), 250 nm (ultra high resolution)
field sensitivity @ 4 K	1500 V/AT
noise-equivalent magnetic field (theoretical)	15 nT/vHz @ 4 K and 40 μ A Hall current, 80 nT/vHz @ 77 K and 40 μ A Hall current
typical attainable field detection limit (measured)	15 μ T typ. (bandwidth 10 Hz @ frequency 277 Hz)
z bit resolution @ 4 K	7.6 μ m at 2 μ m scan range
Sample Positioning	
total travel range	3 x 3 x 2.5 mm ³ (open loop)
step size	0.05..3 μ m @ 300 K, 10..500 nm @ 4 K
fine scan range	30 x 30 x 4.2 μ m ³ @ 300 K, 15 x 15 x 2 μ m ³ @ 4 K (open loop)
closed loop scanning	not compatible
sample holder	ASH/PCB/4 sample holder with 4 electrical contacts, integrated heater with calibrated temperature sensor
Suitable Operating Conditions	
temperature range	1.5 K..300 K (dependent on cryostat); mK compatible setup available on request
magnetic field range	0..14 T (dependent on magnet)(16 T compatible version available on request)
operating pressure	designed for He exchange gas
Suitable Cooling Systems	
titanium housing diameter	23.9 mm
bore size requirement	designed for 1" (25.4 mm) cryostat/magnet bore size (e.g. PPMS)
compatible cryostats	see PPMS compatibility chart

