

HYT 20SXG/25SXG VACUUM PARTICLE SENSORS



Inert and high energy emission environments

Features

- High power laser diode for 0.19 micron sensitivity and large detection area
- Ultra compact probe design
- In-chamber monitoring

Configurations

- VCR®
- Swagelok® Fitting
- Axcelis™ GSD Implant
- Ulvac Disk CoaterL/L™
- AMAT XR80™ Implant
- KF-25
- KF-40
- KF-50

The HYT 20SXG and 25SXG vacuum particle sensors detect particles in non-corrosive, vacuum process equipment. These laser-based sensors can be installed in loadlock or process chambers or into exhaust pump lines. They have been proven in high-production fabs on tools such as sputtering systems and ion implanters.

Used in conjunction with an HYT controller, the HYT 20SXG and 25SXG sensors facilitate process control by enabling users to monitor particles continuously in real time. Complete in situ particle monitoring (ISPM) systems include the sensor, an HYT controller, Machine Trigger™ capability which provides for synchronization of particle counts with the process cycle, and Particle Vision® software for data acquisition and analysis.

The HYT 20SXG sensor is compact, allowing installation in restricted spaces, while the HYT 25SXG may be mounted directly within a chamber or process module. T-shaped housings and custom vacuum adapters are available to facilitate sensor installation into different chambers and pump lines.

The HYT 20SXG and 25SXG sensors are insensitive to high energy emissions, making them suitable for use in the presence of ion gauges and implanter flood guns.

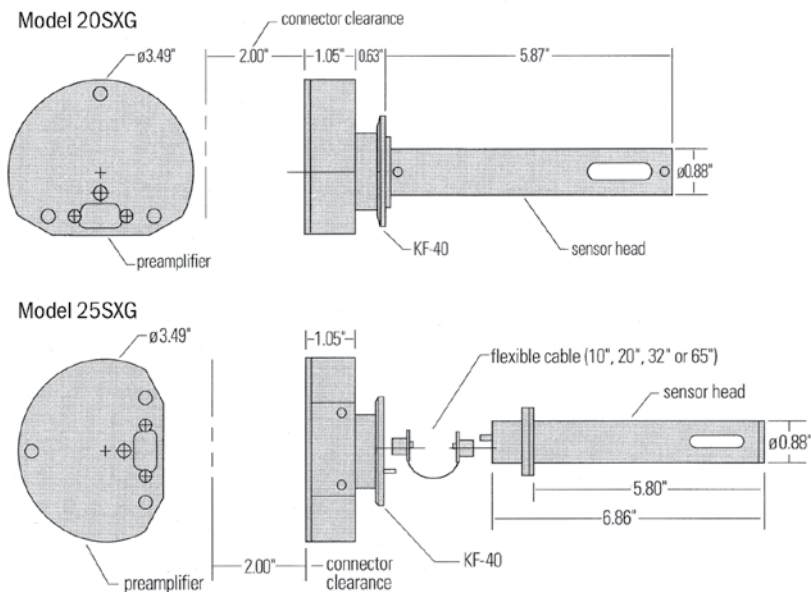


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EXCELLENCE IN PROCESS ANALYTICS

Performance Specifications

Sensitivity	0.19 μm minimum detectable size	
Detection Area	20SXG	20 mm ² @ .22 μm
		40 mm ² @ .502 μm
	25SXG	28 mm ² @ .269 μm
		40 mm ² @ .502 μm
Laser	810 nm, 150 mW emitted	
Laser Safety	Class I laser product when installed in a sealed vacuum system by trained personnel Class IIIb laser when not installed. Complies with FDA radiation performance standards, 21 CFR 1040.10 and 1040.11 and with IEC 825-1:1993.	
Particle Velocity Range	0.3 to 4.0 m/sec (standard)	
	1.5 to 32 m/sec (with Filter Option Board)	
Pressure Range	10^{-8} torr to 100 psi	
Temperature Range	Operating	10 to 50°C (50 to 122°F)
	Storage	-40 to 85°C (-40 to 185°F)
	Exposure to temperatures above 40°C (104°F) during operation may reduce laser life to less than one year.	



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