



## Inert and high energy emission environments

### Model 20SX/25SX Vacuum Particle Sensors

#### 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
- Varian E-1000™ Implant
- Eaton GSD™ Implant
- Ulvac Disk CoaterL/L™
- AMAT XR80™ Implant
- KF-25
- KF-40
- KF-50



The HYT Model 20SX and Model 25SX 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 Model 20SX and Model 25SX sensors facilitate process control by enabling users to monitor particles continuously and 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 Model 20SX sensor is compact, allowing installation in restricted spaces, while the Model 25SX 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 Model 20SX and Model 25SX sensors are insensitive to high energy emissions, making them suitable for use in the presence of ion gauges and implanter flood guns.

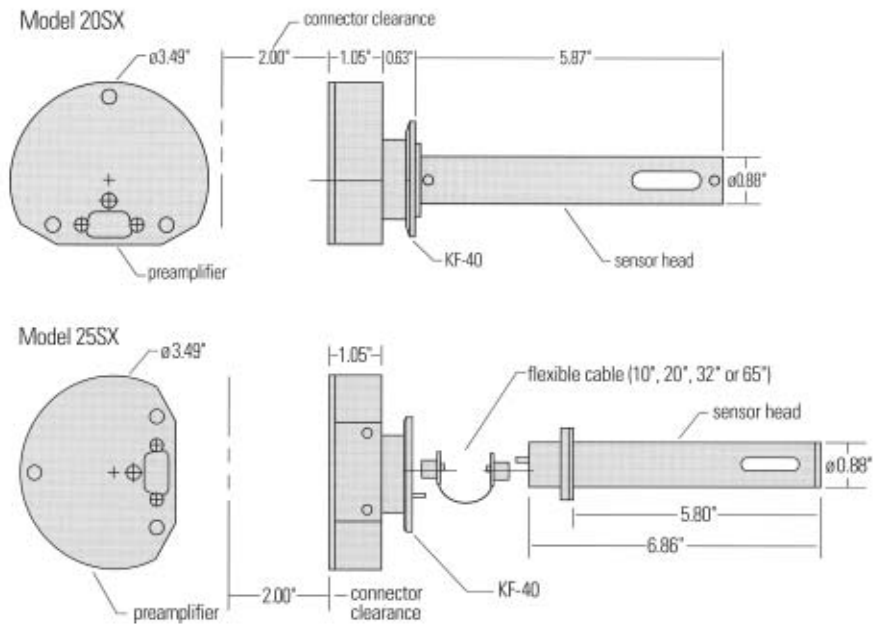


# Model 20SX/25SX Vacuum Particle Sensors

## SPECIFICATIONS

Sensitivity	0.19 $\mu\text{m}$ minimum detectable size	
Detection Area	20SX	20 mm <sup>2</sup> @ .22 $\mu\text{m}$
		40 mm <sup>2</sup> @ .502 $\mu\text{m}$
	25SX	28 mm <sup>2</sup> @ .269 $\mu\text{m}$
		40 mm <sup>2</sup> @ .502 $\mu\text{m}$
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 <sup>-8</sup> torr to 100 psi	
Temperature Range	Operating	50 to 122°F (10 to 50°C)
	Storage	-40 to 185°F (-40 to 85°C)
		Exposure to temperatures above 104°F (40°C) during operation may reduce laser life to less than one year.

## DIMENSIONS



AMERICAS • 481 California Avenue, Grants Pass, Oregon 97526 USA, Toll Free: 1 800 866 7889, Tel: 1 541 472 6500, Fax: 1 541 479 3057  
 EUROPE / ASIA • 6, route de Compois, C.P. 212, CH-1222 Vésenaz, Geneva, Switzerland, Tel: 41 22 855 91 00, Fax: 41 22 855 91 99  
 WEB SITES • www.hachultra.com • www.anatel.com • www.orbisphere.com • www.particle.com