

#### Background

The laser diode in the Klotz particle counting sensor will deteriorate over time. As a result, the noise level will continually increase until the sensor is no longer able to accurately resolve 4µm counts from the background noise. The time it takes for this to happen is highly dependent on the type of samples that are being routinely analyzed.

#### Determining the Noise Level

Prior to replacing the sensor, the noise level should be checked first to confirm this is the root cause of the issue.

Follow the instructions in the CS-APC-22M Calibration Procedure manual (CINRG-APC-22M-CALIBRATION-PROCEDURE.pdf) in sections 3 and 4. The manual provides all the necessary steps in order to determine the sensor noise level.

If the sensor noise is above the threshold level, then the sensor must be repaired or replaced. See the table below for parts that may be required for this service.

#### Sensor Replacement Options

- 1. Purchase a new sensor.** This is the costliest option but will provide you with a brand-new sensor that will likely last the same amount of time that your original sensor lasted.
- 2. Have the sensor repaired.** Send your sensor back to CINRG and we will coordinate repair with the Klotz factory in Germany. You can rent a loaner sensor while your sensor is being repaired. This is the lowest cost option.
- 3. Contact CINRG for a service exchange sensor.** CINRG will send you a rebuilt sensor to replace your failed sensor. When you receive the service exchange unit pack your sensor in the box you received the exchange unit in and return to CINRG.

**Sensor Replacement:** In all cases you will need to perform a sensor calibration once you have replaced your sensor.

Part Number	Description
CS-CINSTAN-SCF	CINStan Super Clean Fluid (SCF)
CS-LDS-4550-REP	Klotz Particle Count Sensor Repair
CS-LDS-4550	Klotz Particle Count Sensor
CS-LDS-4550-SEU	Klotz Particle Count Sensor Service Exchange