



PARTICLE COUNTERS

Particle counters are known for their ability to detect when a filter is reaching the end of its life. ORAKEL Particle Counters are sophisticated instruments suitable for municipal and industrial water treatment applications including filter performance monitoring, protecting RO membranes from colloidal fouling and corrosion product monitoring.



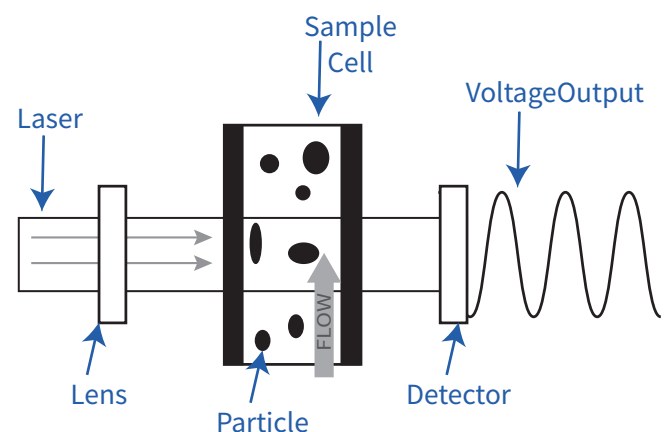
KEY FEATURES

- Counts particles 2-750 microns
- Simple set up and calibration
- Up to 6 user programmable size ranges
- Sapphire optics for extended life

HOW IT WORKS

The ORAKEL Particle Counter works by counting particles. Particles larger than $127\mu\text{m}$ are sized as $>127\mu\text{m}$ particles, but up to 6 size ranges can be programmed and counted for particles ranging from 2 to $127\mu\text{m}$ in diameter. The number of particles counted in each of these ranges is reported as counts per milliliter, counts per 100 milliliters, or raw counts.

As particles in a water stream flow through a cell they break a laser beam. This break is measured by a detector opposite the laser beam and the number of breaks is equal to the number of particles. The size of the signal (created as the particle passes through the beam) is proportional to the size of the particle.



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APPLICATIONS

The ORAKEL particle counters connects to an ORAKEL control unit which can connect up to 16 sensors to one unit. This enables users to combine other measurements such as turbidity, chlorine and pH. Typical applications include:

- Wastewater Treatment
- Water Treatment
- Membrane Filtration
- Reverse Osmosis Pre-treatment
- Food and Beverage
- Pharmaceutical
- Make up water monitoring
- Onboard PID control of automatic backwash*

* When used with turbidity and differential pressure sensors

SPECIFICATION

Laser Type

Solid-state laser diode (780nm)

Cell Material

Nituff™ coated aluminium PEEK plastic (optional)

Viewing Windows

Sapphire

Detection Range

2-750 microns

Sizing Range

2-127 microns

Flow Rate

75ml/min (supplied by overflow weir)

Resolution

Better than 10% at 10 micron (ASTM-F658)

Coincidence Limit

20,000 cnts/ml

Signal to Noise Ratio

Better than 5: 1

Size Channels

Up to 6 user selectable and total counts

Alarms

Sensor diagnostic, particle count limit

Laser Diode Life

MTBF 75,000 hours@55°C

Measurement Type

Light obscuration, Volumetric

Comms

TCP/IP, Modbus, RS232, RS485, 4-20mA, Profibus

Power supply

100-250V AC, 50/60Hz 8-36V DC

Operating ambient temperature

0-50°C

Sample process temperature

0-50°C

Cleaning

<5 mins, 6 monthly on clean water

Enclosure rating

IP65

Display

Value and alarms at the same time



To learn more about Detectronic, get in touch:

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