Finally -- A Sensor for In-Line Monitoring of Liquid-Borne Particles with 0.1 $\mu$m Resolution

Monitor particles in real time at the actual point of use

<table>
<thead>
<tr>
<th>CHARACTERIZING CONTAMINANTS</th>
<th>Integrated use of Compact 0.1$\mu$m sensor</th>
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<tbody>
<tr>
<td>Process monitoring at critical system points</td>
<td>High-performance laser diode</td>
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<tr>
<th>REAL-TIME PARTICLE MONITORING</th>
<th>Long-life laser light source</th>
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<tbody>
<tr>
<td>Control and maintain quality in real time</td>
<td>Detection efficiency 70% or higher</td>
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<tr>
<th>HIGH DETECTION EFFICIENCY</th>
<th>Sophisticated detection technology</th>
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<td>With greater low end sensitivity</td>
<td>Pure water, chemicals, fluoroxide</td>
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<th>ON THE SPOT</th>
<th>Integrated deposit flow cell</th>
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<td>Suited for use with a variety of liquids</td>
<td>Versatile array of interfaces</td>
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<th>MULTI-POINT SENSING</th>
<th>RS-232-C, RS-485, flow controller, pump, etc.</th>
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<td>System integration</td>
<td>FACILITY MONITORING SYSTEM</td>
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Compact, low-price sensor ideal for integrated use in central chemical supply systems and wet benches
Specifications

Optical System: 90° sideway light-scattering principle
Light source: Laser diode (wavelength: 830 nm)
Light detector: PIN Photo diode
Materials of component parts exposed to sample fluid: PFA, fused silica (KS-16), sapphire (KS-16F)
Minimum diameter of countable particle: 0.1 μm
Measurement size range: Five channels 0.1, 0.15, 0.2, 0.3, 0.5 μm
Counting efficiency: 70 ± 15% (KS-16), 60 ± 15% (KS-16F)
Flow rate: 10 mL/min
Maximum particle concentration: 1200 particles/mL (coincidence loss 5% or less)
Sample fluid temperature range: 15 to 35°C
Allowable sample fluid pressure: 300 kPa or less (gauge pressure)

Dimensions:
Main unit: 240 (W) × 110 (H) × 150 (D) mm (excluding protruding parts)
Weight: Approx. 3.5 kg
Power supply unit: 70 (W) × 111 (H) × 184 (D) mm (excluding protruding parts)
Weight: Approx. 0.8 kg
Interface: RS-232-C, RS-485

Sampling Example

Monitoring the purity of wet bench cleaning liquid

Monitoring the purity inside a wet bench cleaning bath

System

Operation Control of KS-16 Via RS-232-C Interface

Monitoring Systems (Option)

RP Monitor K9461 (Ver. 2, 3)
- Particle counter automatic operation
- Can drive any Rion particle counter in RS-232C mode (Ver. 2)
- RS-232C/RS-485 converter allows multi-sensor system with 20 points (Ver. 3)

Multi-Point Monitoring Software KF-02A
- Measurement control, data collection, result display and printing for up to 100 sensors.
- Supports up to 5 controllers, each with up to 20 sensors.

KS-16 Dimensional Drawing

All measurement parameter settings are made at the KZ-70.