



Liquid-Borne Particle Sensor **KS-40A/KS-40AF**

KS-40AF supports hydrofluoric acid measurements

Highly reliable series of 0.1 μm sensors further improved and refined



<Optional unit: controller KE-40 (upper left), Syringe Sampler KZ-30W1 (right)>

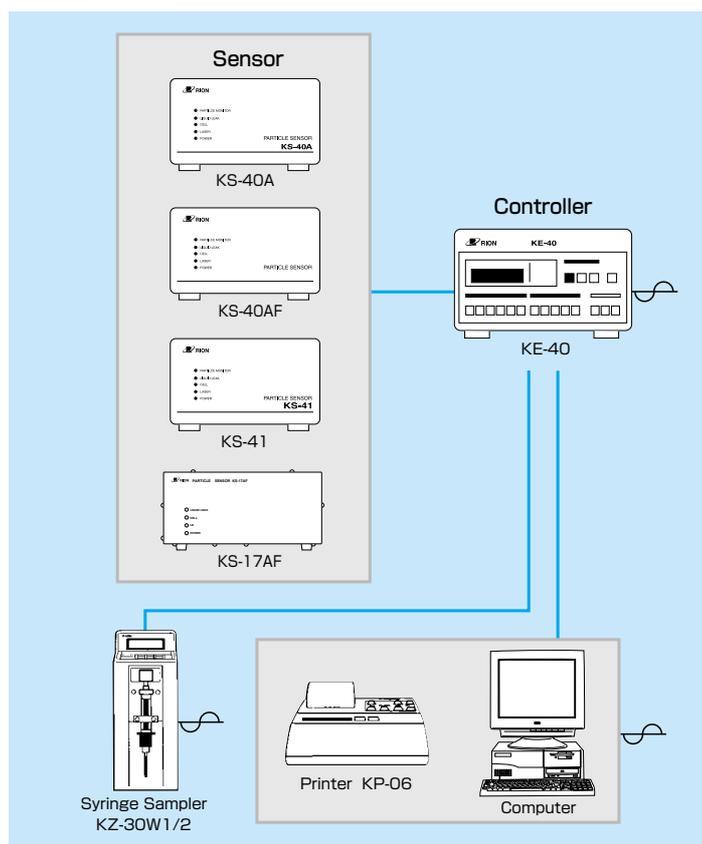
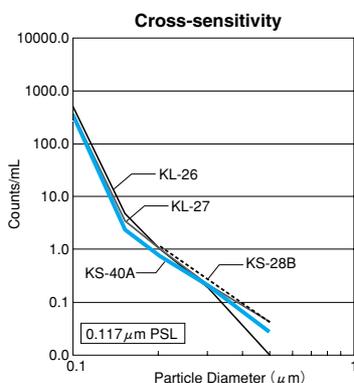
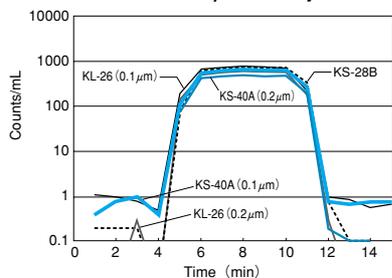
<Counting efficiency and particle size resolution optimized for measurement of high-purity sample fluid>

- High-output laser diode and newly developed flow cell enable 0.1 μm high-sensitivity measurement.
- Repeated measurement function assures precise results also with low sample fluid quantities and short measurement time.
- Compact dimensions, light weight, integrated leak sensor contribute to further improved ease of use.
- KS-40AF employs a monolithic type sapphire cell that supports a wide range of fluids measurement including hydrofluoric acid.

(KS-40A and KS-40AF are used in conjunction with the controller KE-40 or KE-40A.)

**Particle Sensor KS-40A/KS-40AF****Specifications**

Optical system	90° sideway light-scattering method
Light source	Laser diode (wavelength 830 nm)
Light detector	PIN type photodiodes
Materials of component parts exposed to sample fluid	Fused silica, PFA (KS-40A) Sapphire, PFA (KS-40AF)
Diameter range of countable particles	0.1-2 μm (with PSL particles in pure water)
Particle size measurement ranges	Five steps ($\geq 0.1\mu\text{m}$, $\geq 0.15\mu\text{m}$, $\geq 0.2\mu\text{m}$, $\geq 0.3\mu\text{m}$, $\geq 0.5\mu\text{m}$)
Counting efficiency	70% (measuring PSL particles in the range of 0.3 μm, using count of 0.2 μm and above for comparison with reference unit)
Sample flow rate	10 mL/min
Maximum rated particle concentration	1200 particles/min (coincidence loss 5% for 0.1 μm particles)
Sample fluid temperature range	+15 to +35°C (no moisture condensation in cell)
Allowable sample fluid pressure	-100 to 300 kPa (gauge reading)
Input/output connectors	
CONTROLLER	For connection of controller KE-40 or KE-40A
LIQUID LEAK ALARM	Shorted during normal operation, open when internal leak was detected Max. Load: 30 V DC, 1 A
EXT	Test output
Power requirements	Power supplied by controller
Dimensions	245 (W) × 139 (H) × 179 (D) mm (maximum)
Weight	Approx. 4 kg

Configuration of measurement system**Comparison of measurement data****Response of KS-40A at 0.294 μm PSL Injected into DIW (PW)**

Specifications subject to change without notice.

Controller KE-40/KE-40A

Serves for particle sensor operation control and measurement data display. Allows continuous measurement in conjunction with a syringe sampler and printer.

- For one-on-one control of particle sensor (KE-40)
- For configuration of multi-point systems with one-on-one control of particle sensors (KE-40A)

Specifications

Particle size channels: Max. 6 channels (Max. 5 channels when using KS-40A)
 Measurement time: 1 minute, 10 minutes, manual
 Measurement modes: HOLD (retain measurement value until start of next measurement) and REPEAT (automatically restart measurement after 10-second pause interval)

Display:	Particle count (max. 6 digits)
OVER	Lights up when count exceeds 999,999
DATA NG	Lights up when problem was detected during measurement
COUNT	Lights up when measurement is in progress
REMOTE	Lights up when unit is operated under interface control
Interface	Serial interface (standard)
Power requirements	100 - 240 V AC, 50/60 Hz, approx. 80 VA (Supplied power cord should be used only for the connection to 100V AC outlet.)
Dimensions	Approx. 130 (H) × 240 (W) × 170 (D) mm
Weight	Approx. 2.8 kg



20-41, Higashimotomachi 3-chome, Kokubunji, Tokyo 185-8533, Japan
 Telephone: +81-42-359-7878 Fax: +81-42-359-7458
 URL : <http://www.rion.co.jp/> E-mail: info@rion.co.jp

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