

Measures 0.1  $\mu\text{m}$  Particles in Photoresist, SOG and other solutions



# Liquid-Borne Particle Sensor KS-41B

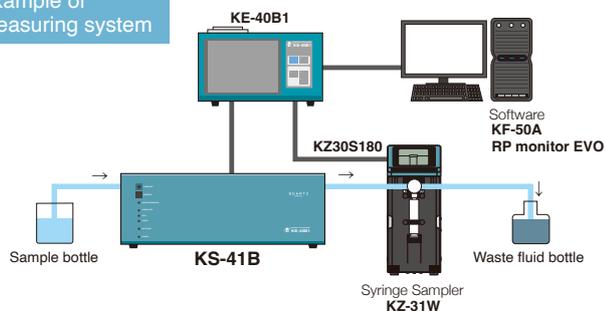
- Detects particles in photoresist down to 0.1  $\mu\text{m}$  size (0.07  $\mu\text{m}$  as Option\*), at a flow rate of 5 mL/min  
\* For measuring clear solutions such as UPW
- Up to 10 user selectable channels (by KE-40B1) from 0.1  $\mu\text{m}$  to 0.5  $\mu\text{m}$   
Factory default setting: five channels ( $\geq 0.1 \mu\text{m}$ ,  $\geq 0.15 \mu\text{m}$ ,  $\geq 0.2 \mu\text{m}$ ,  $\geq 0.3 \mu\text{m}$ ,  $\geq 0.5 \mu\text{m}$ )
- Can be connected to the multiple monitoring system



## Specifications [KS-41B]

Optical system	Light-scattering method
Light source	Diode pumped solid state laser (wavelength 532 nm, rated output 500 mW)
Laser product class	Class 1, IEC 60825-1
Light detector	Multi-channel silicon photodiode
Materials of parts exposed to sample	Synthetic quartz, PFA
Calibration	Polystyrene latex (PSL) particles (refractive index 1.6) in pure water
Size range	
5 channels (factory default)	≥0.1 μm, ≥0.15 μm, ≥0.2 μm, ≥0.3 μm, ≥0.5 μm
User selectable particle size	1 to 10 channels, setting made from Controller
Setting range	0.1 μm to 0.5 μm
Counting efficiency	50 ±10 %
Sample flow rate	5 mL/min
Maximum particle number concentration	9 600 particles/mL (coincidence loss 10 %)
Sample pressure range	300 kPa (gauge pressure) or less
Sample inlet/outlet	2 mm (dia.) x 4 mm (dia.) flared joint for tube
Purge air port	One-touch type joint for dia. 6 mm tube
Input/output connectors	
CONTROLLER connector	Connects to KE-40B1 or KZ-51
LIQUID LEAK	Alarm output terminal shorted during normal operation, open when internal leak is detected
ALARM connector	
Power	DC12 V (supplied by KE-40B1 or KZ-51)
Environmental conditions for operation	15 °C to 30 °C, less than 80 % RH (no condensation)
Dimensions and weight	164 (H) x 464 (W) x 305 (D) mm (without protruding parts), Approx. 12.5 kg
Accessories	Tube A vacuum pack x 1 (2 mm x 4 mm dia. PFA tube with flared joint at one end, 1.5 m x 2, Union joint x 1), Cleaning brush set B x 1, Connection cable A (1 m) x 1
Option	Connection cable (2 m) KS-42-126

### Example of measuring system

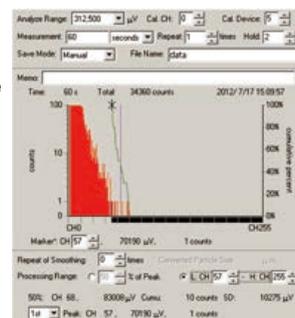


## Pulse Height Analysis Software KF-50A

Option

- Particle distribution data can be used to test particle generator stability
- Automatically calculates particle sizes from voltage values for display

Supported OS:  
Microsoft Windows 10 Pro 64 bit / 11 Pro 64 bit



## RP Monitor Evo10 K1701 Ver. 2/Ver.3

Option

Used for controlling particle counters to regulate the start/end of measurement and turn the light source/built-in pump on and off. Available setting parameters include measurement time, period, number of measurements, alarm, and conversion.

Supported OS: Microsoft Windows 10 Pro 64 bit / 11 Pro 64 bit

## Syringe Sampler KZ-31W

For batch measurement of liquid-borne particle sensor  
\*Connecting cable (KZ30S180, optional)



## Multi-Point Unit KZ-51

Power supply unit to connect KS-41B to RION multi-point monitoring system



For operation control of particle sensor and display of measurement data

## Controller KE-40B1

- Particle size range can be freely set for up to 10 channels.
- Built-in printer. Measurement data can be stored on memory card (CF card).



## Specifications [KE-40B1]

Display	
Display items	Particle size range (max.10 channels), Count (max. 8 digits)
Controls	Touch panel, Sheet switches
Measurement	
Measurement time	10 seconds to 2 hours, or manual
Measurement modes	Manual measurement Automatic measurement: mean value measurement, moving average measurement, periodic measurement, scheduled time measurement
Alarm	When measured value in a selected channel reaches the preset alarm level, a buzzer sounds and alarm terminals are shorted by relay contacts Maximum connected load: DC 30 V, 1 A
Communication	RS-232C
Printer	Printout of measurement results, date and time
Recording paper	Thermal paper: TP-08, Clean thermal paper: TP-10
Memory	CompactFlash (CF) card®(automatic storage in TSV format)
Power	100 to 240 V AC, 50/60 Hz, approx. 130 VA
Dimensions and weight	140 (H) x 240 (W) x 146 (D) mm (excluding protruding parts), approx. 3 kg
Accessories	Power cord x 1, Thermal paper TP-08 x 2 rolls
Options	Communication cable CC-61A/63A, Thermal paper TP-08, Lint-free thermal paper TP-10, Memory card MC-25CF2 (256 MB)
Factory option	D/A converter interface KE-40-S06

\*Use only RION supplied cards for assured operation.

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3-20-41, Higashimotomachi, Kokubunji,  
Tokyo 185-8533, Japan  
Tel: +81-42-359-7878, Fax: +81-42-359-7445