ECO GREEN

A highly reliable particle sensor that can measure 0.1 μm particles. Measurements can be made using only small amounts of samples due to high counting efficiency.

Liquid-Borne Particle Sensor
KS-42A/42AF [Compatible with Hydrofluoric acid]

- Detects particles down to 0.1 μm size,
  (≥1.0 μm support available as option)
  at a flow rate of 10 mL/min

- Particle size range
  Freely settable from 0.1 μm to 0.5 μm
  (up to 10 channels by KE-40B1)
  Factory default setting : five channels
  (≥0.1 μm, ≥0.15 μm, ≥0.2 μm, ≥0.3 μm, ≥0.5 μm)

- Integrated leak sensor with alarm output

- A sapphire flow cell is used in KS-42AF

- User selectable channels within measurement range
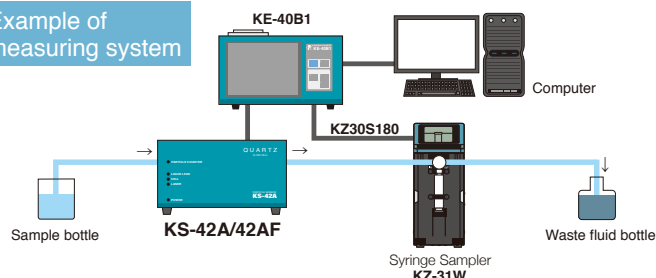 (using KE-40B1 function)

Specifications [KS-42A/42AF]

Optical system	Light-scattering method
Light source	Laser diode (wavelength 830 nm, rated output 200 mW)
Laser product class	Class 1, IEC 60825-1
Light detector	PIN type photodiode
Materials of parts exposed to sample	KS-42A: Synthetic quartz, PFA KS-42AF: Sapphire, PFA
Allowable sample type	Any liquid that does not corrode contacting materials
Calibration	Polystyrene latex (PSL) particles (refractive index 1.6) in pure water
Size range	
5 channels (factory default)	$\geq 0.1\,\mu m$, $\geq 0.15\,\mu m$, $\geq 0.2\,\mu m$, $\geq 0.3\,\mu m$, $\geq 0.5\,\mu m$ ($\geq 1.0\,\mu m$ support available as option)
User selectable channels	1 channel to 10 channels, setting made from Controller
Setting range	$0.1\,\mu m$ and $0.13\,\mu m$ to $0.5\,\mu m$
Counting efficiency	KS-42A: 70±15 % KS-42AF: 60±15 %
Flow rate	10 mL/min
Maximum particle number concentration	1 200 particles/mL (at 5 % coincidence loss for $0.1\,\mu m$ particles)
Sample pressure range	300 kPa (gauge pressure) or less
Sample inlet/outlet	2 (dia.) x 4 (dia.) flared joint for tube
Purge air port	Rc1/8 (1/8 PT female screw)
Input/output connector	
CONTROLLER connector	Connecting to KE-40B1
LIQUID LEAK	Alarm output terminal shorted during normal operation,
ALARM connector	open when internal leak is detected
Power	DC12 V (supplied by KE-40B1)
Environmental conditions for operation	+15 ˚C to +35 ˚C, less than 85 % RH (no condensation)
Dimensions and weight	125 (H) × 240 (W) × 151 (D) mm (excluding protrusions), Approx. 4 kg
Accessories	Tube A vacuum pack x 1
	(2 x 4 dia. PFA tube with flared joint at one end, 1.5 m x 2, Union joint x 1),
	Connection cable A (1 m) x 1

Options	Connection cable B (5 m) KS-42-123

Example of measuring system

Computer

KE-40B1

KZ30S180

QUARTZ

KS-42A/42AF

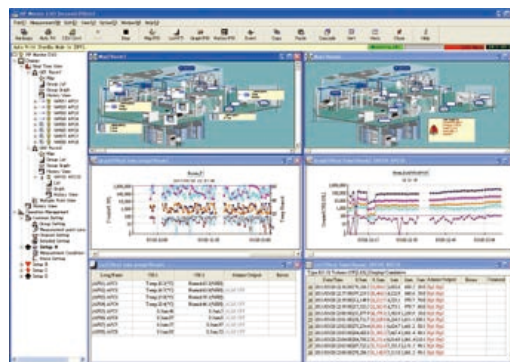Sample bottle

Syringe Sampler KZ-31W

Waste fluid bottle

RP monitor EVO K0505 Ver. 2   Option

Used for controling particle counters to regulate the start/end of measurement and turn the light source/built-in pump on and off Measurement time, period, number of measurements, alarm, and conversion settings

● This software can monitor the same number of particle counters to serial ports when it is installed on a computer that can detect multiple serial ports (COM ports).

Supported OS：Microsoft Windows XP Professional (32 bit), 7 Professional (32 bit)

Sample display

Syringe Sampler KZ-31W

For batch measurement of liquid-borne particle sensor.

＊Connecting cable (KZ30S180, option)

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.
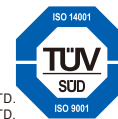Measurement data can be stored on memory card (CF card).

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, Dummy card

Options	Communication cable CC-61A, Thermal paper TP-08, Clean thermal paper TP-10, Memory card MC-25LC1 (256 MB), CFcard adapter CFC-ADP03
Factory option	D/A converter interface KE-40-S06

＊Use only RION supplied cards for assured operation.

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