

# For Chemical 0.02 $\mu\text{m}$



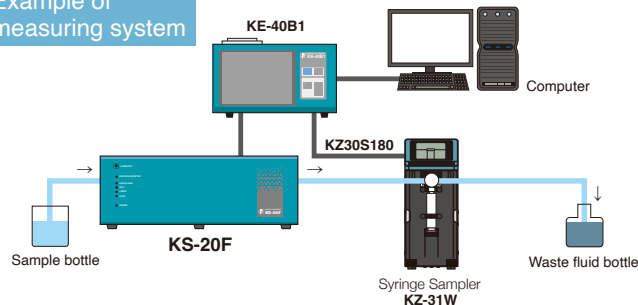
## Liquid-Borne Particle Sensor KS-20F

- Detects particles to 0.02  $\mu\text{m}$
- User can freely select particle size  
Up to 7 channels from 0.02  $\mu\text{m}$  to 0.08  $\mu\text{m}$
- Sapphire flow cell
- With abundant options, it can be used for both in-line and off-line measurement

## Specifications [KS-20F]

Optical system	Light-scattering method
Light source	Diode pumped solid state laser (wavelength 532 nm, rated output 1.5 W)
Laser product class	Class 1, IEC 60825-1
Light detector	Silicon photodiode
Materials of parts exposed to sample	Sapphire, PFA
Calibration	Polystyrene latex (PSL) particles with refractive index 1.6 in pure water
Size range	
Setting range	0.02 $\mu$ m to 0.08 $\mu$ m Up to 7 channels can be set with the KE-40B1 controller
Factory default (4 channels)	$\geq 0.02 \mu\text{m}$ , $\geq 0.03 \mu\text{m}$ , $\geq 0.04 \mu\text{m}$ , $\geq 0.06 \mu\text{m}$
Flow rate	10 mL/min
Counting efficiency	3 %
Maximum particle number concentration	50 000 particles/mL (coincidence loss is 10 % or less)
Sample pressure range	300 kPa or less (gauge pressure)
Sample inlet / outlet	$\phi 2 \text{ mm} \times \phi 4 \text{ mm}$ flared joint for tube
Purge air port	One - touch type joint for $\phi 6 \text{ mm}$ tube
Input / output connectors	
CONTROLLER	For connection of KE-40B1
LIQUID LEAK ALARM	Alarm output terminal shorted during normal operation, connector open when internal leak is detected
Environmental conditions for operation	15 °C to 35 °C, less than 80 %RH (no condensation)
Power	100 to 240 V AC, 50/60 Hz, Approx. 250 VA
Dimensions and weight	235 mm (H) x 552 mm (W) x 340 mm (D) (excluding protruding parts), approx. 18 kg
Supplied Accessories	Tube A vacuum pack x 1 ( $\phi 2 \text{ mm} \times \phi 4 \text{ mm}$ , Flared PFA tube 1.5 m x 2, union joint x 1), Connection cable A (1 m) x 1, Power cord x 1
Factory option	MODBUS board installed
Option	Connection cable (2 m) KS-42-126

### Example of measuring system



## Syringe Sampler KZ-31W

For batch measurement of liquid-borne particle sensor.

\*Connecting cable (KZ30S180, option)



Suitable syringe sizes	25 mL
Operation mode	Purge mode (50) , Measurement mode (50) , (Repeat count setting range) Combination mode (20)
Setting range	5 to 100 mL/min (with liquid-borne particle counter connected)
Power	100 to 240 V AC, approx. 50 VA
Dimensions and weight	Approx. 345 (H) x 141 (W) x 215 (D) mm, Approx. 5.5 kg

## Mass Flow Controller

CVR-1/4-FM  
(Viton)

CVR-1/4-P-FM  
(Perfluor)



(This Mass Flow Controller is products of Surpass Industry Co.,Ltd.)

Allowable sample type	Pure water, chemical fluids
Flow	10 to 31.2 mL/min
Pressure used	100kPa to 400kPa
Dimensions and weight	Approx. 125 (H) x 185 (W) x 110 (D) mm, Approx. 2.4 kg

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.

\* Company names and product names mentioned in this catalog are usually trademarks or registered trademarks of their respective owners.  
\* Specifications subject to change without notice.

Distributed by:

**RION CO., LTD.**  
<https://www.rion.co.jp/english/>

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