



# *Liquid-borne Particle Counter*

## **KL-28B/KL-28BF**

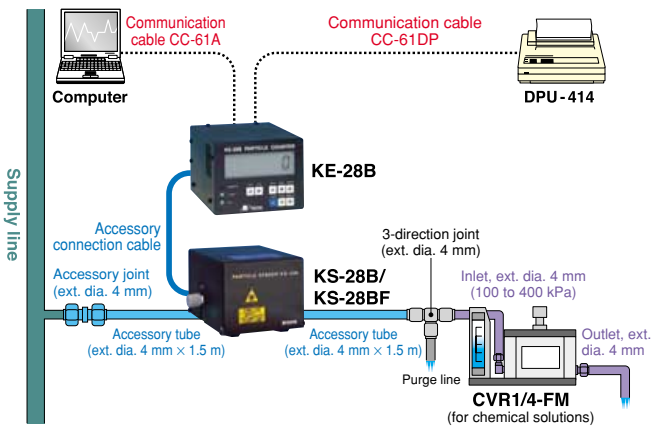
### **Compact and Integrated Use for Facility Monitoring System**



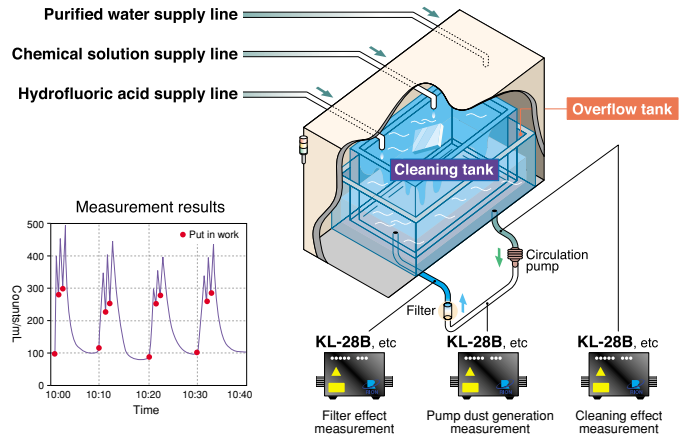
- Two-channel measurement:  $\geq 0.2$  and  $\geq 0.5 \mu\text{m}$  for KL-28B, KL-28BF
- HF is usable as sample with KL-28BF
- Versatile array of interface: RS-232C, RS-485, 4-20 mA, 1-5 V
- Multi-point monitoring is possible with optional software such as RP-monitor

# Development not only of single unit but also monitoring systems with 20-point connection using RP monitors (K9462) and 248-point connection (KF-02B)

## Example of inline system configuration (using mass flow controller)



## Example of cleaning tank inline monitoring



### Specifications (KL-28B/28BF are composed of display control unit KE-28B and detection unit KS-28B/28BF)

#### KS-28B/28BF

Product name	Light scattering liquid-borne particle detector	Light scattering liquid-borne particle detector
Model	KS-28B	KS-28BF
Optical system	Lateral light scattering system	
Light source	Laser diode: frequency 780 nm, rated output 40 mW	
Laser product classification	Class 1, compliant with IEC 60825-1 (2001)	
Light-sensitive element	Photodiode	
Liquid contact unit	PTFE, PFA, synthetic quartz	PTFE, PFA, sapphire
Particle diameter classification	0.2 μm, 0.5 μm 2 stages for each particle diameter or more	
Rated flow	10 ml/min	
Maximum rated particle density	1 200/ml (with count loss 5 % in 0.2 μm particles)	
Sample temperature range	15 °C to 35 °C (moisture is not to form in cell unit)	
Sample pressure range	300 kPa or less (gauge pressure)	
Liquid connection	Sample intake/discharge 2 mm × 4 mm flared tube joint	
Purge opening	Internal diameter 4 mm tube connection	
Input/output terminal	CONTROL terminal Connected to liquid-borne particle counter KE-28B	
Power supply	Supplied by liquid-borne particle counter KE-28B	
Size & weight	70 (H) × 85 (W) × 118 mm (D) (excluding joints and other projecting parts), approx. 600 g	
Accessories	Tube A vacuum pack X 1, sensor cable X 1, hexagonal bar wrench (across flat 2) X 1	

#### KE-28B

Product name	Liquid-borne particle counter
Model	KE-28B
Particle diameter classification	2 stages (CH.1, CH.2), particle diameter depends on connection to particle detector
Measured liquid volume	10 ml, 100 ml, random volume (MAN)
Automatic measurement	If the measured liquid volume is 10 ml or 100 ml, selection is possible between single-time automatic measurement and repeated automatic measurement
External terminals	
CONTROL	Used for connection to particle detector
SERIAL	Serial interface terminal (RS-232-C)
12 VDC	DC power supply terminal
Power supply	12 VDC (connection to 100 VAC using special AC adapter)
Power consumption	100 VAC, 23 VA
Size & weight	65 (H) × 85 (W) × 120 mm (D) (excluding projecting parts), approx. 400 g
Accessories	AC adapter X 1, electrical power cord X 1

### Options

#### Mass flow controller CVR1/4-FM

Optimal for simple inline measurement system flow control

Liquids	Purified water and chemical solutions
Flow	10 to 31.2 ml/min
Operating pressure	0.1 MPa to 0.4 MPa
Size & weight	125 (H) × 165 (W) × 110 mm (D) (excluding projecting parts), approx. 2.4 kg

#### Thermal printer DPU-414 (Seiko Instruments Inc.)

Measurement data printouts, also driven by internal battery

Printing method	Heat sensitive serial dot system
Imprinted digit count	40
Power supply	AC adapter or battery
Interface	RS-232C
Size & weight	66.5 (H) × 160 (W) × 170 mm (D) (excluding projecting parts), approx. 0.7 kg

- Printer cable CC-61DP (optional)
- Heat sensitive paper TP-14 (112 mm × 28 mm/roll, 6 rolls)
- Clean paper TP-26 (112 mm × 28 mm/roll, 6 rolls)

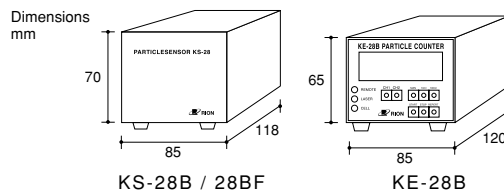
#### Monitoring software RP-Monitor series

- RP-Monitor K9461  
Particle counter, sensor automatic measurement, data collection, graph production primarily for one-to-one connection
- RP-Monitor K9462  
Small-scale multi-point monitoring system for connection to maximum 20 sensors
- KF-02B  
Large-scale multi-point monitoring system for connection to maximum 248 sensors

#### Multi-point monitoring system interface KZ-45MG

Required when combining KE-28B and sensor multi-point monitoring systems

#### External dimensions (excluding projecting parts)

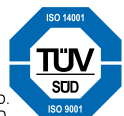


\* Specification subject to change without notice.



3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan  
Tel: +81-42-359-7878 Fax: +81-42-359-7458  
<http://www.rion.co.jp/english/>

Distributed by:



ISO 14001 RION CO., LTD.  
ISO 9001 RION CO., LTD.