SPECIFICATIONS

PARTICLE COUNTER

KE-28B

RION CO., LTD.

3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan

No. 00013-2E 19-10 Printed in Japan

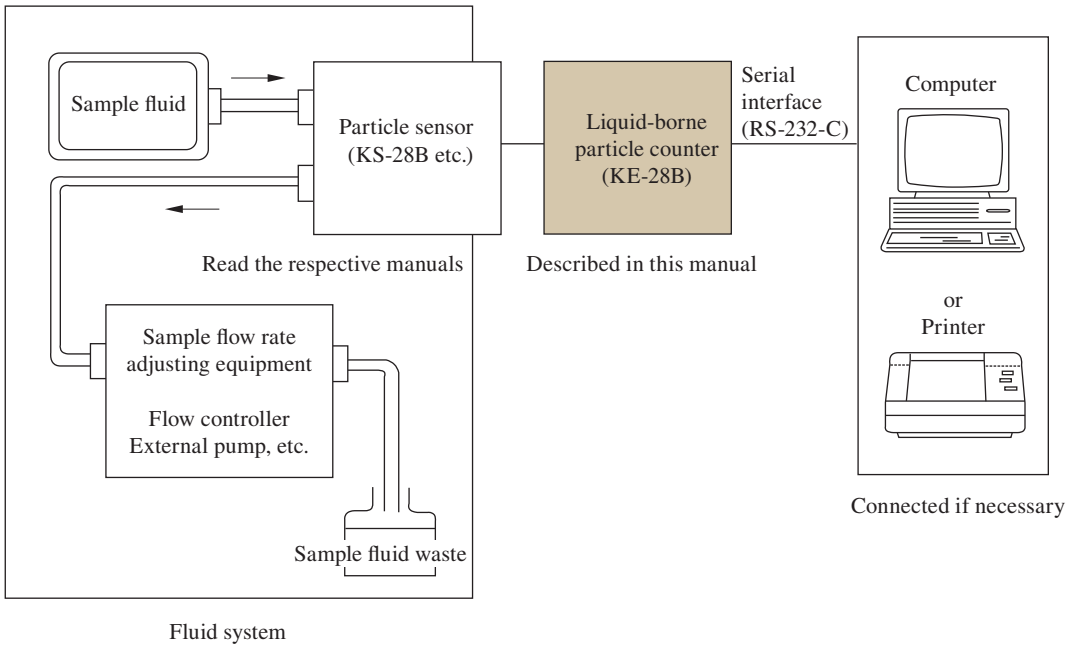
Outline

The KE-28B is designed to measure the number concentration and size of particles in liquid, in conjunction with the Rion particle sensor KS-28B/28BF. The KE-28B supplies power to the particle sensor, controls its operation, and displays measurement results. The integrated serial interface (RS-232-C) serves to control operation of the KE-28B and sends measurement data to a computer or other external equipment.

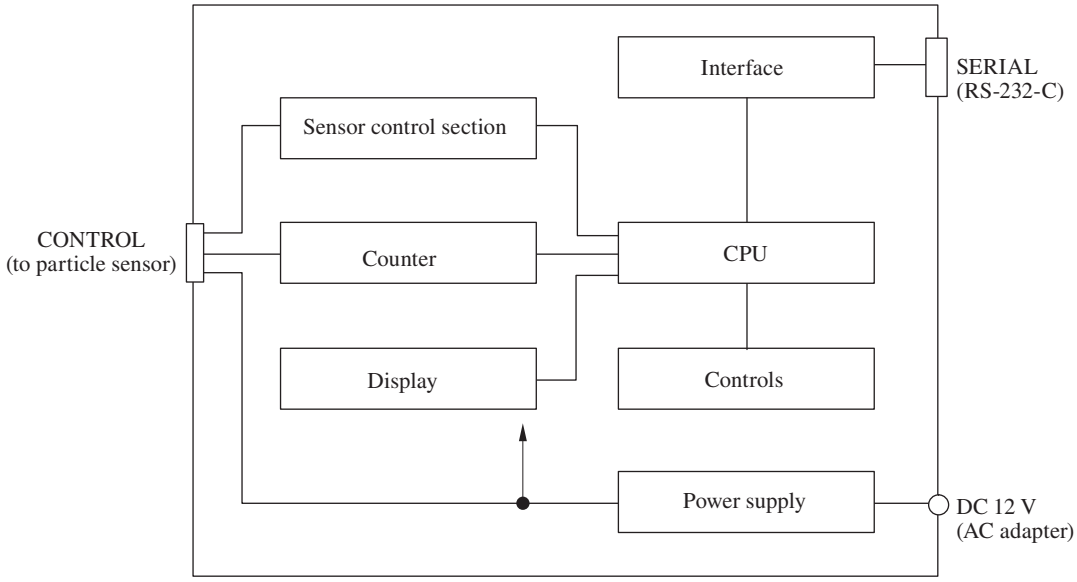
When the optional D/A converter interface is installed, 4 mA to 20 mA analog signal will be output which can be connected directly to an instrumentation system.

By using the optional multi-point interface KZ-45MG, a multi-point system for monitoring particle number concentration can be configured.

The measurement setup is shown in the illustration below. The fluid system consists of the particle sensor and sample flow rate adjusting equipment. Which equipment is used depends on the type of particle sensor and the sample fluid supply method.



Measurement setup



Block diagram

Specifications

Suitable particle sensor model
Light-scattering type particle sensor KS-28B and KS-28BF

Particle size detection — 2-step detection (CH1, CH2)
(actual particle size depending on particle sensor)

Measurement sample fluid volume
10 mL, 100 mL, or arbitrary (MAN)
Automatic measurement stop for 10 mL or 100 mL
Manual measurement stop with STOP button for manual measurement

Automatic measurement — Single or repeated 10-mL or 100-mL measurement, selectable

Single automatic measurement
REPEAT indicator off
Automatic stop after preset sample fluid volume is reached
Data are held until start of next measurement

Repeated automatic measurement
REPEAT indicator on
Automatic restart of measurement after 10-second pause interval
During pause interval, data are held until start of next automatic measurement

Display — For particle count and status indication

- Particle count — Six digits (0 to 999999)
- REMOTE — Lights up in remote mode
- LASER — Flashes when a light source error has occurred
- CELL — Flashes when a flow cell error has occurred

Connectors

- CONTROL — Connector for particle sensor unit
- SERIAL — Interface connector for serial interface
- DC 12V — For supplied AC adapter

D/A interface output terminals (factory option)
Converts the particle count in a selected channel into 4 mA to 20 mA DC current

Internal interfaces

Serial interface

Flow control:	none
Transfer principle:	asynchronous, full-duplex
Transfer rate:	4800 bps
Data word length:	7 bit
Stop bits:	2
Parity:	even
Xon/Xoff control:	none
Delimiter:	*<CR><LF>*
Character code:	ASCII

D/A interface (factory option)

Converts the particle count in a selected channel into 4 mA to 20 mA DC current

Output range	0 to 10, 0 to 100, 0 to 1,000, 0 to 10,000, 0 to 100,000, 0 to 16, 0 to 256, 0 to 4,096, 0 to 40,960, 0 to 409,600 (selectable)
Load resistance	0 Ω to 500 Ω (including the resistance of the connection cable)
Output precision	±1%

Ambient conditions for operation:

0˚C to +40˚C, less than 85% RH (no condensation)

Ambient conditions for storage

–10˚C to +50˚C, less than 85% RH (no condensation)

Power requirements	12 V DC (from supplied AC adapter) AC adapter can be used from 100 V to 240 V
Power consumption	100 V AC, 23 VA (including liquid-borne particle sensor KS-28B/KS-28BF and supplied AC adapter)
Dimensions	65 mm (H) × 85 mm (W) × 120 mm (D) (without protruding parts)
Weight	Approx. 400 g

Supplied accessories

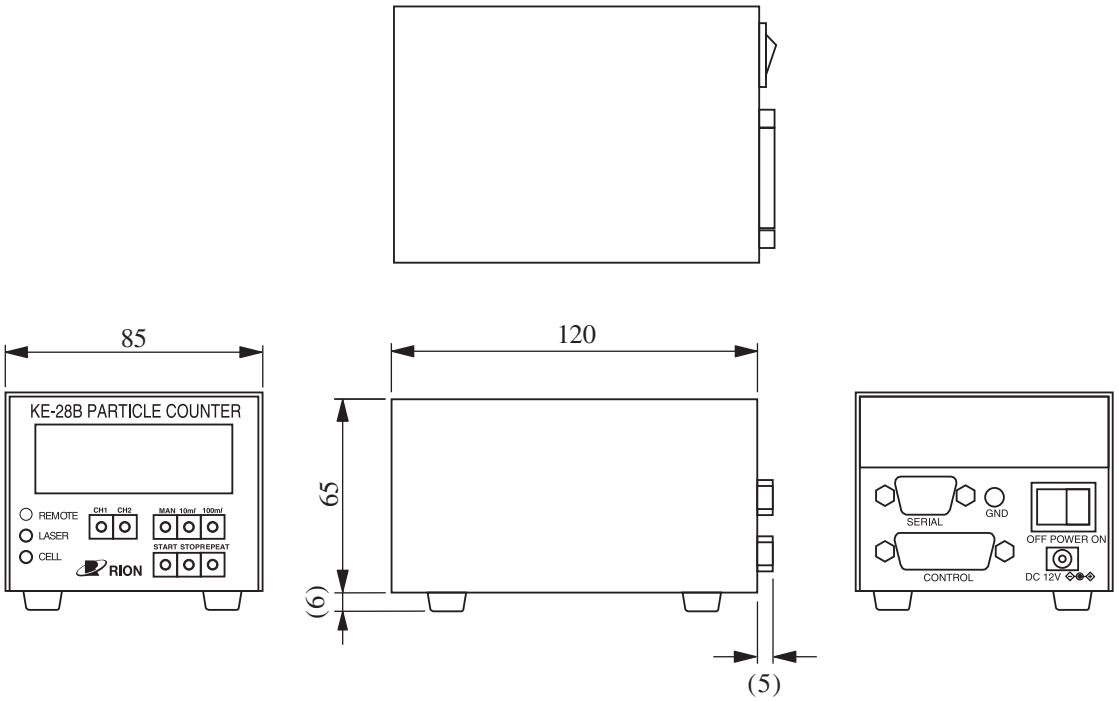
AC adapter	1
Power cable (used for 125 V and less)	1
Instruction manual	1
Inspection certificate	1

Factory options

Multi-point interface	KZ-45MG
D/A interface	KZ-25-S02

Options

Interface cable	CC-63A/CC-61A
(For connection to DTE with 9-pin male D-sub connector)	
Thermal paper (6 rolls set)	TP-14
Lint-free thermal paper (6 rolls set)	TP-26
RP monitor EVO (monitoring software)	K0505
RP monitor Evo10 (monitoring software)	K1701
Printer (AC adapter and communication cable supplied)	DPU-S445



Unit: mm

Dimensional Drawings

Specifications subject to change without notice