Compatible with a wide range of measurement of various particle sizes and types

Liquid-Borne Particle Sensor
KS-42C

- Detects particles down to 0.5 μm size, at a flow rate of 10 mL/min
- Seven particle size ranges (7 channels, factory default setting)
  \[ \geq 0.5 \, \mu m, \geq 1.0 \, \mu m, \geq 2.0 \, \mu m, \geq 3.0 \, \mu m, \geq 5.0 \, \mu m, \geq 10 \, \mu m, \geq 20 \, \mu m, \]
- Integrated leak sensor with alarm output
- User selectable channels within measurement range (using KE-40B1 function)
Specifications [KS-42C]

**Optical system**  Light-scattering method
**Light source**  Laser diode (wavelength 785 nm, rated output 5 mW)
**Laser product class**  Class 1, IEC 60825-1
**Light detector**  PIN type photodiode
**Calibration**  Polystyrene latex (PSL) particles (refractive index 1.6) in pure water
**Flow rate**  10 mL/min
**Counting efficiency**  70% to 110%

**Size range**
- 0.5 μm to 1 μm
- 2 μm, 3 μm, 5 μm, 10 μm, 20 μm

**Allowable sample type**  Any liquid that does not corrode contacting materials

**Power**  DC12 V (supplied by KE-40B1)

**Calibration**  Polystyrene latex (PSL) particles (refractive index 1.6) in pure water
**Setting range**  0.5 μm to 20 μm
**Counting efficiency**  70% to 110%
**Flow rate**  10 mL/min

**Sample inlet/outlet**  2 (dia.) x 4 (dia.) flared joint for tube
**Sample pressure range**  300 kPa (gauge pressure) or less
**Maximum particle number concentration**  1 200 particles/mL (at 5% coincidence loss less than 0.5 μm particles)
**Materials of parts exposed to sample**  Synthetic quartz, PFA, PTFE
**Light detector**  PIN type photodiode
**Light source**  Laser diode (wavelength 780 nm, rated output 5 mW)
**Optical system**  Light-scattering method

**Dimensions and weight**  125 (H) x 240 (W) x 146 (D) mm (excluding protruding parts), approx. 3 kg

**Supported OS**  Microsoft Windows XP, 7 (32 bit)

**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).

**Display**
- 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: 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

**Communication**
- RS-232C
- Communication cable CC-61A, Thermal paper TP-08, Clean thermal paper TP-10
- Memory card (CF card) (automatic storage in TSV format)
- Power: 100 to 240 V AC, 50/60 Hz, Approx. 130 VA
- Dimensions and weight: 240 (W) x 146 (D) mm, less than 80% RH (no condensation)
- 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 (128 MB) MC-12CF1/(256 MB) MC-25CF1, CFcard adapter CFC-ADP03

**Syringe Sampler KZ-30W1/30W2**
For batch measurement of liquid-borne particle sensor.

**Sample display**
- Connection cable (KZ30S180, option)

**RP monitor EVO K0505 Ver. 2**
Used for controlling 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 are changed. 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).

**Display**
- Connection to KE-40B1
- Alarm output terminal shorted during normal operation, open when internal leak is detected
- LIQUID LEAK connector

**Input/output connector**
- POWER connector
- LASER connector
- CELL connector
- LIQUID LEAK connector
- PARTİCLE COUNTER connector
- CONTROLLER connector
- ALARM connector

**Sample display**
- Connecting cable (KZ30S180, option)

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