

# **SPECIFICATIONS**

Multi-Point Monitoring System Software

KF-03



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# Outline

The Multi-Point Monitoring System Software KF-03 provides the capability to control the operation of multiple particle counters installed at various measuring points.

The system also provides the capability to create measuring groups. Up to 8 measuring groups are supported. One measuring group can have up to 31 nodes for which measuring data are managed. In the case of multi-point monitoring using tubes, the system can have up to 32 points (port) as measuring point.

Functions of the software are automatic continuous measurement, recording data of schedule automatic continuous measurement, alarm, recording of operational information, recording of each condition setting, display measuring data, display each history information, printing and automatic printing, clock calibration, backup of the database and management workers (Supported 21CFR Part11) etc.

The system using this software, 21CFR Part 11 which is related to electronic records and signatures, is available as a hybrid system without the electronic signature function.

In addition, in order to use features of this software according to the requirements of the 21CFR Part 11, it is necessary to pre-register the operator.

The operator responsibility hierarchy has three-level and function usage permissions can be set for each hierarchy.

When you operate each screen, the operator ID and login password will be required.

# Specifications

## Hardware configuration

### Computer (Windows machine)

CPU	Pentium 4 2.0 GHz or higher
RAM	2 GB or more
Drive format	CD-ROM drive
Interfaces	Ethernet port, USB port
Hard disk	80 GB or more (RAID1 recommended)

### Operating system

Microsoft Windows XP, English version

Display 17-inch TFT display

Printer Printer guaranteed to work with Microsoft Windows XP (option)

Alarm unit Used for alarm output. Ethernet to relay contact output (option)

### Communication converter

Ethernet to RS-485 communication protocol converter (option)

### Communication converter cable

For connection of particle counter and communication converter (option)

### Product supply media type

CD-ROM

Ethernet hub Number of required ports: number of measuring groups + 1 (option)

UPS (Uninterruptible Power Supply)

For computer, hub, display (option)

## Functions

### Measuring condition main screen

This screen serves for showing KF-03 continuous measuring settings, measuring status for each group, alarm event outline display, and other operation information.

### Measuring group setting

Up to 8 groups can be registered. Measuring conditions are the same for the entire group.

### Measuring point setting

Measuring groups are made up of measuring points. Settings for connected measuring device, measuring cycle, measuring time and other measuring conditions as well as for automatic measuring scheduling etc. can be made.

### Device ownership registration

Information such as serial number of owned device, management number assigned by user etc. can be registered and used when making measuring point settings.

### Scan

This function communicates with connected measuring device to obtain information, which is compared to measuring device settings

### Alarm condition main screen

This screen serves for setting conditions for the following two types of alarm, and for specifying two alarm output destinations for each.

### Alarm condition setting (group alarm)

Each measuring point in a measuring group is monitored for specified channel count values. If a problem is detected, the alarm output is triggered. Evaluation of channel count can use moving average, conversion, and continuous number of occurrences. Measuring error evaluation can also be performed.

### Alarm condition setting (system alarm)

Operator actions and system operation are monitored, and alarm output is triggered when a specified event occurs. Alarm evaluation according to a specified system error level can be performed.

### Display main screen

This screen serves for display and printing of measuring data and various information. Operator registration and maintenance are also performed at this screen.

## Measuring data

Allows displaying measuring data and printing of displayed data. Automatic printing is also possible. Measuring points to display are specified as a display group.

- Display data types

Latest data: Shows a continuously updated display of latest measuring data.

Latest section data: Shows a continuously updated display of measuring data for a specified interval before the current point.

Period specification data: Shows measuring data for a specified period.

- Display style

Table

Graph (Latest section data and Period specification data only)

Map (Latest data only)

- Switching among measuring points to display
- Properties: Common, Graph, and Map display settings.
- Print function: Displayed data can be printed.
- Automatic print function: Period specification data can be printed in certain intervals.

## Alarm condition setting history

Past settings made at the alarm condition setting screen can be displayed, and a history can be printed.

## Measuring condition setting history

Past settings made at the measuring condition main screen can be displayed, and a history can be printed.

## Operation history

Audit trail data including system operation information, operator action information, and alarm event information can be displayed and printed.

## Operator registration

Serves for registering operator to use the KF-03 software, displaying a list of registered operators, displaying a setting change history for individual operators, and for printing the displayed information.

Clock setting Serves for setting the clock of the computer where the KF-03 software is installed. Manual input is possible.

Backup	Electronic data in the database can be backed up using full backup as well as differential backup that covers only data that have changed since the last backup. Before performing a full backup, measurement must be stopped. After a full backup has been performed, data records that are one year old or more can be deleted, and restore is possible.
Information	Shows version information about the KF-03 software.
Automatic logout function	A function that automatically performs logout after a certain period of inactivity.
21CFR Part11 support	Supported as a hybrid system without the electronic signature function.
Electronic signature support	Supported if an application for creating PDF files is installed on the computer where KF-03 is running. Printable files can then be output as PDF files. The electronic signature support uses the corresponding function of the PDF creation application.
Measuring modes	
Multi (R) mode	Designed for use with Rion particle counters other than the KM series. Up to 31 particle counters can be configured in a bus line and subline configuration, and connected to the Ethernet port via communication converters. The maximum number of measuring points in the system is 248 (31 units × 8 groups).
Multi (M) mode	Designed for use with Rion particle counters of the KM series. Up to 31 particle counters can be configured in a bus line and subline configuration, and connected to the Ethernet port via communication converters. The maximum number of measuring points in the system is 248 (31 units × 8 groups).
Manifold (M) mode	Designed for use with tube multi-point type manifold systems. Particle counters and manifold device are connected via dedicated cables, and connected to the Ethernet port via communication converters. The ports of the manifold system are then switched for measuring control. The maximum number of measuring points in the system is 256 (32 units × 8 groups).

#### Operator registration restrictions

Once registered, operators cannot be deleted. Disabling all function use permissions of an operator is possible, but the operator ID will still be managed in the system history. Reusing an operator ID is therefore not possible.

#### Number of computers

One computer is designated for controlling the system.

#### Number of measuring groups

Up to 8 groups can be registered in the system.

#### Number of measuring points (connected nodes)

Up to 256 points can be registered in the system (depending on measuring mode).

#### Channels

Up to 10 channels can be set per measuring point.

#### Number of graph elements

Up to 16 elements can be represented in a graph.

#### Maintenance and validation

**Maintenance** Based on maintenance contract. For details, please contact the supplier.

**Validation** Supported. For implementation details, please contact the supplier.

Supplied accessories	Protection Key (HASP)	1
	Instruction Manual (Reference Manual)	1
	Inspection Certificate	1