OMRON

Condition Monitoring Configuration Tool

Usage Guide

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N240-E1-03

NOTE

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Safety Precautions

Definition of Precautionary Information

The following notation is used in this Guide to provide precautions required to ensure safe usage of the product.

The safety precautions that are provided are extremely important to safety. Always read and follow the information provided in all safety precautions. The following notation is used.

⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

Symbols

Symbol		Meaning
Mandatory Caution		• General Caution Indicates non-specific general cautions, warnings, and dangers.

Take adequate security measures against DDoS attacks (Distributed Denial of Service attacks), computer viruses and other technologically harmful programs, unauthorized access and other possible attacks before using this product.

⚠ CAUTION

Security Measures

Anti-virus protection

Install the latest commercial-quality antivirus software on the computer connected to a control/monitor system and maintain to keep the software up-to-date.

Security measures to prevent unauthorized access

Take the following measures to prevent unauthorized access to our products.

- Install physical controls so that only authorized personnel can access control/monitor systems and equipment.
- Reduce connections to a control/monitor system and equipment via networks to prevent access from untrusted devices.
- Install firewalls to shut down unused communications ports and limit communications hosts and isolate a control/monitor system and equipment from the IT network.
- Use a virtual private network (VPN) for remote access to a control/monitor system and equipment.
- Scan virus to ensure safety of SD cards or other external storages before connecting them to a control/monitor system and equipment.

Data input and output protection

Validate backups and ranges to cope with unintentional modification of input/output data to a control/monitor system and equipment.

- Checking the scope of data
- Checking validity of backups and preparing data for restore in case of data tampering and abnormalities
- Safety design, such as emergency shutdown, in case of data tampering and abnormalities

Data recovery

Perform regular backups and keep the data up-to-date for data loss prevention.

Security Measures of Condition Monitoring Configuration Tool

To prevent computer viruses, install antivirus software on a computer where you use this software. Make sure to keep the antivirus software updated.

Keep your computer's OS updated to avoid security risks caused by a vulnerability in the OS. Manage usernames and passwords in the OS or this software carefully to protect them from unauthorized uses.

Always use the highest version of this software to add new features, increase operability, and enhance security.

Set up a firewall (E.g., disabling unused communication ports, limiting communication hosts, etc.) on a network of a control/monitor system and devices, and ensure isolation from other IT networks.

Make sure to connect to a control/monitor system within the firewall.

Use a virtual private network (VPN) for remote access to a control/monitor system and devices from this software.

Precautions for Safe Use

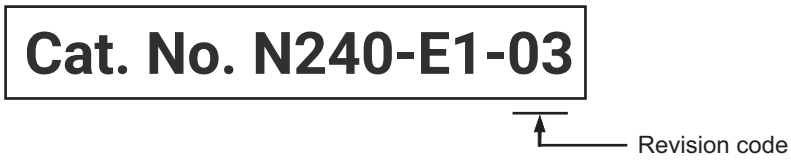
- In addition to this Guide, also refer to the Instruction Manual and User's Manual for each Condition Monitoring Device.
- Ensure that a destination Condition Monitoring Device is not in a monitoring state before you transfer parameters to it.
- Do not set the project file (extension ".icproj") created with this tool to Read Only.
- Uninstall an old version before installing a newer version of this tool.

Precautions for Correct Use

- Use the Condition Monitoring Configuration Tool only on the specified operating system.
  The Condition Monitoring Configuration Tool may malfunction on other operating systems.
- Do not use the Condition Monitoring Configuration Tool near electrical noise sources such as motors and power lines. Noise on communication cables may lead to potential malfunctions.
- Do not run any other software applications while you are using the Condition Monitoring Configurations Tool. Doing so may cause log data sampling to be skipped during communications with a host device such as data collection systems, or other communications errors may occur.

Revision History

A revision code of this Guide appears as a suffix to the catalog number on the front and back covers of this Guide.



Revision code	Date	Description
01	February 2024	Original production
02	March 2024	Made revisions accompanying the upgrade to Condition Monitoring Configuration Tool version 1.2. • K7DD: page 23: Corrected description of Data Registration for Digital Maintenance Log. page 40: Added a note for Data Registration phase of 3-1 K7DD Features Analysis. • K6PM-TH: page 30: Added TR3 output mode parameter accompanying the functional upgrade of the Main Unit. • K7TM: page 24: Added description of the **Read Log Data** Button. page 35: Changed and added the K7TM Reference Resistance Value Registration Screen. • All models: page 52: Added a note for the logging operating conditions.
03	September 2024	Made revisions accompanying the upgrade to Condition Monitoring Configuration Tool version 1.2.1. • K7DD: page 36: Added Parameter Calculation Cycle to the setting parameters

Related Manuals

The following table shows related manuals. Use these manuals for reference.

Manual name	Cat. No.
Condition Monitoring Configuration Tool Usage Guide (this manual)	N240
K6CM Motor Condition Monitoring Device User's Manual	N219
K6PM-TH Thermal Condition Monitoring Device User's Manual	H231
K7GE-MG Insulation Resistance Monitoring Device User's Manual	N224
K7TM Heater Condition Monitoring Device User's Manual	N227
K7DD Power Line Data Generator User's Manual	N233

Manual Structure

Icons

Special information in this manual is classified as follows:

Icon	Meaning
	Additional information to read as required. This information is provided to increase understanding or give hints on operation.

Introduction

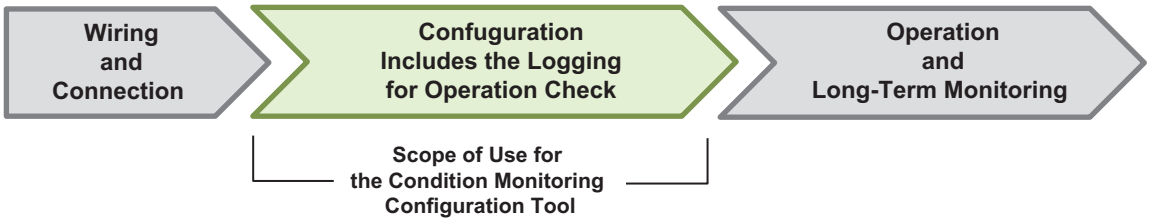
Overview

Condition Monitoring Configuration Tool (hereafter referred to as the 'Tool' when applicable) is software that supports the configuration of the following devices.

Product name	Model
Motor Condition Monitoring Device	K6CM
Temperature Condition Monitoring Device	K6PM
Insulation resistance Monitoring Device	K7GE
Heaters Condition Monitoring Device	K7TM
Advanced Motor Condition Monitoring Device	K7DD

● Scope of use for the Tool

Although the Tool is equipped with a logging function to collect and save measurement data, it is only used for configuration support. It is not intended for long-term operation. If you want to collect measurement data over a long period of time, build a system that suits your application.



Features

Simple Configuration

This Tool allows you to intuitively configure condition monitoring devices by following the display screen.

Logging

This Tool can accumulate and store measurement data collected from a condition monitoring device in chronological order.

Digital Maintenance Log (K7DD only)

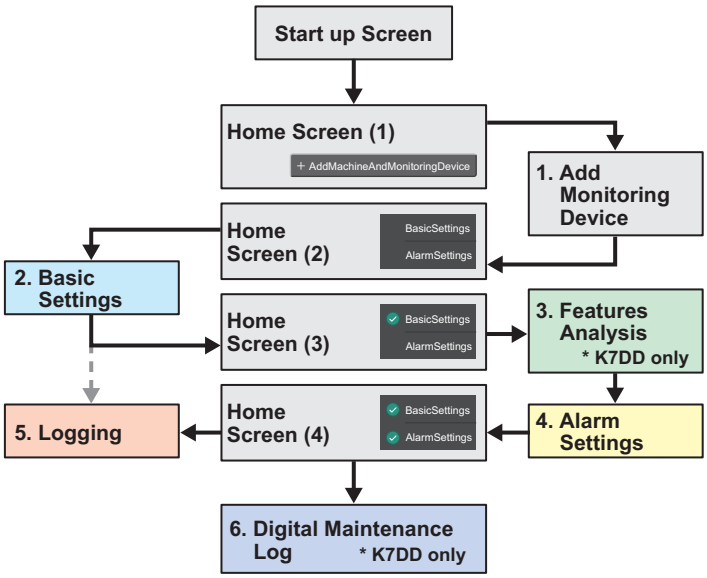
This function allows you to estimate the progression degree of abnormal condition and record your equipment condition as data.

Screen Transitions of The Tool and Section Structure of This Guide

Screen Transition of The Tool

This Tool allows you to configure settings in order from **(1) Add Monitoring Device** through **(6) Digital Maintenance Log** via the *Home Screen*. The *Home Screen* changes four times as the configuration progresses.

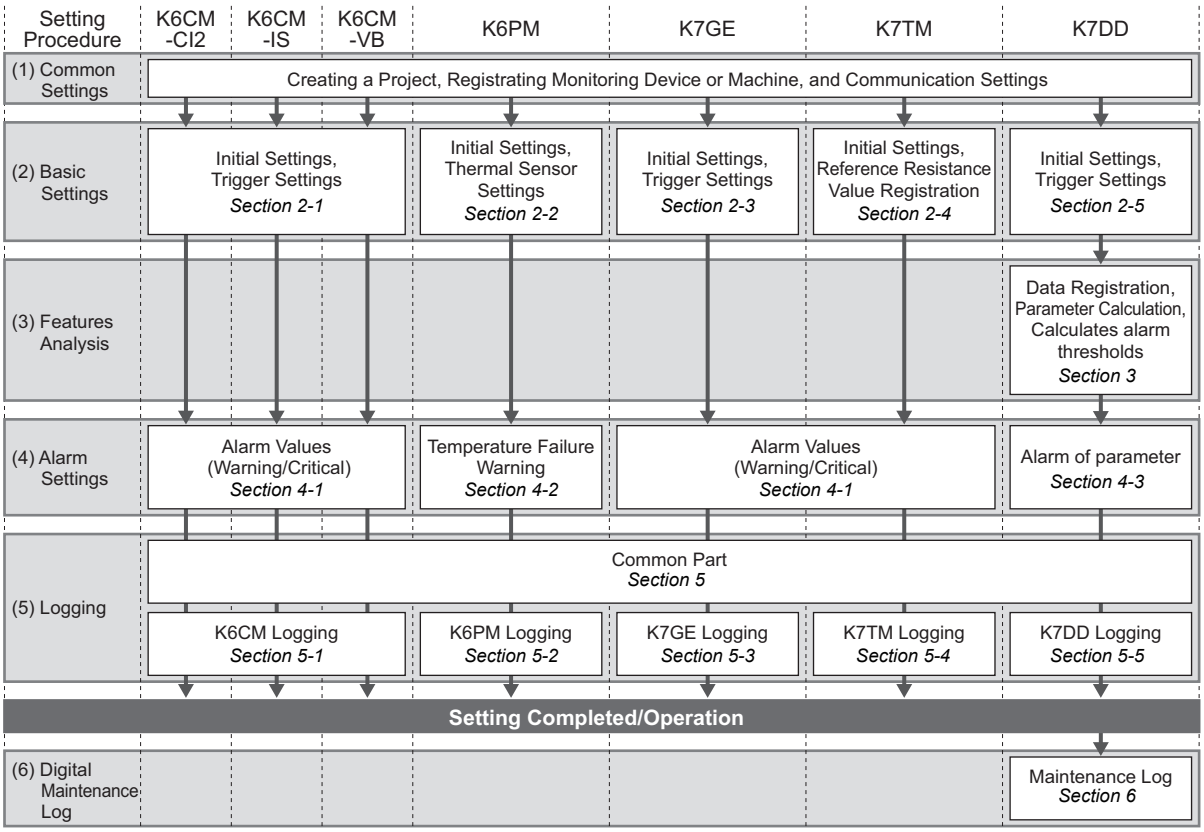
When moving to the next setting screen, the Buttons displayed on the screen will be hidden or inactive if the setting is not available.
The Tool is designed for easy setup, allowing you to proceed with configuration effortlessly by clicking on the active Buttons.



Section Structure of This Guide

This Guide is structured to align with the screen transition of this tool. It includes sections that offer both general explanations applicable to all models and explanations specific to each model. In the general explanation section, the interface screens are described for each model. If the only difference between these screens is the pull-down Menu items, the interface details are considered to be the same and are explained accordingly.

For advance preparations such as device wiring and communications connections, refer to the manual for each condition monitoring device.

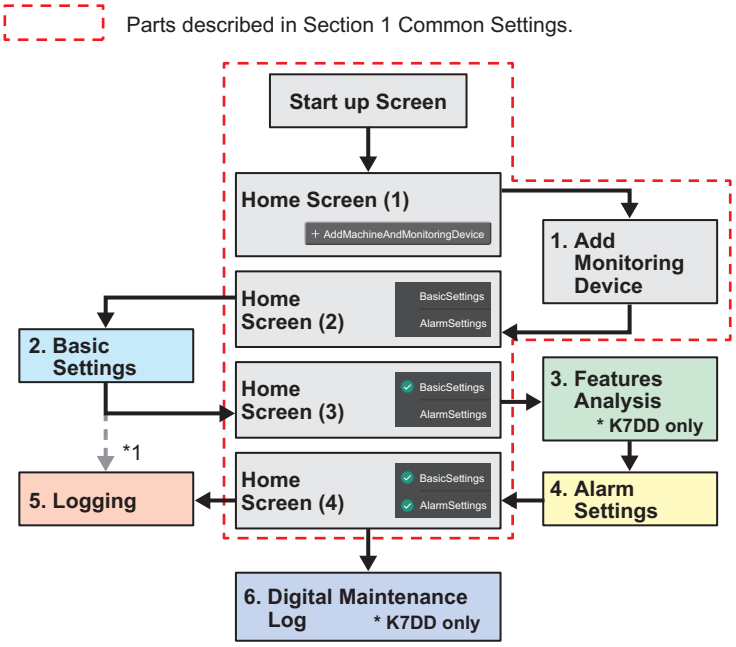


1. Common Settings

In this section, explanations for the following screen transitions are provided. The content primarily includes information that cannot be inferred from the Tool screen.

- Startup Screen
- Home Screen (1): 1. Add Monitoring Device
- Home Screen (2): Communication Settings
- Home Screen (3)
- Home Screen (4)

If it is not described for each model, read on as it is a common description for each model.



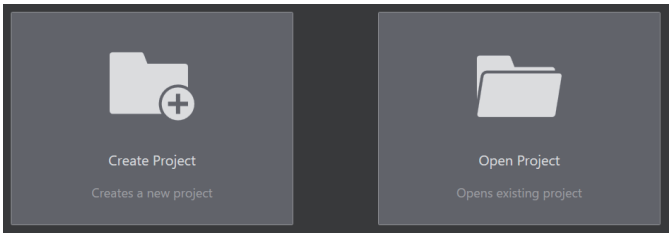
*1. You can start logging after completing the setting items in *Basic Settings*. However, since the Alarm Settings are not yet set, the Tool's graph does not display red and yellow lines for the alarm values.

1-1 Startup Screen/ Creating a Project

How to Create a Project

1 Startup the Tool.

The *Startup* Screen is displayed.



Startup Screen

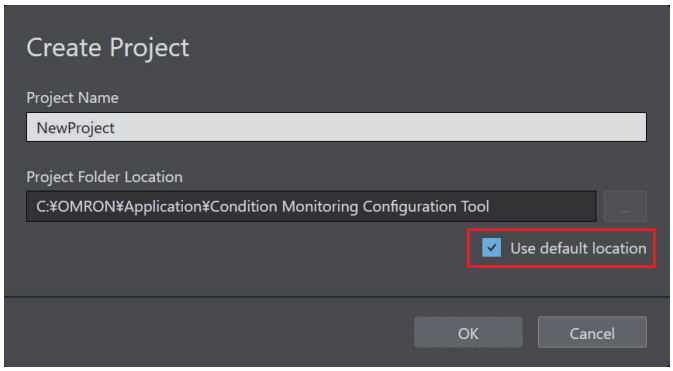
● Create a New Project

2 Click the **Create Project** Button.

The **Create Project** Dialog Box is displayed.

3 Enter the *Project Name* and select *Project Folder Location*, and then click the **OK** Button.
Move to the *Home Screen (1)*.

If you click the **Cancel** Button, you will return to the *Startup* Screen without saving your settings.



Create Project Dialog Box

If you check the box for 'Use default location,' the project file will be saved to the following location.
C:\OMRON\Application\Condition Monitoring Configuration Tool

How to Save the Project
Select *Save Project* from the *File* Menu at the top left of the screen to save the project.
Note that the project will not be saved automatically.

● Open a Created Project File

2 Click the **Open Project** Button.

The dialog box for selecting a project file is displayed.

3 Select a created project file, and then click the **OK** Button.

Your project file is imported to this Tool.

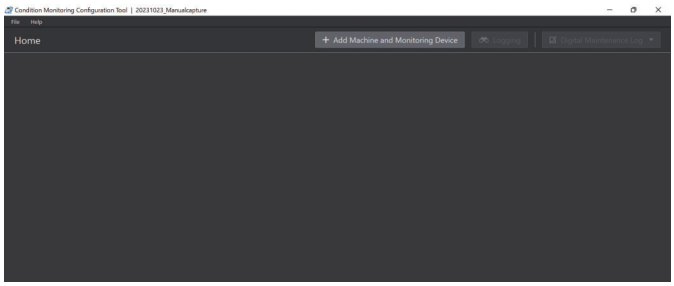
Created project files have the following extension:
• ". icproj": Project file created with the Tool.
• ".k_dd": Project file created with K7DD Support Tool.

1-2 Add Monitoring Device (Home Screen (1))

How to Add Monitoring Device

1 Click the **Add Machine and Monitoring Device** Button on the *Home Screen (1)*.

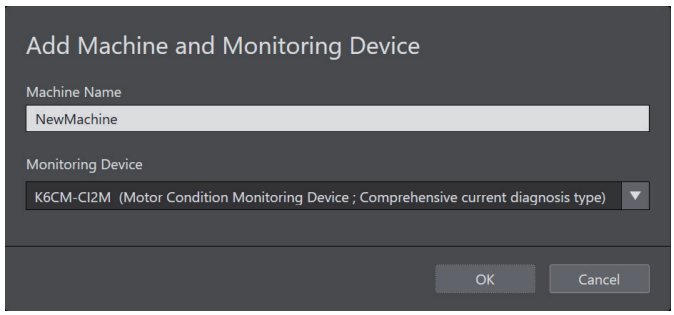
The **Add Machine and Monitoring Device** Dialog Box is displayed.



Home Screen (1)

2 Enter **Machine Name** and select **Monitoring Device** from the Pull-down Menu.

- Device Name Example: Master axis motor



Add Machine and Monitoring Device Dialog Box

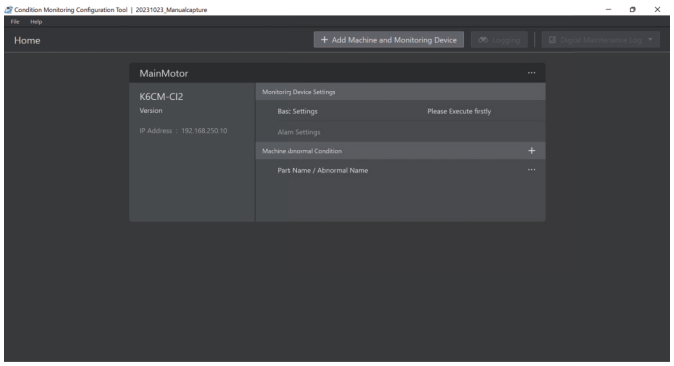
- Monitoring Device from the Pull-down Menu:

  K6CM-CI2M (Motor Condition Monitoring Device Comprehensive Current Diagnosis Type) *Default
  K6CM-ISM (Motor Condition Monitoring Device Insulation Resistance Type)
  K6CM-VBM (Motor Condition Monitoring Device Vibration & Temperature Type)
  K6PM-THM (Thermal Condition Monitoring Device)
  K7DD-PQM (Advanced Motor Condition Monitoring Device)
  K7GE-MGM (Insulation Resistance Monitoring Device)
  K7TM-A2M (Heater Condition Monitoring Device)

3 Click the **OK** Button.

Move to the *Home Screen (2)*.

If you click the **Cancel** Button, you will return to the *Startup* Screen without saving your settings.



Home Screen (2)

1-3 Communication Settings (Home Screen (2))

The Basic Settings consists of the following three items. You can set it on the *Home Screen (2)*.

Settings Item	Description
Communication Settings	The procedure for communications settings differs between models starting with the prefix K6 and models starting with K7. See *this Section*.
Initial Settings	The *Initial Settings* differ depending on the model. See *Section 2*.
Trigger Settings *1	The *Trigger Settings* depends on the model. See *Section 2.*

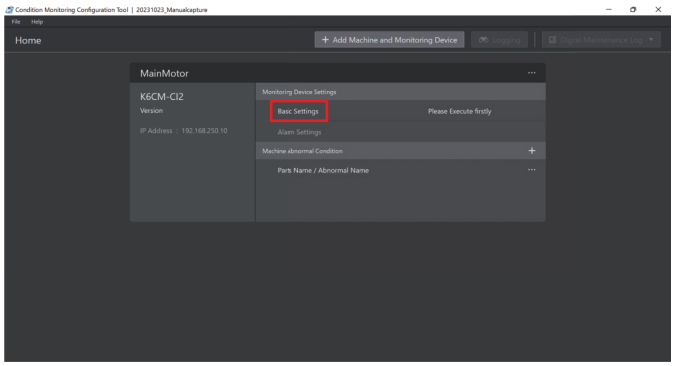
*1. The setting name differs depending on the model.

How to Make Communication Settings

1 Click Basic Settings on the *Home Screen (2)*.

The **Communication Settings** Dialog Box is displayed.

Before setting up communications, turn on the power of the condition monitoring device.



Home Screen (2)

You need to set the IP address of your computer to the same network as the target communication IP address, to use the Tool. Refer to the *4-3 IP Address Setting* in the *K6CM User's Manual (N219)* as a setting example.

*1. For K6CM and K6PM, set the IP address of each condition monitoring device itself. For K7GE, K7TM, and K7DD, set the IP address of the communication converter. Refer to the communication converter instruction manual for details.

● K6CM and K6PM

2 Enter the *IP address* of the condition monitoring device in the *Communication Test* Field and click the **Execute** Button.

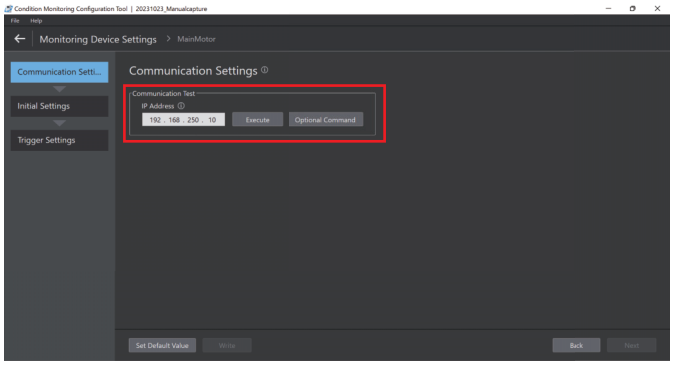
The results of the communication test is displayed as a message.

If the communication test is successful, proceed with the settings.

If the communication test fails, follow the instructions in the message and retry the communication test.

When the condition monitoring device and this Tool are successfully connected, the *IP address*, *Subnet Mask*, and *Default Gateway* will be automatically displayed in each Field.

If you want to change the IP address, change the settings on the screen and click the **Write** Button.



K6CM/K6PM Communication Settings Dialog Box

● K7GE, K7TM and K7DD

2 Enter the IP address of the RS-485 to Ethernet communications converter in the *IP Address* Field.

3 From the Slave Address pull-down Menu, select the communication unit number that is set with the rotary switches on the model K7**.

4 Click the **Execute** Button in *Communication Test* Field.

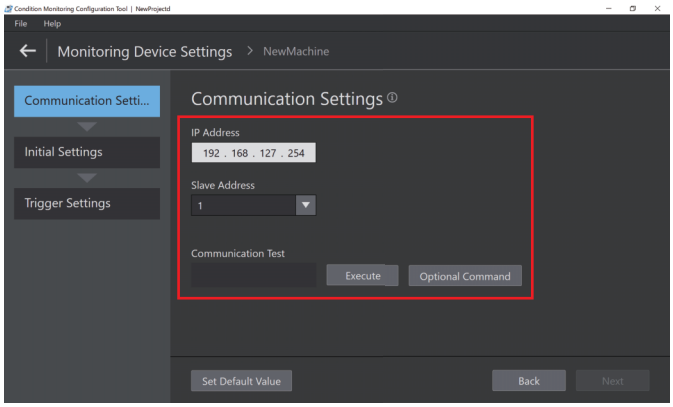
The results of the *Communication Test* is displayed as a message.

If the *Communication Test* is successful, proceed with the settings.

If the communication test fails, follow the instructions in the message and retry the communication test.

5 Click the **Next** Button if *Succeeded* is displayed in the *Communication Test* Field.

Move to The *Initial Settings*.



K7GE/K7TM/K7DD Communication Settings Dialog Box

Optional Command
A pop-up for Modbus optional commands is displayed by clicking the **Optional Command** Button, enabling you to send any Modbus command of your choice. For information on the send commands, refer to the manuals of the condition monitoring devices.

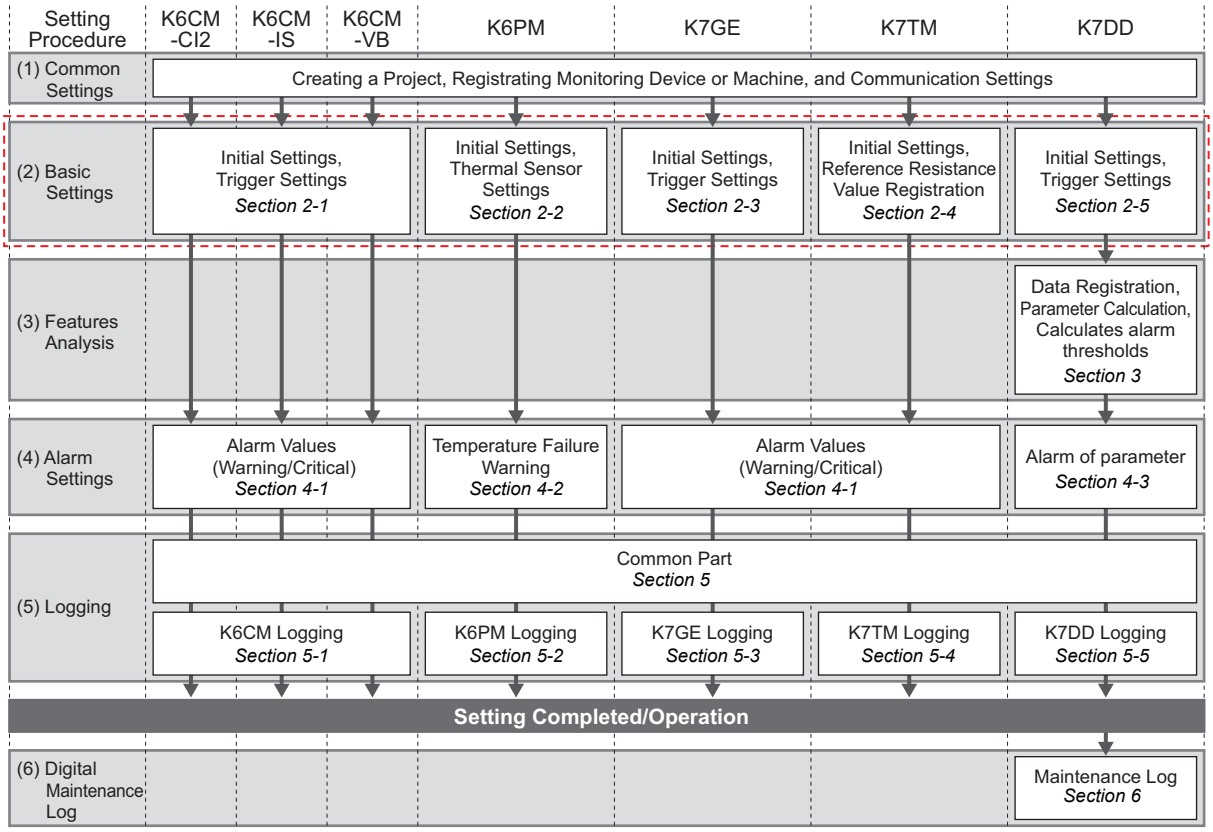
You can set the *IP Address*, *Subnet Mask*, and *Default Gateway* for K6CM and K6PM. Execute the Communication Test again after setting them.

With the procedures above, the *Communication Settings* in the *Basic Settings* can be completed.

The *Initial Settings* and *Trigger Settings**1 in the *Basic Settings* parameter for each condition monitoring device are described in *Section 2*.

Refer to the respective page numbers for each model listed under *(2) Basic Settings* in the figure below.

*1 The setting name differs depending on the model.

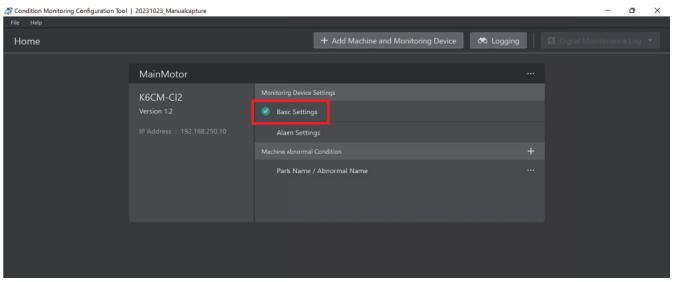


1-4 Machine Abnormal Condition Registration/Alarm Thresholds Setting (Home Screen (3))

After you complete the three settings in *Basic Settings* parameter (*Communication Settings, Initial Settings, and Trigger Settings**1), the *Home Screen (3)* is displayed.

A check mark appears to the left of *Basic Settings* parameter.

*1. The setting name differs depending on the model.



Home Screen (3)

You can set the following items on the *Home Screen (3)*:

Setting Item	Description
Machine Abnormal Condition	The registration of specific parts name and abnormal name can be made. See *this Section*.
Alarm Settings	The *Alarm Settings* differs depending on the model. See *Section 2*.

How to Register Machine Abnormal Condition

● K6CM/K6PM/K7GE/K7TM

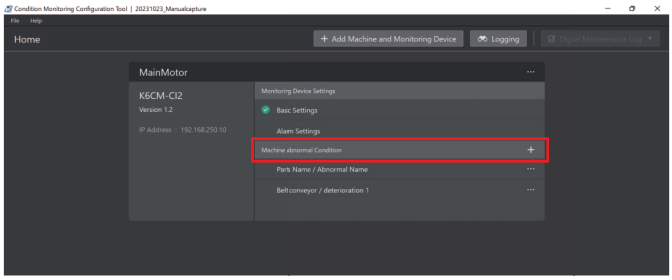
1 Click the + Button to the right of *Machine Abnormal Condition* on the *Home Screen (3)*.

You can register the parts name and abnormal name.

Example:

K6PM: *Contactor/Abnormal temperature inside the panel*

K6CM: *Belt Conveyor/Degradation level 1*



Home Screen (3)

● K7DD

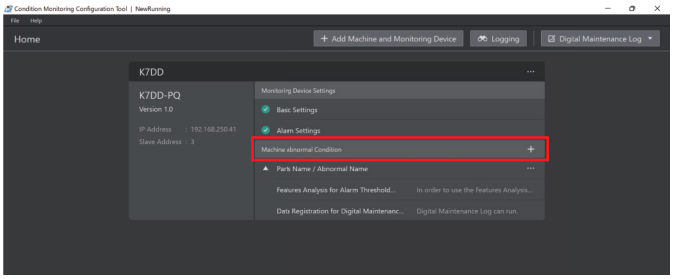
1 Click the + Button to the right of *Machine Abnormal Condition* on the *Home Screen (3)*.

You can register the parts name and abnormal name.

Example:

K7DD: *Blade/Wear*

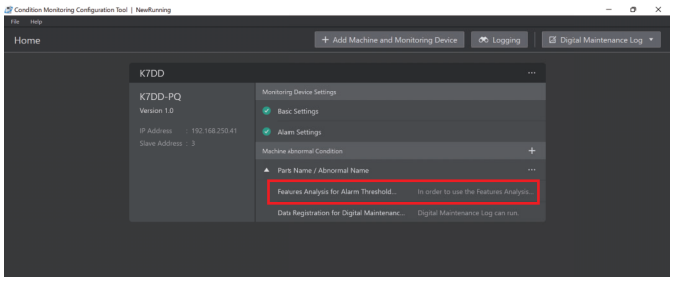
You can register multiple abnormal names.



Home Screen (3)

2 Click **Features Analysis for Alarm Threshold Calculation** to go to the next screen.

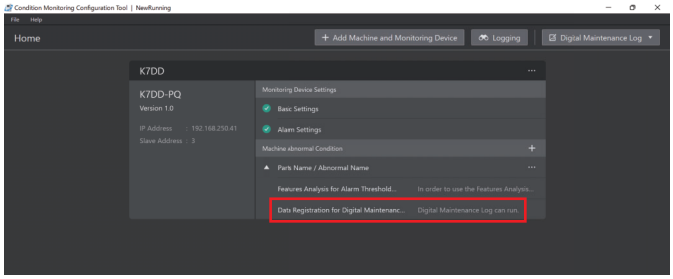
Refer to *Section 3 Features Analysis* on page 39 for details.



Home Screen (3)

Using Digital Maintenance Log

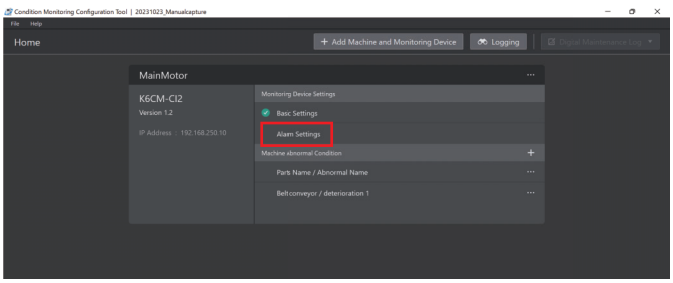
If you only want to use the Digital Maintenance Log function without set an alarm, skip the Step 2 and click to the Data Registration for Digital Maintenance Log.
The Tool will be moved to the screen of the Data Registration phase of Feature Analysis, and by registering the data, the Digital Maintenance Log function can be used.
Refer to the K7DD Data Registration in 3-1 K7DD Feature Analysis on page 36 for details.



Home Screen (3)

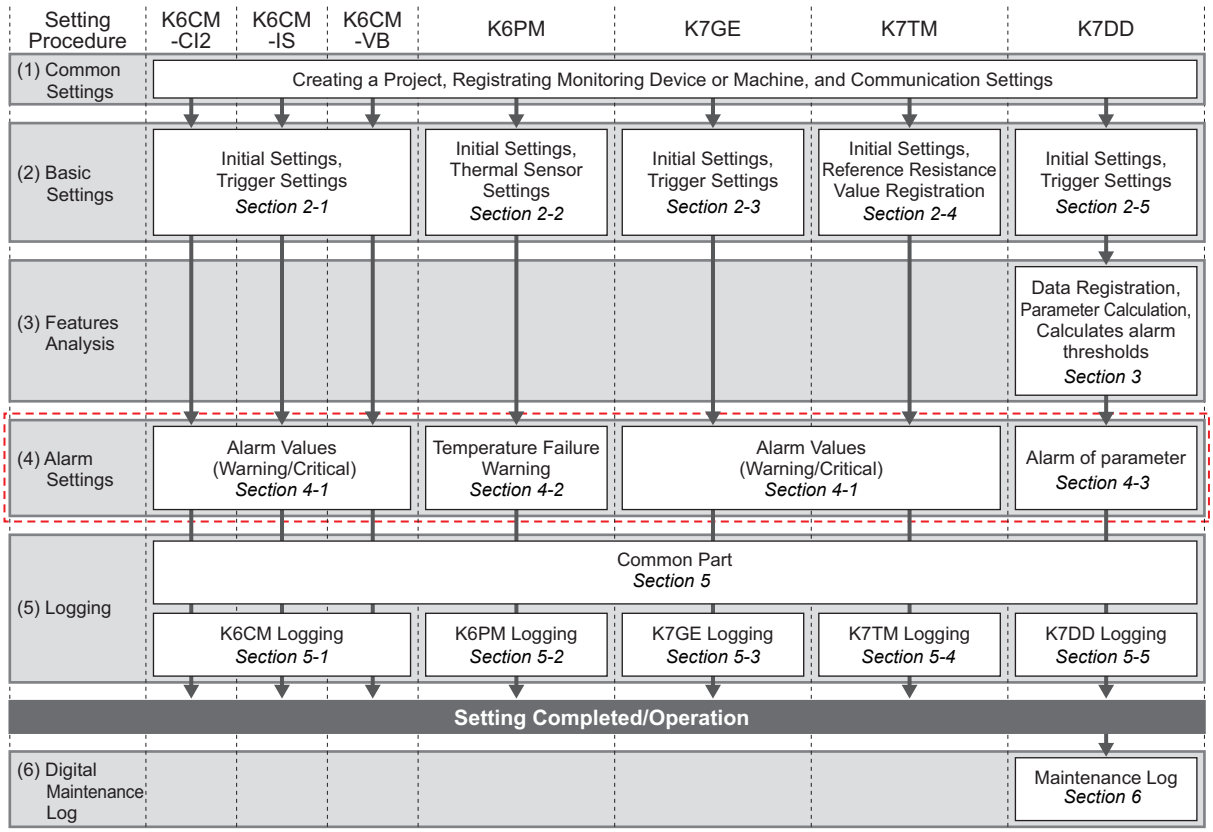
How to Set Alarm Thresholds

1 Click **Alarm Settings** on the *Home Screen (3)*.



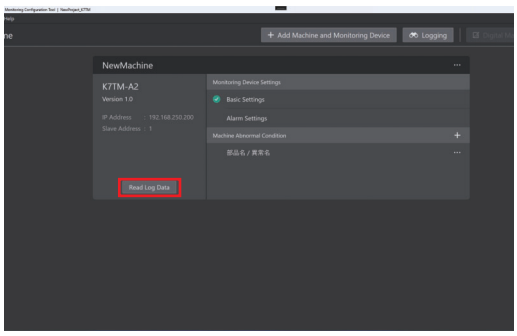
Home Screen (3)

Alarm Settings parameter is described for each condition monitoring device.
For details on *Alarm Settings* parameter, refer to the respective page numbers for each model listed under *(4) Alarm Settings* in the figure below.



When you save a project from the K7TM Home Screen (3) or later, the **Read Log Data** Button will be displayed in active state. You can click on that Button to read the log below.
- Reference Resistance Value Change Rate
- Voltage value
- Current value
- The above three recording times

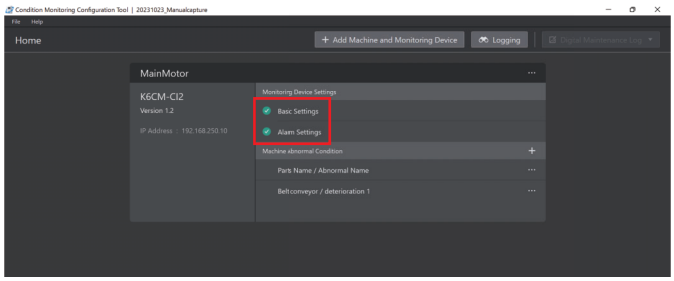
You can use this function with the Condition Monitoring Configuration Tool Ver.1.2 or later. Refer to 4-6 Logging Function in the K7TM User's Manual for details on the logging function of the K7TM.



Home Screen (3)

1-5 Logging/Digital Maintenance Log (Home Screen (4))

After setting the parameter of *Alarm Settings*, the *Home Screen (4)* is displayed. A check mark appears to the left of *Alarm Settings*.



Home Screen (4)

You can set the following items on the *Home Screen (4)*:

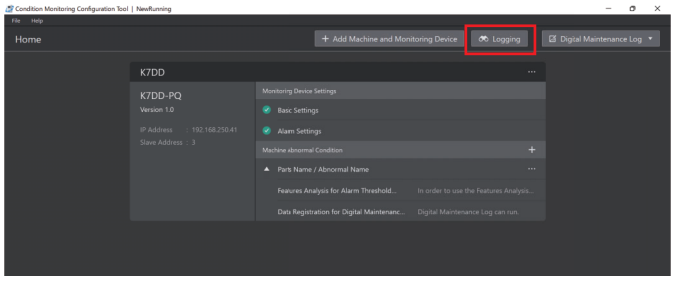
Settings Item	Description
Logging	The logging settings differ depending on the model. See *Section 5*.
Digital Maintenance Log	This function is available only for K7DD. See *Section 6*.

How to Log the Data

1 Click the **Logging** Button on the *Home Screen (4)*.

Check that the alarm value set in *Alarm Settings* is within the normal range and not in an abnormal condition.
Be sure to perform logging while the equipment is actually operating.

Refer to *Section 5 Logging* on page 51 for details.



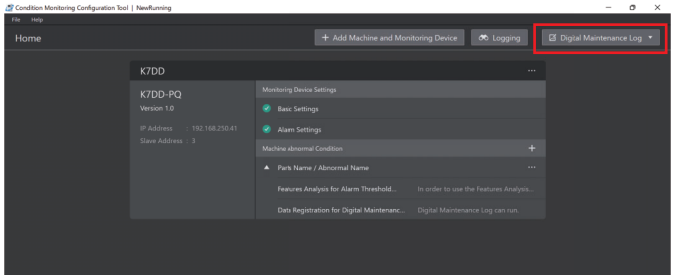
Home Screen (4)

How to Make Digital Maintenance Log Setting

1 Click the **Digital Maintenance Log** Button on the *Home Screen (4)*.

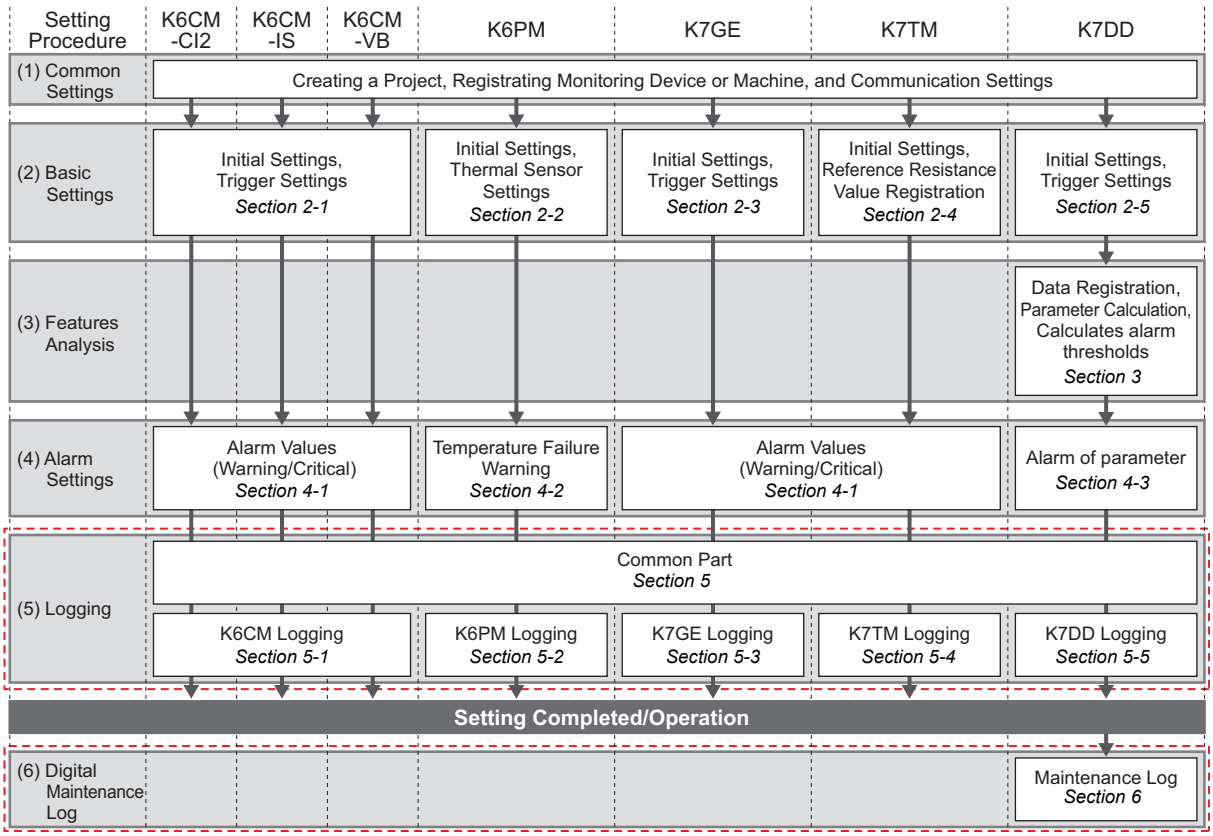
This function is displayed on the screen only for K7DD.

Refer to *Section 6 Digital Maintenance Log* on page 58 for details.



Home Screen (4)

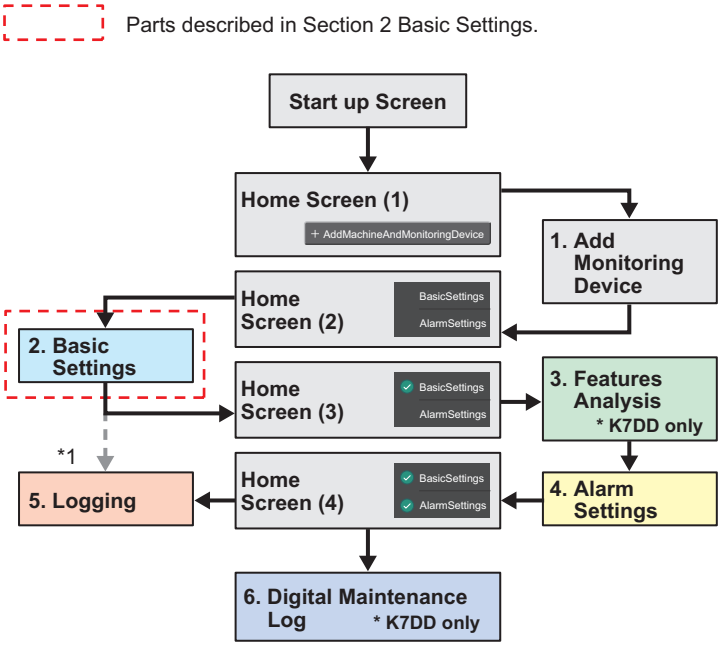
For details on the *Logging parameter*, refer to the respective page numbers for each model listed under *(5) Logging* in the figure below.
For details on *Digital Maintenance Log* parameter of the K7DD, refer to the page number listed under *(6) Digital maintenance Log*.



2. Basic Settings

In this section, explanations for the *Basic Settings* are provided. The content primarily includes information that cannot be inferred from the Tool screen.

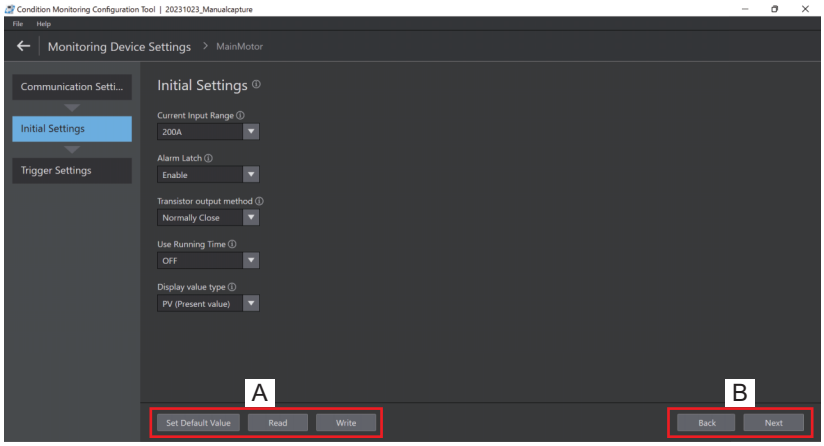
- K6CM (three models)
- K6PM
- K7GE
- K7TM
- K7DD



*1. You can start logging after completing the setting items in *Basic Settings*.
However, since the Alarm Settings are not yet set, the Tool's graph does not display red and yellow lines for the alarm values.

Common Part

The Buttons in the common section of the *Basic Settings* for each condition monitoring device are described below.



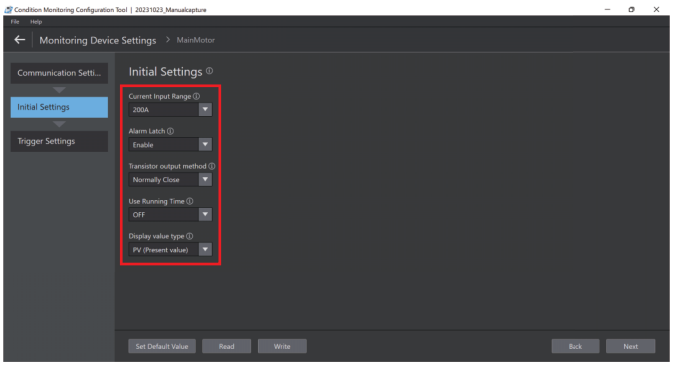
Area	Button name	Description
A	Set Default Value	Sets the default values for the displayed setting items.
	Read	Reads the current setting values from the condition monitoring device and applies them to the setting items.
	Write	Writes the configured setting items to the target condition monitoring device.
B	Back	Back to the previous screen.
	Next	The Button is enabled for clicking when the reading or writing is successfully completed or when the settings for the screen are completed.

2-1 K6CM Basic Settings

The *Initial Settings* and *Trigger Settings* in the *Basic Settings* are described below. Refer to *1-3* Communication Settings (Home Screen (2)) for information on *Communication Settings*.

K6CM Initial Settings

This is the *Initial Settings* Screen in the *Basic Settings*.
The setting parameters for three K6CM models are as follows:



Initial Settings

Motor Condition Monitoring Device	Setting Parameter
K6CM-CI2 Comprehensive current diagnosis type	Current Input Range, Alarm Latch, Transistor Output Method, Use Running Time, Display Value Type
K6CM-VB Vibration & temperature type	Temperature Unit, Alarm Latch, Transistor Output Method, Use Running Time, Display Value Type
K6CM-IS Insulation resistance type	Circuit Topology, Using Inverter*1, Alarm Latch, Transistor Output Method, Use Running Time, Display Value Type

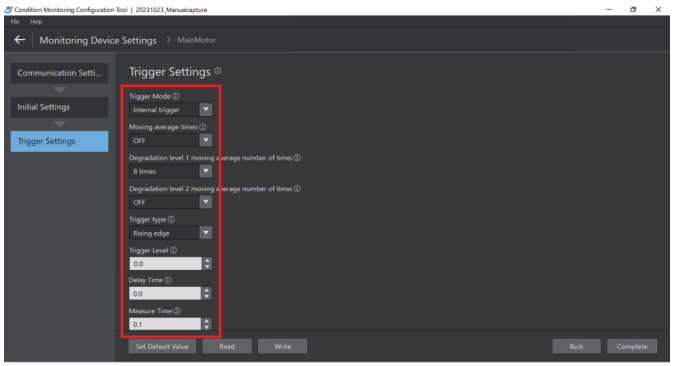
*1. If *Using inverter* parameter is set to ON, the *Inverter special measurement* is also displayed.

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

K6CM Trigger Settings

The *Trigger Settings* are used to specify the measurement timing conducted by the condition monitoring device.
If noise is induced when the equipment starts up or when operation is unstable, set the measurement timing while taking into consideration the time required for noise removal over a specified period. Refer to *Section 3 Measuring and monitoring System* of the *K6CM User's Manual (N224)* for details.

This is the *Trigger Settings* Screen in the *Basic Settings*. The settings for the three K6CM models are as follows:



Trigger Settings

Motor Condition Monitoring Device	Setting Parameter
K6CM-CI2 Comprehensive current diagnosis type	Trigger Mode, Current Moving Average Times, Degradation Level 1 Moving Average Number of Times, Degradation Level 2 Moving Average Number of Times, Trigger Type, Trigger Level, Monitoring Delay Time, Monitoring Time
K6CM-VB Vibration & temperature type	Trigger Mode, Moving Average Times, Trigger Type, Trigger Level, Monitoring Delay Time, Monitoring Time
K6CM-IS Insulation resistance type	

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

2-2 K6PM Basic Settings

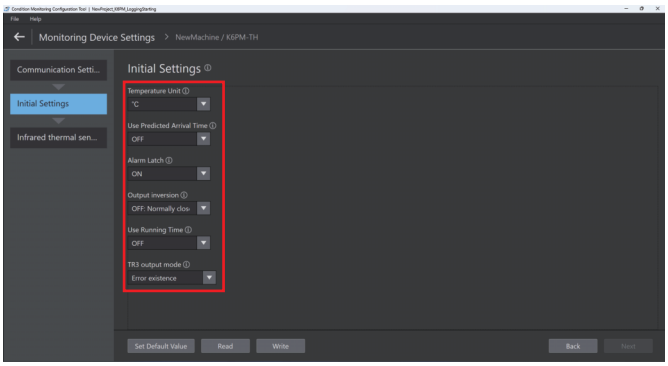
The *Initial Settings* and *Infrared Thermal Sensor Settings* in the *Basic Settings* are described below. Refer to *1-3* Communication Settings (Home Screen (2)) for information on *Communication Settings*.

K6PM does not have *Trigger Settings*.

K6PM Initial Settings

This is the *Initial Settings* Screen in the *Basic Settings*.

Setting parameters are as follows:



Initial Settings

Thermal Condition Monitoring Device	Setting Parameter
K6PM-TH	Temperature Unit, Use Arrival Prediction, Alarm Latch, Output Inversion, Use Running Time, TR3 Output Mode

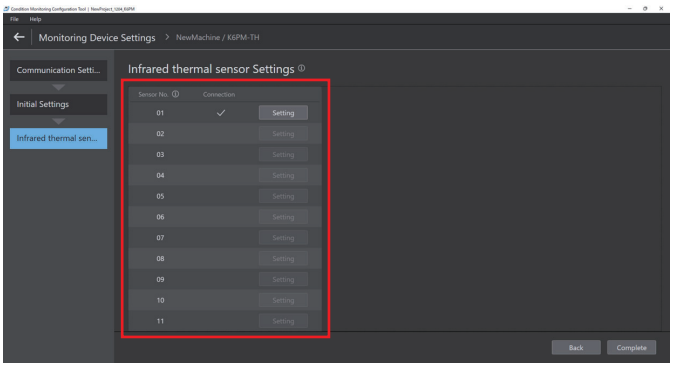
For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

K6PM Infrared Thermal Sensor Settings

Set the position of the infrared thermal sensor.

A list of sensor numbers connected to K6PM is displayed on the *Infrared Thermal Sensor Settings* Screen in the Basic Settings. The sensor number is set using the DIP switches on the side of the infrared thermal sensor.

When communication is performed normally, a check mark will appear in the *Connection*, and the **Setting** Button will be enabled.



Infrared Thermal Sensor Settings

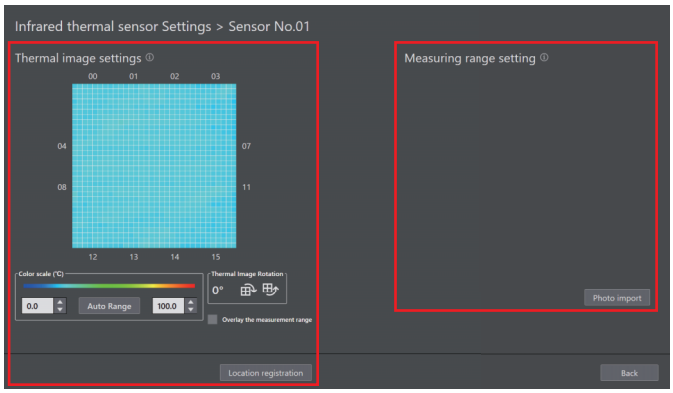
1 Click the **Setting** Button.

Set the selected infrared thermal sensor.

Left: Thermal image settings

2 The thermal image of the specified sensor number is displayed. The following settings can be made.

- Color scale settings according to the temperature
- Rotation of thermal image
- Select the *Overlay the measurement range* check box, displaying the loaded photo overlaid on the thermal image in the *Measuring range setting*. If a photo image is not registered in the Tool, the overlaying on the thermal image is not displayed.



Left: Thermal image settings
Right: Measuring range setting

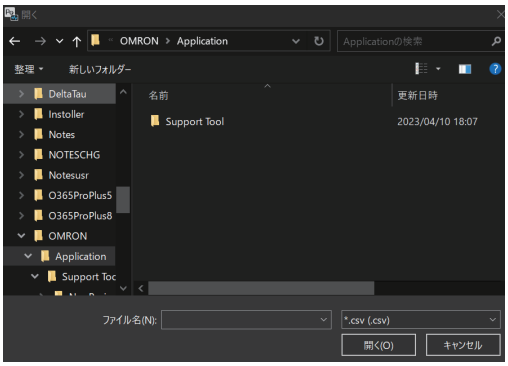
Right: Measuring range setting

3 You can import a photo to overlay on the thermal image. Click the **Photo import** Button. The Open Window is displayed, enabling you to select a photo.

4 Select the photo you want to import and click the **Open** Button.

The selectable file formats are as follows:

BITMAP (.bmp)
JPEG (.jpg)
PNG (.png)

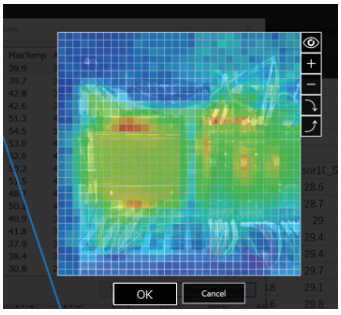


Select photos to import

Example:

Displaying a real image overlaid with a thermal image

Real image



Real image overlaid with a thermal image

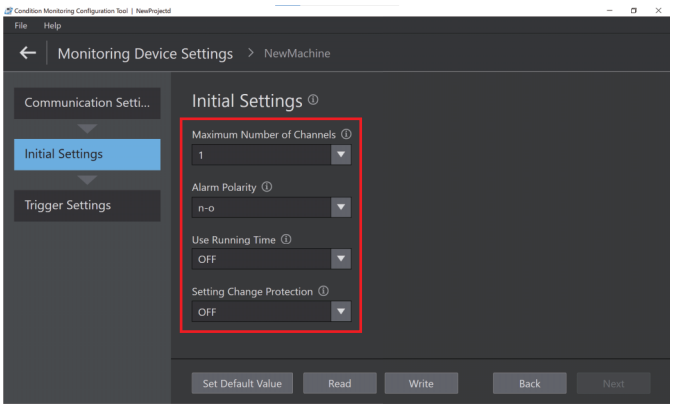
2-3 K7GE Basic Settings

The *Initial Settings* and *Trigger Settings* in the *Basic Settings* are described below. Refer to *1-3* Communication Settings (Home Screen (2)) for information on *Communication Settings*.

K7GE Initial Settings

This is the *Initial Settings* Screen in the *Basic Settings*.

Setting parameters are as follows:



Initial Settings

Insulation Resistance Monitoring Device	Setting Parameter
K7GE-MG	Maximum Number of Channels, Alarm Polarity, Use Running Time, Setting Change Protection

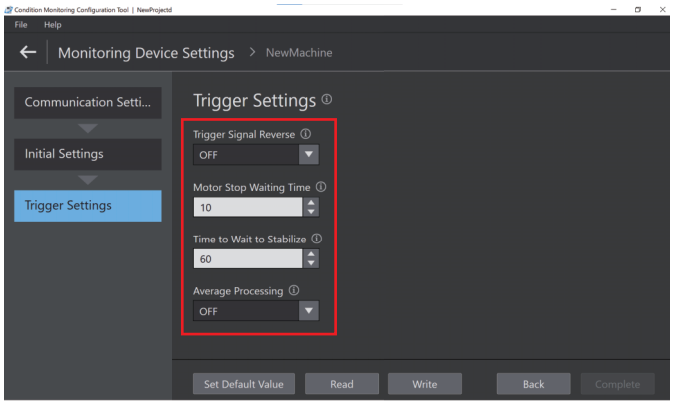
For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

K7GE Trigger Settings

K7GE automatically measures in synchronization with a trigger signal. Set the necessary parameters for automatic measurement.

This is the *Trigger Settings* Screen in the *Basic Settings*.

Setting parameters are as follows:



Trigger Settings

Insulation Resistance Monitoring Device	Setting Parameter
K7GE-MG	Trigger Signal Reverse, Motor Stop Waiting Time, Time to Wait to Stabilize, Average Processing

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

The K7GE automatic measurement consists of the following four steps. Among these, the time for *Discharge of electric charge* and *Sampling* cannot be changed. For details on operation, refer to the *K7GE-MG User's Manual (N224)*.

Step: Motor stop standby	… Set between 0 and 299 seconds inclusive.
↓	
Step: Discharge of electric charge	… Fixed at 20 seconds.
↓	
Step: Waiting for stability	… Set between 0 and 99 seconds inclusive.
↓	
Step: Sampling	… Automatic setting

2-4 K7TM Basic Settings

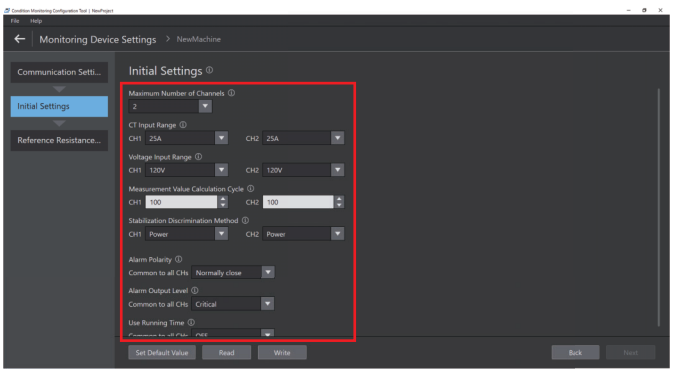
The *Initial Settings* and *Reference Resistance Value Registration* in the *Basic Settings* are described below. Refer to *1-3* Communication Settings (Home Screen (2)) for information on *Communication Settings*.

K7TM does not have *Trigger Settings*.

K7TM Initial Settings

This is the *Initial Settings* Screen in the *Basic Settings*.

Setting parameters are as follows:



Initial Settings

Heater Condition Monitoring Device	Setting Parameter
K7TM-A2	Maximum Number of Channels, CT Input Range, Voltage Input Range, Measurement Value Calculation Cycle, Stabilization Discrimination Method*1, Alarm Polarity, Alarm Output Level, Use Running Time

*1. If you select *Temperature* for the *Stabilization Discrimination Method* parameter, the following parameters will be displayed.
Baud Rate 1, Parity1, Send Wait Time 1, Temperature Set Point, Temperature Data Write Cycle

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

K7TM Reference Resistance Value Registration

This is the *Reference Resistance Value Registration* Screen in *Basic Settings*. You can register a resistance value that serves as a reference for the condition monitoring device to detect heater degradation.

Run the heater and register the reference resistance value under stable temperature conditions. When replacing the heater with a new one, it is recommended to perform this function for the corresponding heater channel.

1 Make sure the settings on the Tool match those of the condition monitoring device.

- Click the **Read** Button to read the values set in the condition monitoring device into this Tool.
- Click the **Write** Button to transfer the selected settings from the Tool to the condition monitoring device.

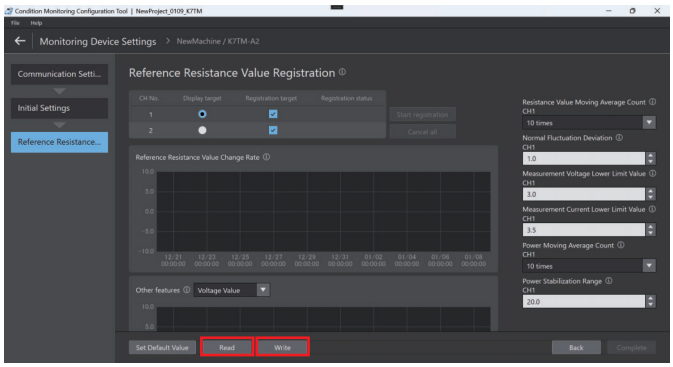
2 Check the registration target.

3 Run the heater and keep the heater temperature stable.

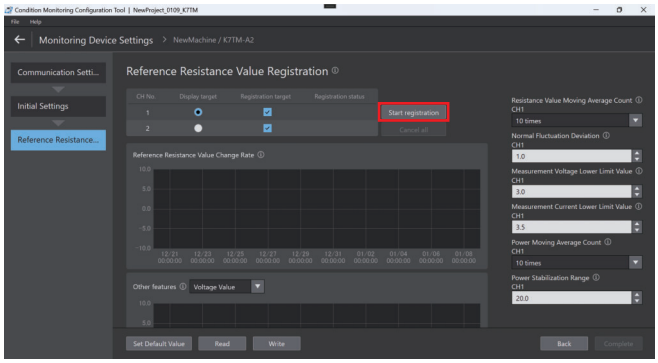
4 Click the **Start registration** Button.

The registration statuses include the following:

- Waiting for Evaluation to Start*1
- Under Evaluation
- Succeeded
- Failed
- Communications failed
- Registration aborted



Reference Resistance Value Registration



Reference Resistance Value Registration

*1. It takes about 17 minutes for the registration status to change from *Waiting for Evaluation to Start* to *Under Evaluation* when both *Measurement Value Calculation Cycle* and *Resistance Value Moving Average Count* are set to their default values.

If the *Reference Resistance Value Registration* fails, it is necessary to adjust the measurement settings. For details of the setting values, refer to *2-8 Adjustment When Reference Resistance Value Registration Failed in K7TM User's Manual (N227)*. After adjusting the settings, click the **Start registration** Button again. If the setting value is successfully adjusted on all channels, the *Reference Resistance Value Registration* will be completed.

Heater Condition Monitoring Device	Setting Parameter
K7TM-A2	Resistance Value Moving Average Count, Normal Fluctuation Deviation, Measurement Voltage Lower Limit Value, Measurement Current Lower Limit Value, Power Moving Average Count, Power Stabilization Range, Temperature Stabilization Range

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

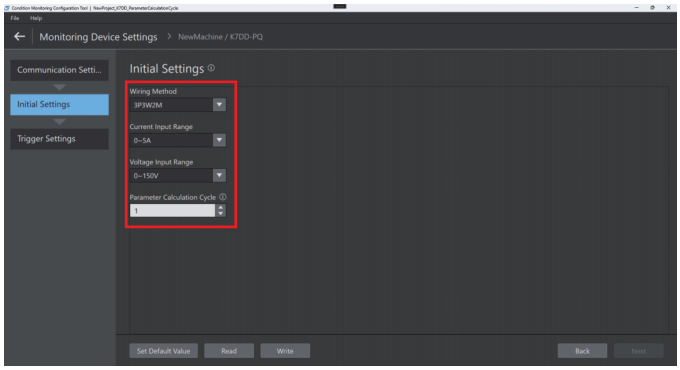
2-5 K7DD Basic Settings

The *Initial Settings* and *Trigger Settings* in the *Basic Settings* are described below. Refer to *1-3* Communication Settings (Home Screen (2)) for information on *Communication Settings*.

K7DD Initial Settings

This is the *Initial Settings* Screen in the *Basic Settings*.

Setting parameters are as follows:



Initial Settings

Advanced Motor Condition Monitoring Device	Setting Parameter
K7DD-PQ	Wiring Method*1, Current Input Range, Voltage Input Range,Parameter Calculation Cycle*2

*1. The *Wiring Method* parameter is referred to as *Wiring State* parameter in the *K7DD User's Manual*.

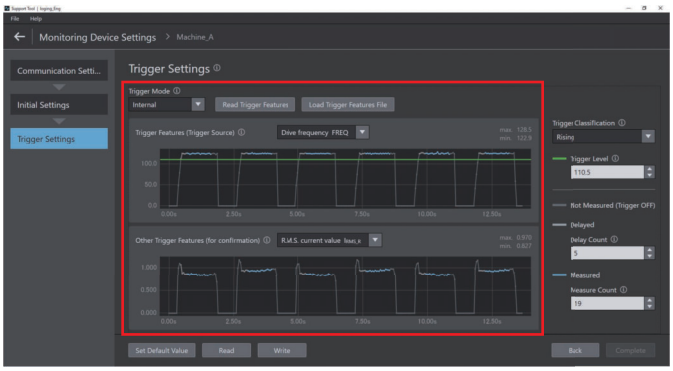
*2. You can use this function with the Condition Monitoring Configuration Tool Ver.1.2.1 or later.

K7DD Trigger Settings

The *Trigger Settings* are used to specify the measurement timing conducted by the condition monitoring device.
The trigger settings specify only the timing when the drive frequency does not change and remains a constant value, in order to measure accurately.
If noise is induced when the equipment starts up or is unstable, set the measurement timing while taking into consideration the time required for noise removal over a specified period.
For details on K7DD trigger settings, refer to *Accurate Monitoring with Trigger Settings* in *2-1 Overview of Operating Procedures* of the *K7DD User's Manual (N233)*.

This is the *Trigger Settings* Screen in the *Basic Settings*.

Setting parameters are as follows:



Trigger Settings

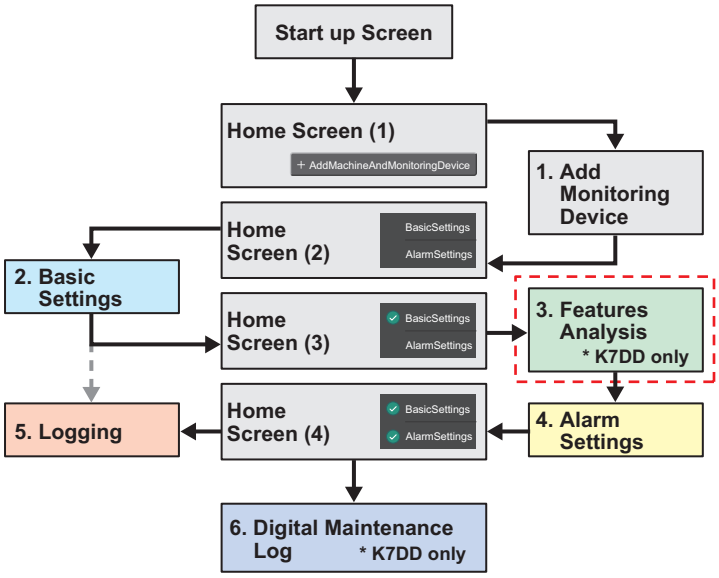
Advanced Motor Condition Monitoring Device	Setting Parameter
K7DD-PQ	Trigger Mode, Trigger Source, Trigger type, Trigger Level, Delay Count, Measure Count

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

3. Features Analysis

This section describes the *Feature Analysis* Screen for K7DD only. The content primarily includes information that cannot be inferred from the Tool screen.

Parts described in Section 3 Features Analysis.



3-1 K7DD Features Analysis

The feature analysis function is only available for K7DD. This function can analyze 400 types of features from normal and abnormal data and can calculate the feature with the largest rate of change from abnormal data. The Screen shown below can be displayed by clicking the *Features Analysis for Alarm Threshold Calculation* on the *Home Screen (3)*.
The *Feature Analysis* has the following three phases. Execute the *Feature Analysis* for each registered abnormal data.

- Data Registration*1
- Features Selection
- Threshold Calculation

*1. The data registered in the Data Registration Phase can be used in the Digital Maintenance Log. When you click the **Data Registration for Digital Maintenance Log** on the Home Screen (3) on page 23, only the Data Registration phase is will be displayed. Refer to the following descriptions for details on the operation procedure.

K7DD Data Registration

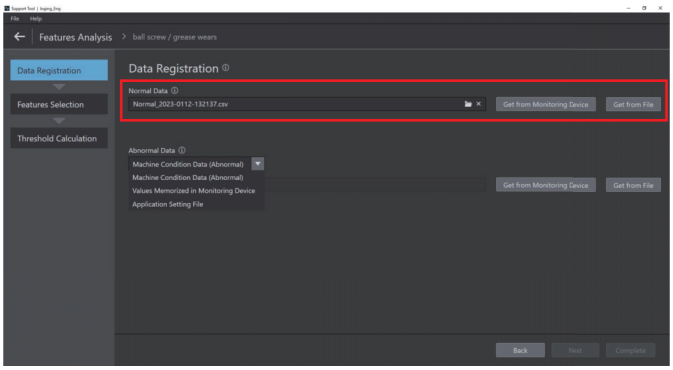
Register data for feature analysis. Run equipment to be monitored in actual operation and register two waveform data sets: one for normal conditions and the other for abnormal conditions.

● Registration of normal data

This is the *Data Registration* Screen.
Start registration from normal data.

1 Operate equipment to be monitored.

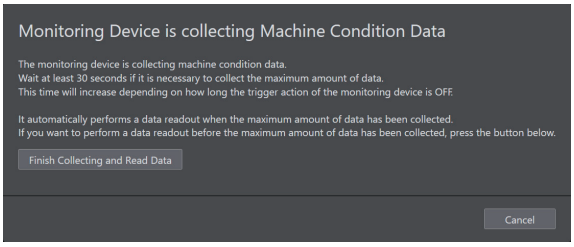
2 Click the **Get from Monitoring Device** Button when you register normal data for the first time.*1



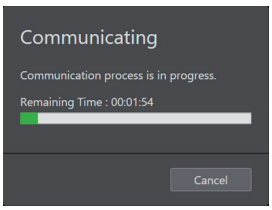
Features Analysis - Data Registration

A pop-up window appears, displaying the message *Monitoring Device is collecting Machine Condition Data*.

- Wait for approximately 5 minutes, a progress bar will be displayed, indicating communication in progress.
- If the equipment is in constant operation, you can reduce the waiting time, approximately 5 minutes, by clicking the **Finish Collecting and Read Data** Button.



Pop-up window for collecting machine condition data



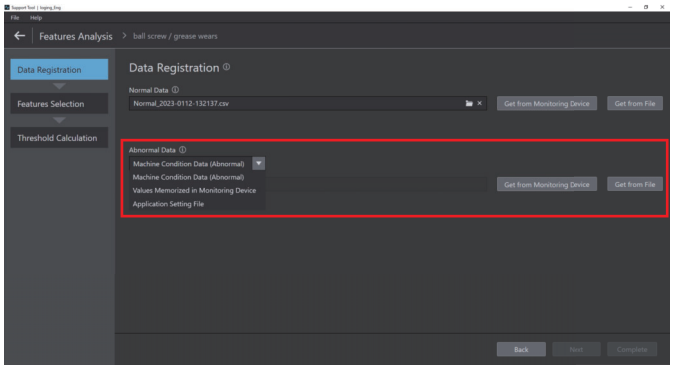
*1. Use the **Get from File** Button when accessing to use previously acquired data.
Data file names are created according to the following rules:
Normal data: Normal_yyyy-MMdd-HHmmss.csv
Abnormal data: Abnormal_yyyy-MMdd-HHmmss.csv

● Registration of Abnormal Data

Next, start registering abnormal data.
The following options are available for abnormal data:

- Machine Condition Data (Abnormal)
- Values Memorized in Monitoring Device *1
- Application Setting File *2

The procedure is given below for the case in which the *Machine Condition Data (Abnormal)* is selected.



Features Analysis - Data Registration

3 Operates equipment to be monitored where a state of abnormality has been intentionally created.

4 Click the **Get from Monitoring Device** Button.

The abnormal data is registered.

A pop-up window appears, displaying the message *Monitoring Device is collecting Machine Condition Data*, the same as the one shown during the registration of normal data.

Wait till the *Data Registration* Screen is displayed again.

5 When the registration of normal data and abnormal data is completed, the **Next** Button is enabled. Click the Button to go to the next screen.

*1. Refer to *2-3-2 To capture sudden errors* of *K7DD User's Manual (N233)* for details.
The file created for "Values Memorized in Monitoring Device" is as follows:
File name: MaxMin.csv

*2. Refer to *2-3-1 Settings with Application Setting File* of *K7DD User's Manual (N233)* for details.

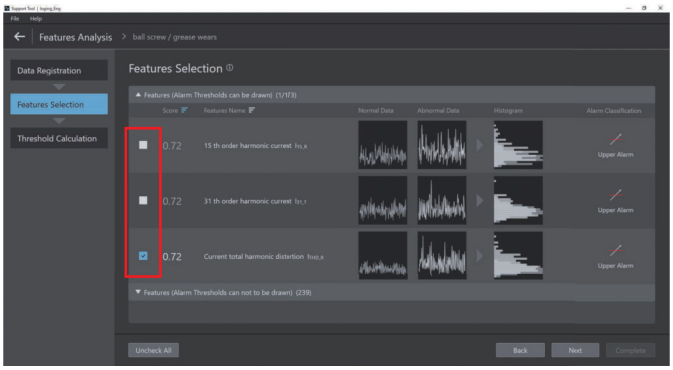
K7DD Features Selection

The optimal features for monitoring are automatically displayed based on the normal and abnormal data registered on the *Data Registration* Screen.
Select the checkboxes for the features with a largest change rate displayed in the *Score*.

This is the *Features Selection* Screen.

1 Select the checkboxes for the features to be used for alarm settings.

2 Once you select one or more features, the **Next** Button will be enabled. Click the Button to go to the next screen.



Features Analysis - Features Selection

The change rate displayed in the Score represents the proportion of the change compared to normal data (the difference between normal and abnormal data). For example, if the change rate is 0.10, it indicates a 10% change.

Change rate displayed as infinity symbol (∞) in the *Score*
Even if the change rate is indicated by the infinity symbol in the *Score*, you can select it as a feature for monitoring without any problem. The change rate is calculated by dividing the value after the change (abnormal) by the difference between the value after the change (abnormal) and the value before the change (normal). If the value before the change (normal) is extremely small, it may result in the display of the infinity symbol (∞), indicating a significant distinction between normal and abnormal data.

The number of features selected
The change rate is automatically calculated by comparing the feature values in normal and abnormal conditions. Unless otherwise specified, select the feature with the largest change rate displayed on the Screen.
If the feature with the largest change rate is *nth order harmonic current*, select the corresponding *Current total harmonic distortion* for R, S, and T phases. This ensures a certain capture of the change.

Histogram
The Histogram is a statistical graph that displays the magnitude of features for normal or abnormal data on the vertical axis and the occurrence frequency on the horizontal axis. This is used to visually understand the distribution and trends of your data.
In the Tool, overlapping areas are highlighted with a more vivid white color for emphasis. This allows for a quick visual confirmation of central tendency, dispersion, skewness, and other characteristics.

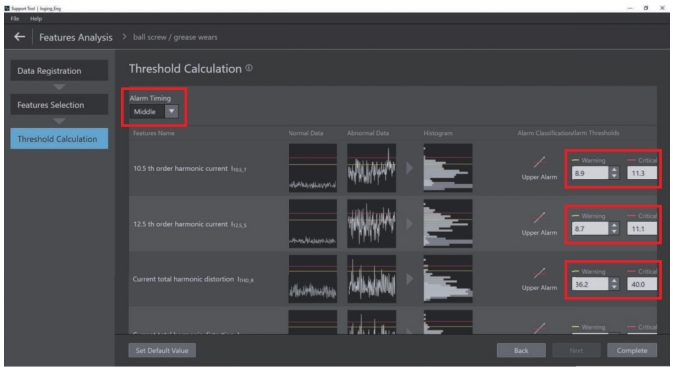
K7DD Threshold Calculation

Set the alarm thresholds for the selected feature for monitoring on the *Features Selection* Screen.

You can set them depending on the timing of the alarm output selected from early, middle, and late.

At this point, the alarm thresholds have not yet been set on the K7DD. Refer to the *Alarm Settings* in Section 4 for details.

This is the *Threshold Calculation* Screen.



Features Analysis - Threshold Calculation

1 There are two types of alarm thresholds: caution and warning. Set them according to your application.

(1) Automatic threshold calculation based on alarm timing:
When you select *Early*, *Middle*, or *Late*, the threshold value is calculated and is applied to the *Warning* and *Critical* Text Boxes.

(2) Direct settings in the Warning and Critical Text Boxes:
The alarm threshold is calculated based on the selected alarm timing, but you can modify it if you wish to make further fine adjustments or set it arbitrarily.

2 Click the **Complete** Button to go to the next screen.

The thresholds calculated based on the selected alarm timing is calculated using the percentages shown below.
Early: Warning=30%, Critical=50%
Middle: Warning=50%, Critical=70%
Late: Warning=70%, Critical=90%

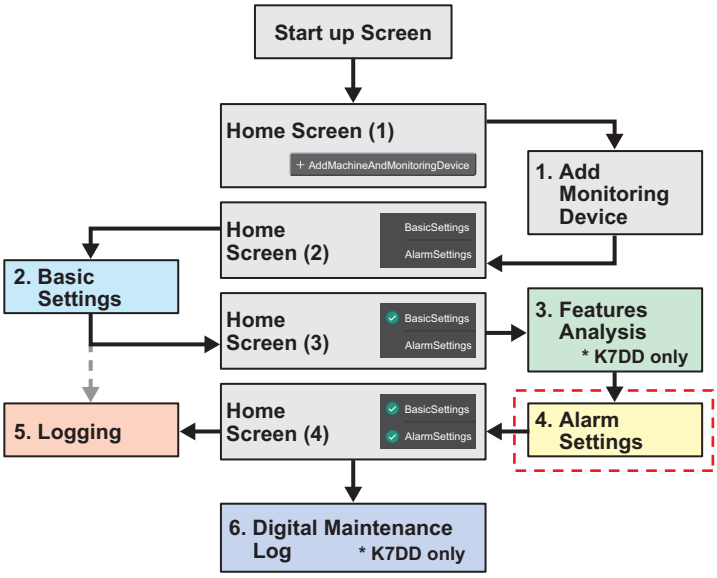
4. Alarm Settings

In this section, explanations for *Alarm Settings* Screen are provided. The content primarily includes information that cannot be inferred from the Tool screen.

Although the setting screens for each condition monitoring device are different, the alarm settings for K6CM, K7GE, and K7TM are described together.

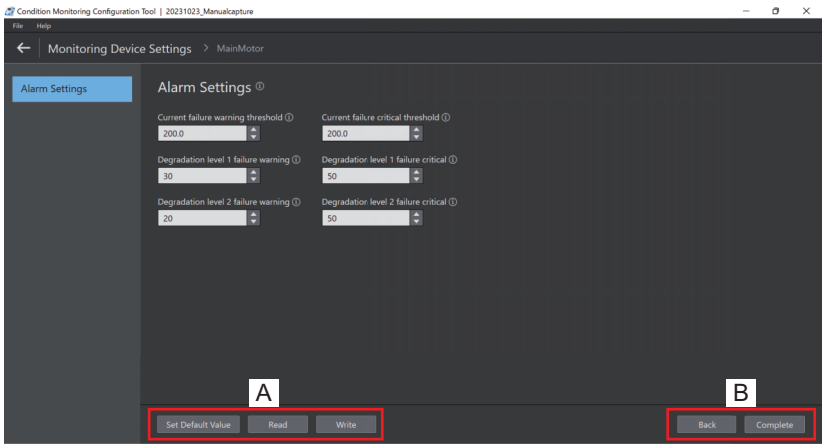
The alarm settings for K6PM and K7DD are explained separately, as their settings are different from those of other models.

Parts described in Section 4 Alarm Settings.



Common Part

The Buttons in the common section of the *Alarm Settings* for each condition monitoring device are described below.



Area	Button name	Description
A	Set Default Value	Sets the default values for the displayed setting items.
	Read	Reads the current setting values from the condition monitoring device and applies them to the setting items. The **Read** Button can be used if you have already configured the condition monitoring device using the operation keys.
	Write	Writes the configured setting items to the target condition monitoring device.
B	Back	Back to the previous screen.
	Next	The Button is enabled for clicking when the reading or writing is successfully completed or when the settings for the screen are completed.

4-1 K6CM/K7GE/K7TM Alarm Settings

The alarm settings for the following models are described here.

- K6CM-series (K6CM-CI2, K6CM-IS and K6CM-VB)
- K7GE
- K7TM

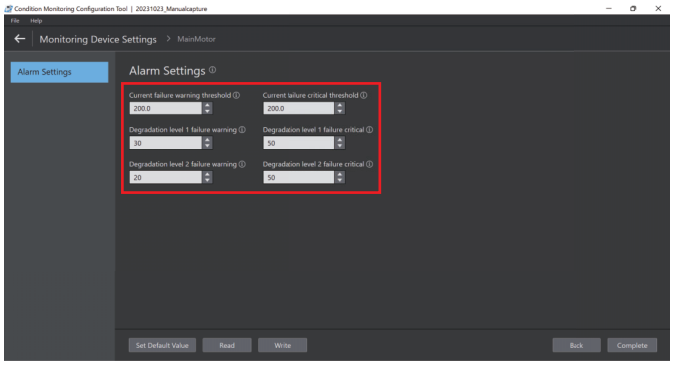
Alarm Settings for K6CM/K7GE/K7TM

Set alarm values to detect abnormalities. Make sure the settings on the Tool match those of the condition monitoring device. If the alarm values are already set on the condition monitoring device, read them from the condition monitoring device and apply to the Tool.

This is the *Alarm Settings* Screen.

1 Set the alarm values for the displayed parameters on the screen.

2 The **Complete** Button is enabled for clicking when the reading or writing is successfully completed.
Click the **Complete** Button to go to the next screen.



K6CM-CI2 Alarm Settings example

Condition Monitoring Device name	Setting Parameter
K6CM-CI2 Comprehensive Current Diagnosis Type	Current failure warning threshold Current failure critical threshold Degradation level 1 failure warning Degradation level 1 failure critical Degradation level 2 failure warning Degradation level 2 failure critical
K6CM-VB Vibration & Temperature Type	Acceleration failure warning *1 Acceleration failure critical *1 Velocity failure warning *1 Velocity failure critical *1 Motor temperature failure warning Motor temperature failure critical Temperature gap failure warning Temperature gap failure critical
K6CM-IS Insulation Resistance Type	Insulation resistance failure warning Insulation resistance failure critical
K7GE-MG Insulation Resistance Monitoring Device	Alarm Value 1 Alarm Value 2
K7TM-A2M Heater Condition Monitoring Device	Heater Deterioration Alarm Value (Warning) Heater Deterioration Alarm Value (Critical) Last Resistance Value Change Rate Alarm Value Heater Burnout Alarm Value (Voltage) Heater Burnout Alarm Value (Current)

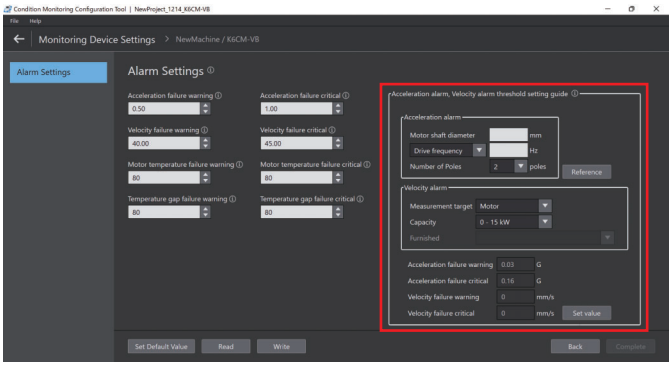
*1. Automatic calculation is possible using *Acceleration alarm, speed alarm threshold setting guide*.

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

Acceleration Alarm, Speed Alarm Threshold Setting Guide (K6CM-VB Vibration & temperature type only)

The *Acceleration alarm, speed alarm threshold setting guide* is displayed on the right side of the *Alarm Settings* Screen for K6CM-VB.
It allows for the following automatic settings:

- Acceleration alarm threshold by entering the motor shaft diameter, drive frequency or rotation speed, and the number of poles
- Velocity alarm threshold by entering the measurement target, capacity and furnished.



K6CM-VB Alarm Settings

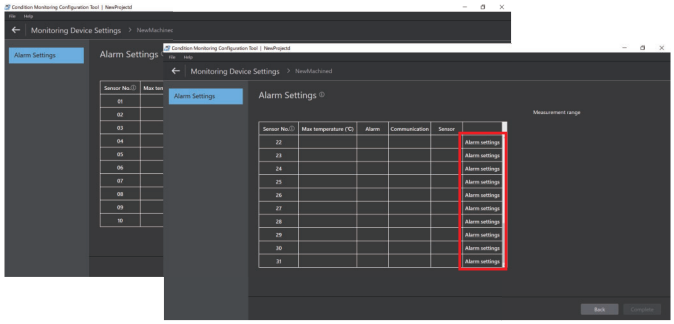
4-2 K6PM Alarm Settings

The K6PM alarm settings are described below.

Alarm Settings for K6PM

Set the alarm values for each sensor that detect abnormalities, and write them to K6PM.

This is *Alarm Settings* Screen. This screen is updated every 5 seconds.



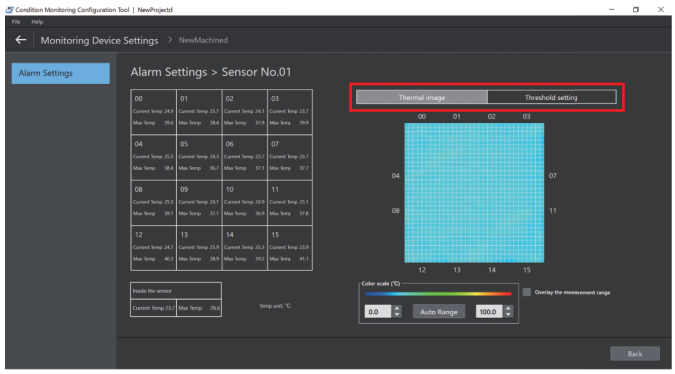
K6PM Alarm Settings

1 Click *Alarm Settings* corresponding to the sensor number.

The 15 segments of the sensor are displayed. You can monitor the current temperature and maximum temperature on this screen.

2 Click *Threshold settings* at the top right of the screen.

The adjustable thresholds for each segment are displayed.



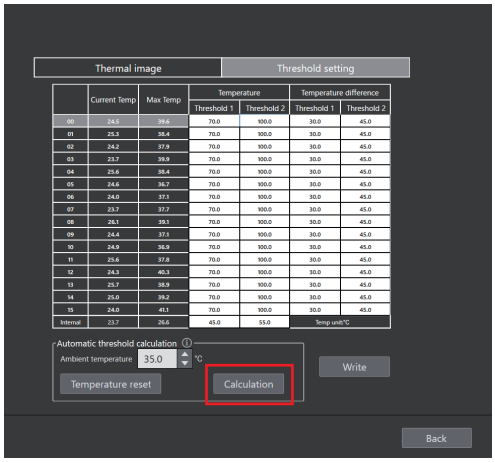
K6PM Alarm Settings

Adjustment of the color scale in accordance with the temperature difference
Click the **Auto Range** Button to perform automatic adjustment.

Displaying the loaded photo overlaid on the thermal image
Select the Overlay the *measurement range* check box, displaying the loaded photo overlaid on the thermal image in the Measuring range setting.
If a photo image is not registered in the Tool, the overlaying on the thermal image is not displayed.

3 Set the thresholds

You can use the *Automatic threshold calculation* function.



Threshold settings for each segment of K6PM

■ How to use *Automatic threshold calculation*

(1) After resetting the maximum temperature, conduct monitoring for several days. Measuring other objects (such as human bodies) than the intended target or misalignment of the monitoring position may affect the automatic threshold calculation.

(2) For the max. ambient temperature, enter the temperature corresponding to the max. ambient temperature in the control panel, considering seasonal temperature variations.

(3) Click the **Calculation** Button.

4

The Button is enabled for clicking when the reading or writing is successfully completed or when the settings for the screen are completed.

For details on setting parameters, hover your mouse over the "i" mark on the screen to display hints and instructions. Set the parameters according to those instructions.

Icon	Description
	Threshold 1 exceeded This is a warning level notification. When setting with *Automatic threshold calculation*, the minimum temperature that recommends immediate maintenance is automatically set.
	Threshold 2 exceeded This is a critical level notification. When setting with *Automatic threshold calculation*, the minimum temperature that recommends immediate maintenance is automatically set.
	Connection status
	Disconnection status
	Temperature measurement range exceeded Measurement temperature: 200.0°C min. Sensor internal temperature: 80°C min.
	The detection of the K6PM-TH sensor If the angle deviates by more than 5 degrees and this continues for more than 3 seconds.

4-3 K7DD Alarm Settings

The K7DD alarm settings are described below.

Alarm Settings for K7DD

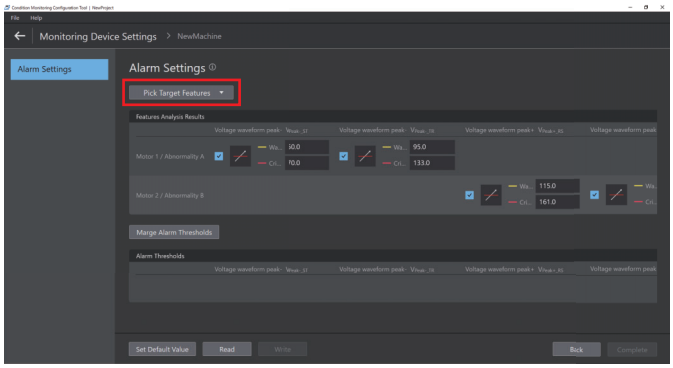
The K7DD alarm settings is a function that integrates the feature value and alarm threshold for each abnormality calculated by feature analysis (see *3-1 K7DD Features Analysis* on page 40) to set the alarm.

This is *Alarm Settings* Screen.

1 Select either of the following options from the **Pick Target Features** pull-down menu.

- All feature values:
  When selecting desired features and setting alarm thresholds.
- Features analysis results:
  Select this if you have already analyzed features with normal/abnormal data.

A list of features is displayed.

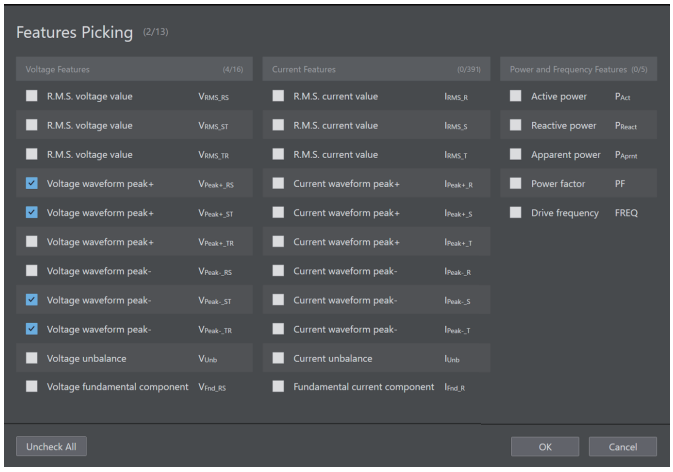


K7DD Alarm Settings

2 Select features from the list or confirm the features marked with checks in the list displayed on the *Features Picking* Screen.

When you select *Features Analysis Results* in step 1, the relevant features are displayed with checkmarks in the list.

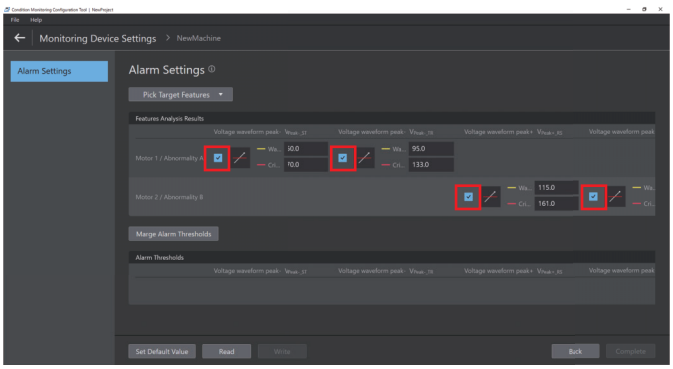
Click the **OK** Button.



Features Picking List

3 Select the features to merge the thresholds.

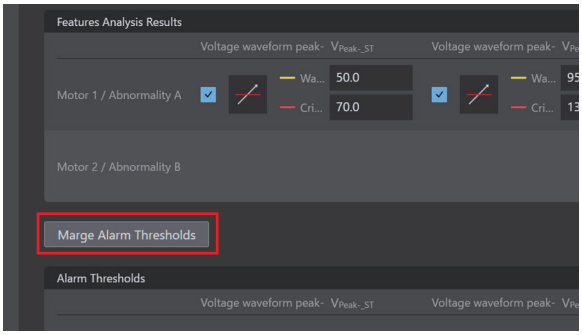
Basically, select all items.



K7DD Alarm Settings

4 Click the **Marge Alarm Thresholds** Button.

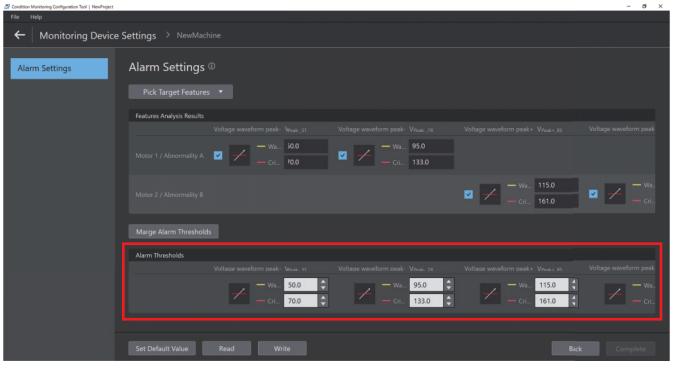
The alarm values of the features set for each abnormality are merged based on the threshold of the side more likely to trigger an alarm.



K7DD Alarm Settings

The merged results of alarm values are displayed in the Alarm Thresholds field.

For fine-tuning, adjust the warning and critical values for alarm thresholds.

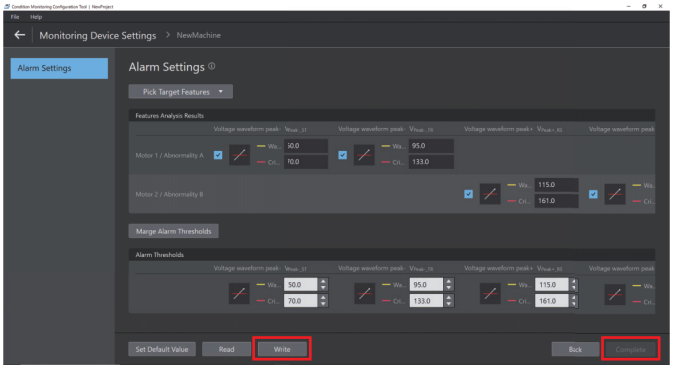


K7DD Alarm Settings

5 Click the **Write** Button to write the setting data to K7DD.

Once the writing is completed, the K7DD is reset and restarted.

6 The **Complete** Button is enabled for clicking when the reading or writing is successfully completed or when the settings for the screen are completed. Click the Button to go to the next screen.

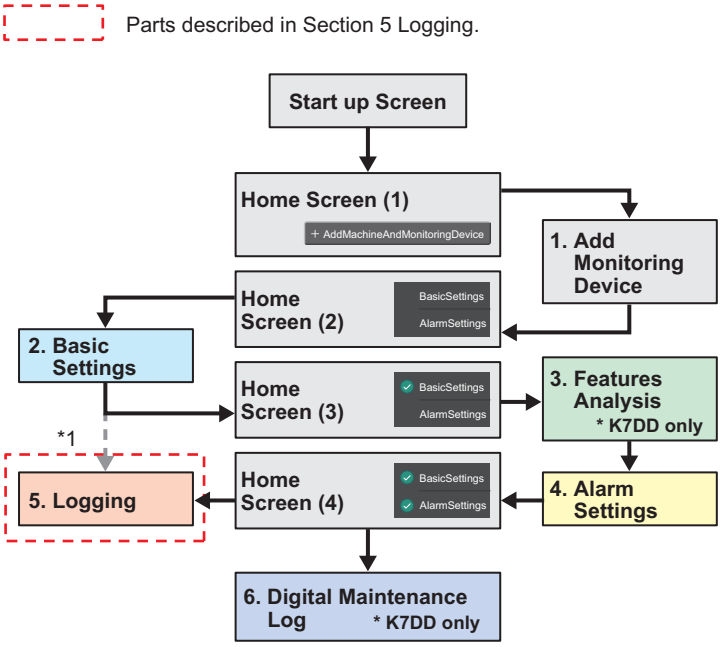


K7DD Alarm Settings

5. Logging

In this section, explanations for the *Logging* Screen are provided. The content primarily includes information that cannot be inferred from the Tool screen.

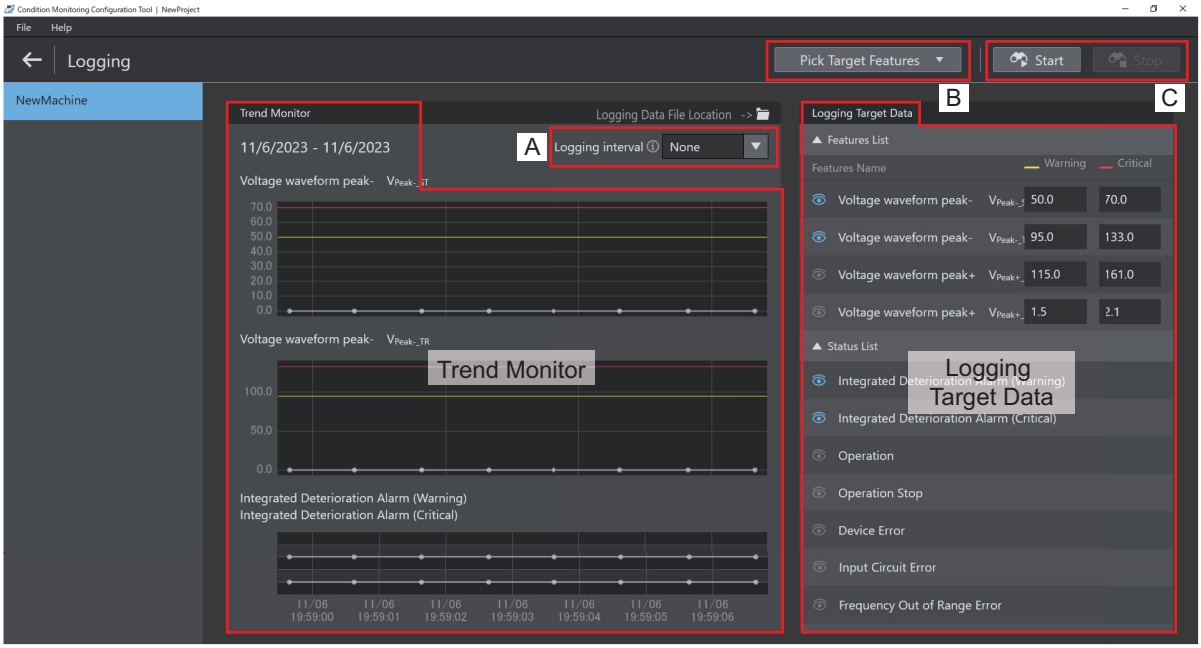
The logging function is used for a temporary check to confirm whether the alarm values are within an appropriate range. If you want to collect measurement data over a long-term monitoring, build a system that suits your application.



*1. Logging is possible after completing the basic settings; however, note that since the alarm settings are not yet made, red and yellow lines indicating alarm values are not displayed on the graph in the *Trend Monitor*.

Common Part

The screen common to the logging function of each condition monitoring device is described. The screen shown below can be displayed by clicking the **Logging** Button on the *Home Screen (4)*.

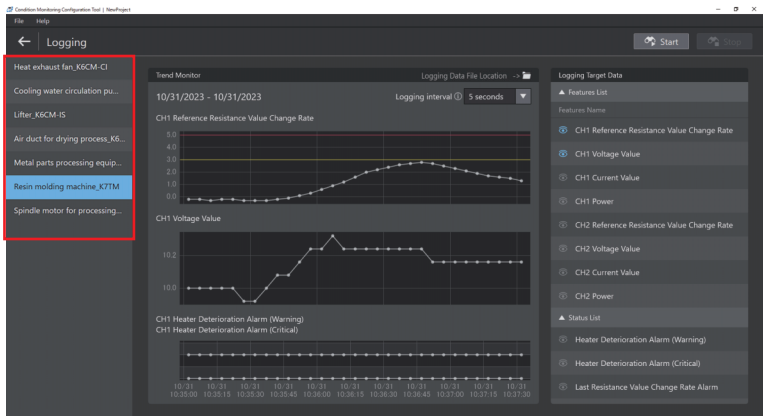


● Trend Monitor

The waveforms during logging are displayed in real-time. The displayed target data cannot be changed throughout the logging session. When alarm values are set, warning levels are indicated by yellow lines, and critical levels are indicated by red lines.

● Logging Target Data

Up to two features and two statuses can be selected and displayed for logging.
Set the icon "" to "" (enabled) to the left of the features and statuses you intend to log.

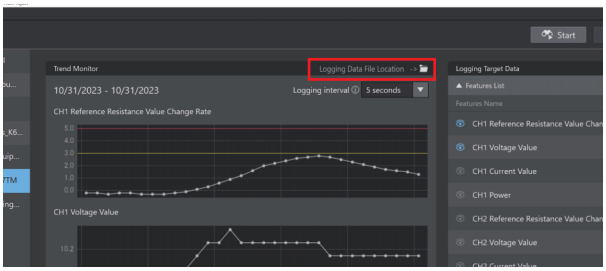
Area	Item	Description
A	Logging interval	To set the logging interval. The setting range differs depending on the condition monitoring device. Refer to the description for each model for the setting range.
B	Pick Target Features	This dropdown button is dedicated to K7DD. Select the feature to be logged from the following three options. • All features • Feature analysis results • Alarm setting After making the selection above, a screen for feature selection is displayed, allowing you to select individual features.
C	Start or Stop	To start/stop logging. Multiple connected condition monitoring devices can be logged.*1 The names of devices are displayed on the left. Click on any of the device names to display logging details for the selected device in the *Trend Monitor*. 

*1. OMRON has confirmed the operation under the following conditions.
- System configuration: One condition monitoring device with the maximum number of probe units and sensors is connected to the Tool for each model.
- Logging interval: Set the minimum value for each model
- Logging period: Set to 7 days for all models

● How to save the logging files:

Logging files are saved by selecting *Save Project* from the *File* menu at the top left of the screen. Note that they are not saved automatically.

You can click the icon in the red frame on the right to open the location of the logging data file.



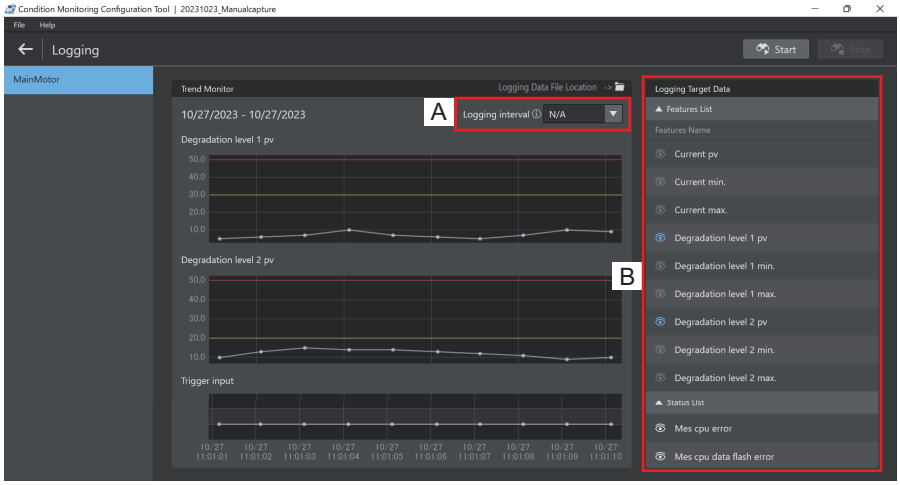
5-1 K6CM Logging

The *Logging* Screen for K6CM is described below.

K6CM Logging Screen

The content of the *Logging* Screen for the K6CM series (K6CM-CI2, K6CM-IS, or K6CM-VB) is provided below.

For illustrative purposes, the following screen shows the logging of K6CM-CI2.



Area	Item	Description
A	Logging Interval	None*1, 5 seconds, 1 minute, 10 minutes, or 1 hour
B	Logging Target Data	The data that can be logged differs for each K6CM series. Refer to the *K6CM User's Manual (N219)* for details on the status.

*1. When the logging interval is set to None, the Tool immediately acquires the next set of data once the current cycle of data acquisition is completed.

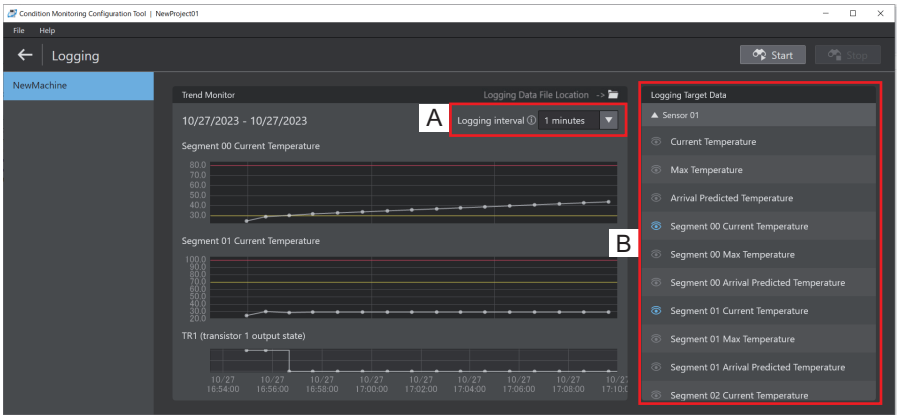
Icon	Description
	Critical This is displayed when one of the alarm results (critical) is 1 (ON) in the latest log data.
	Warning This is displayed when one of the alarm results (warning) is 1 (ON) in the latest log data.*1
	Communications Error This is displayed in the following cases: • When the logging time times out • When an error response is received

*1. If both critical and warning alarms turn to 1 (ON), the critical level icon will be displayed.

5-2 K6PM Logging

The *Logging* Screen for K6PM is described below.

K6PM Logging Screen



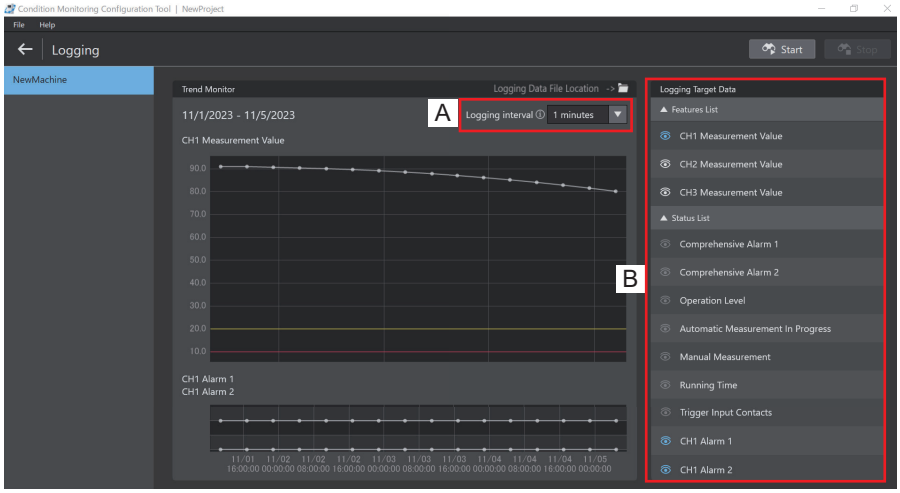
Area	Item	Description
A	Logging Interval	1 minute, 10 minutes, 30 minutes, 1 hour, or 6 hours
B	Logging Target Data	Displays sensors with completed basic settings. The following items can be selected for segments (00-15) and sensors (1-31). Sensors: internal temperature value, internal maximum temperature value, Segments: current temperature value, maximum temperature value, predicted arrival temperature value Refer to the *K6PM-TH User's Manual (N231)* for details on the status.

Icon	Description
	Critical This is displayed when the comprehensive temperature alarm (threshold 2 exceeded) is 1 (ON) in the latest log data (Flashing: predicted arrival temperature exceeded)
	Warning This is displayed when the comprehensive temperature alarm (threshold 1 exceeded) is 1 (ON) in the latest log data (Flashing: predicted arrival temperature exceeded)
	Communications Error This is displayed in the following cases: • When the logging time times out • When an error response is received

5-3 K7GE Logging

The *Logging* Screen for K7GE is described below.

K7GE Logging Screen



Area	Item	Description
A	Logging Interval	1 minute, 10 minutes, 30 minutes, 1 hour, or 6 hours
B	Logging Target Data	CH1 to 8 measurement values Refer to the *K7GE-MG User's Manual (N224)* for details on the status.

Icon	Description
	Critical This is displayed when the comprehensive alarm 2 is 1 (ON) in the latest log data
	Warning This is displayed when the comprehensive alarm 1 is 1 (ON) in the latest log data (If both comprehensive alarms 1 and 2 turn to 1 (ON), the critical level icon for the comprehensive alarm 2 will be displayed.)
	Communications Error This is displayed in the following cases: • When the logging time times out • When an error response is received

5-4 K7TM Logging

The *Logging* Screen for K7TM is described below.

K7TM Logging Screen

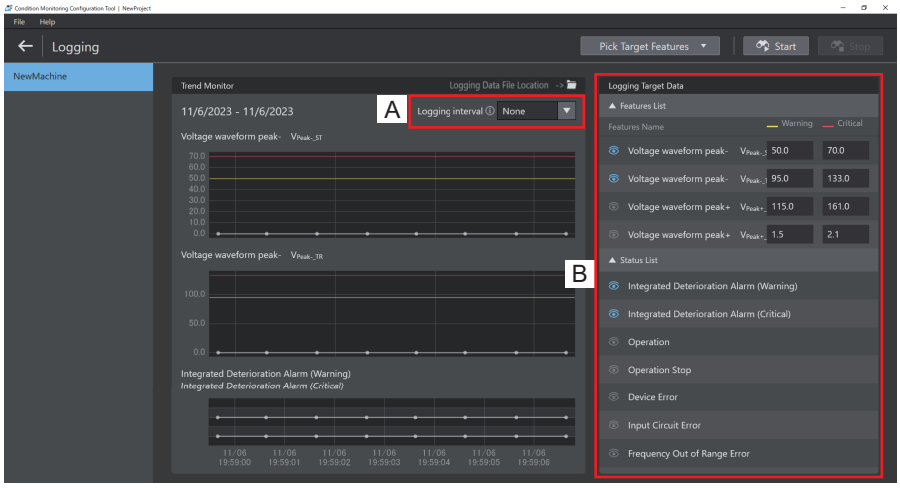
Area	Item	Description
A	Logging Interval	5 seconds, 1 minute, 10 minutes, 30 minutes, or 1 hour
B	Logging Target Data	Reference resistance value change rate, voltage value, current value, power Refer to the *K7TM User's Manual (N227)* for details on the status.

Icon	Description
	Critical This is displayed when either of the following parameters turns to 1 (ON) in the latest log data. • Heater deterioration alarm (Critical) • Heater burnout alarm
	Warning This is displayed when either of the following parameters turns to 1 (ON) in the latest log data. • Heater deterioration alarm (Warning) • Last resistance value change rate alarm (If both critical and warning alarms turn to 1 (ON), the critical level icon will be displayed.)
	Communications Error This is displayed in the following cases: • When the logging time times out • When an error response is received

5-5 K7DD Logging

The *Logging* Screen for K7DD is described below.

K7DD Logging Screen



Area	Item	Description
A	Logging Interval	None*1, 5 seconds, 10 seconds, 30 seconds, or 1 minute
B	Logging Target Data	Refer to *5-2-1 All Feature Measurement* of the *K7DD User's Manual (N233)*.

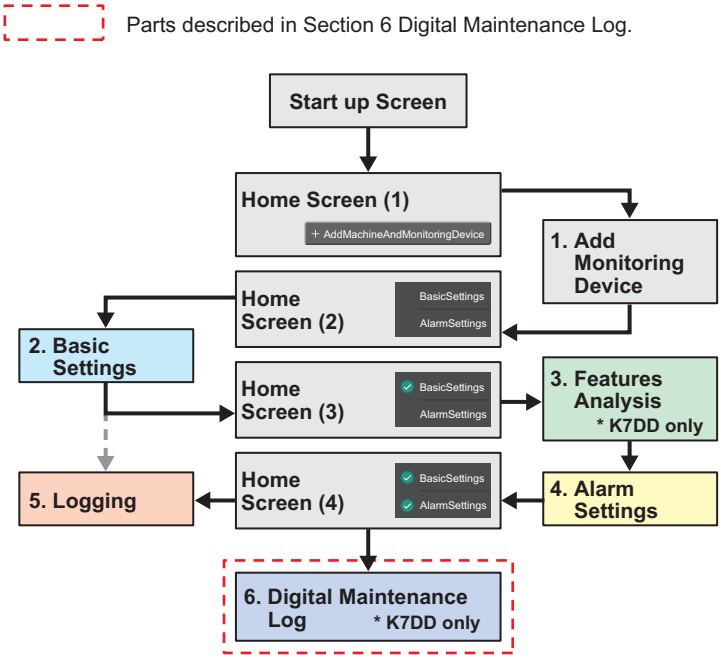
*1. When the logging interval is set to None, the Tool immediately acquires the next set of data once the current cycle of data acquisition is completed.

Icon	Description
	Critical This is displayed when one of the alarm results (critical) is 1 (ON) in the latest log data.
	Warning This is displayed when one of the alarm results (warning) is 1 (ON) in the latest log data. (If both critical and warning alarms turn to 1 (ON), the critial level icon will be displayed.)
	Communications Error This is displayed in the following cases: • When the logging time times out • When an error response is received

6. Digital Maintenance Log

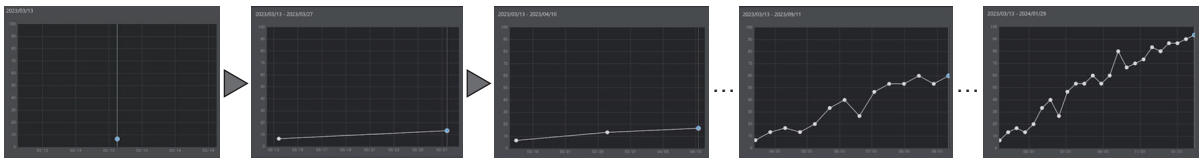
In this section, explanations for the Digital Maintenance Log are provided. The content primarily includes information that cannot be inferred from the Tool screen.

The Digital Maintenance Log serves as a unique tool function within K7DD. When executed, it communicates with K7DD, measuring its features in real-time.
Subsequently, it calculates the change rate using the recorded normal and abnormal data, plotting the results alongside the date and time.
This functionality is known as condition diagnosis.
By recording over an extended period, it proves valuable in predicting the optimal timing for equipment repair or replacement.



By accumulating data on a weekly or monthly basis, you can visualize the condition of equipment.

Example of weekly data accumulation:



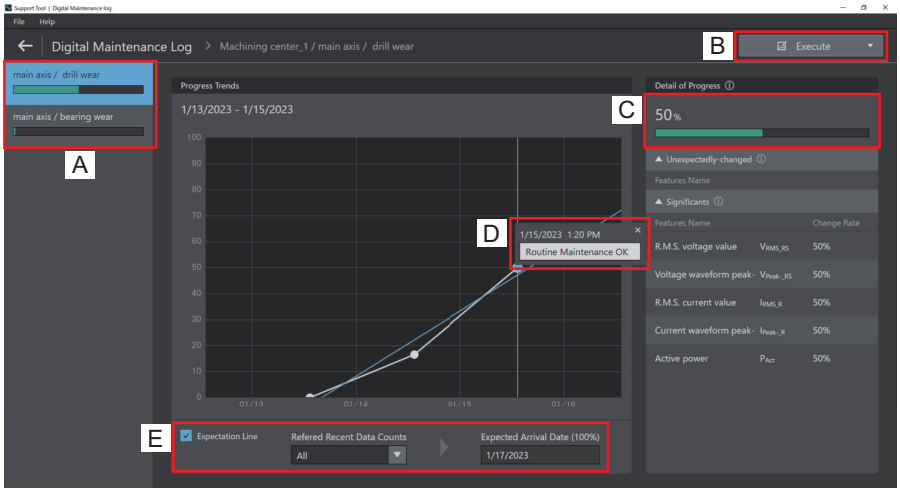
Week 1 | Week 2 | Week 3 | Week 14 | Week 24 (6 month later)

All measurable features are recorded in the Digital Maintenance Log. Measurements are taken when specific trigger conditions are met.

The measurable features vary depending on the wiring method. Refer to *5-2-1 All Feature Measurement* of the *K7DD User's Manual (N233)* for details.

K7DD Digital Maintenance Log

The content of the *Digital Maintenance Log* Screen for K7DD is provided below.
The screen shown below can be displayed by clicking the **Digital Maintenance Log** Button on the *Home Screen (4)*.



Area	Item	Description
A	Abnormal condition	The current condition of registered abnormalities is displayed. The condition of the selected abnormality is indicated by a blue background.
B	Condition diagnosis execution	The condition diagnosis is performed. Clicking on the button displays a pop-up to select where to acquire the data. • Acquiring data from the equipment It communicates with K7DD and calculates progress based on the current data and plots it on a graph. • Acquiring data from a file A previously saved CSV file can be specified for acquiring data. The file name corresponds to the date and time when the diagnosis is conducted, serving as a timestamp for reference. File Name: Current_yyyy-MMdd-HHmmss.csv
C	Condition diagnosis progress	The progress of abnormality through condition diagnosis is represented by a percentage and bar display and is considered to be a diagnostic result. Pre-registered normal and abnormal conditions as benchmarks are set at 0% and 100%, respectively. The calculation of progress incorporates data variability through t-tests, potentially leading to significant deviations from the change rate of each feature based on the registered data's variability. [How to view the progress] 0%: Represents the same condition as when normal data is acquired. 100%: Represents reaching the registered abnormal condition.
D	Diagnostic notes	It is displayed by hovering over the progress graph. Text can be entered as condition diagnosis notes, allowing you to register information such as the weather conditions, the name of the person conducting the condition diagnosis, and maintenance remarks. When these diagnostic notes are displayed, the progress in Area C dynamically adjusts based on the plotted content at that specific moment.
E	Predicted date of abnormal arrival	This function performs a linear approximation based on two or more points to predict the arrival date of an abnormal condition up to 100%. It is represented by a blue line on the graph. You can select the number of data points for the approximation. Use this function when recalculating from the date of maintenance.

Hover your mouse over the "i" mark on the screen to display hints and instructions.

7. Troubleshooting

Status	Cause	Correction	Reference
Unable to communicate.	The IP address of the PC or condition monitoring device (communication converter) is incorrect.	Check the IP address of the PC or condition monitoring device (communication converter).	Manuals for each condition monitoring device Refer to the *Related Manuals* on page 10.
	The communication settings for the condition monitoring device and/or communication converter are incorrect.	Check the communication settings between among the PC, the communication converter, and the condition monitoring device.	
	• The wiring is incorrect. • The connectors have poor contact.	Check the wiring between among the PC, the communication converter, and the condition monitoring device.	
	K7 series only The unit number is not set using the rotary switches on the front of the condition monitoring device.	K7 series only Since the rotary switch unit number is serves as a slave address, set it to a number value that does not overlap with other connected devices. The changed unit number will take effect after a power cycle.	• K7GE User's Manual • K7TM User's Manual • K7DD User's Manual Refer to the *Related Manuals* on page 10.

Appendices

Operating environment

Supported OS	Windows 10 (Version1607 or later) and 11 (Japanese or English) 64 bit
PC specifications	CPU: 1 GHz or higher, 64 bit processor Memory: 2 GB or higher Disk reserved area capacity: 20 GB or higher Monitor resolution: 1920 × 1080 Others: LAN port (for network connection)

Important note on compatibility with existing tools

The Tool (Condition Monitoring Configuration Tool) has undergone a re-design to incorporate numerous functions from existing tools for condition monitoring devices. However, certain functions from the following existing tools have not been implemented.

Existing tool name	Unimplemented functions
K6CM Exclusive Tools Motor Condition Monitoring Tool	• Auto-connect via AutoIP • Connecting to EIP CPU version 1.0 or 1.1 of K6CM • Monitoring screen for all connected K6CM • Copy of setting values (Input/output of parameter data file with k6pa extension) • Event log information on screen • Auto-saving log files
K6PM Exclusive Tools Thermal Condition Monitoring Tool	• Auto-connect via AutoIP • Monitoring screen for all connected K6PM • Auto-saving log files
K7TM Configuration Tool	• Reading of Log *1

*1. You can use this function with the Condition Monitoring Configuration Tool Ver.1.2 or later.

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