

## Power Supply Monitoring Tool

### Operation Manual



## **NOTE**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of OMRON.

No patent liability is assumed with respect to the use of the information contained herein. Moreover, because OMRON is constantly striving to improve its high-quality products, the information contained in this manual is subject to change without notice. Every precaution has been taken in the preparation of this manual. Nevertheless, OMRON assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained in this publication.

## **Trademarks**

- Microsoft, Windows, Windows Vista, Excel, and Visual Basic are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.

## **Copyrights**

Microsoft product screen shots reprinted with permission from Microsoft Corporation.

# IMPORTANT

---

By downloading this Software, you agree to be bound by the following Software License Agreement.

## SOFTWARE LICENSE AGREEMENT

---

This is a binding agreement between OMRON Corporation ("OMRON") and you (the "User") on the terms and conditions of the license of the Software.


1. In this Agreement, "Software" means the computer program and related documentation put on the website linked to button below. The "Software" shall include any derivative works thereto. Copyright of the Software remains the sole property of OMRON or the third party who has licensed the Software to OMRON and shall not be assigned to the User under this Agreement.
2. OMRON grants the User a non-exclusive, non-transferable and limited license to use the Software on computers owned by the User per license. The User shall not simultaneously use the Software on more than one computer per license.
3. The User shall not sub-license, assign nor lease the Software to any third party without prior written consent of OMRON.
4. The User may copy the Software for back-up purpose only. The User may not de-compile, de-assemble, reverse engineer nor otherwise attempt to discern the source code of the Software.
5. The User shall treat any information contained in the Software as confidential and shall not disclose it to any third party. This obligation shall survive the termination of this Agreement.
6. THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. IN NO EVENT, OMRON WILL BE LIABLE FOR ANY LOST PROFITS OR OTHER DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT OR USE OF THE SOFTWARE.
7. If the User breaches this Agreement, OMRON may terminate this Agreement upon notice to the User. In that event, the User shall return the Software and all copies thereof.
8. Neither this Agreement nor any party or portion hereof shall be assigned, sub-licensed or otherwise transferred by the User. Should any provision of this Agreement be held to be void, invalid, unenforceable or illegal by a court, the validity and enforceability of the other provisions of this Agreement shall not be affected thereby. Failure of a party to enforce any provision of this Agreement shall not constitute or be construed as a waiver of such provision or of the right to enforce such provision.
9. This Agreement shall be governed by and construed under the laws of Japan. Any and all dispute, controversy or difference which may arise between the parties hereto out of or in relation to or in connection with this Agreement shall be finally settled by arbitration in Osaka, Japan in accordance with the Arbitration Rules of the Japan Commercial Arbitration Association. The award rendered by arbitrator(s) shall be final binding upon the parties hereto.

# Safety Precautions


## Definition of Precautionary Information

The following notation is used in this manual 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 heed the information provided in all safety precautions. The following notation is used.

 <b>CAUTION</b>	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 instructions Indicates instructions on unspecified general action

## Security Measures of Power Supply Monitoring 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 for a control/monitor system and devices to separate them from other IT networks. Make sure to connect to the control/monitor system inside 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

---

- Use this manual together with the S8VK-X Data sheet (Cat. No. T210) and the Instruction Manual that is provided with the product.

# Precautions for Correct Use

---

- Do not use the Power Supply Monitoring Tool on unsupported operating systems. It may cause malfunction.
- Always exit other applications while the Power Supply Monitoring Tool is running. It may cause communications errors, such as missing sampled log data.

# Revision History

---

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

Man.No. **T215-E1-03**

↑  
Revision code

Revision code	Date	Revised content
01	April 2018	Original production
02	May 2018	Corrected mistakes.
03	September 2022	<i>Added information on Safety Precautions.</i>

# Related Documents

---

- For details on the S8VK-X, refer to the Data Sheet (Cat. No. T210), and the Instruction Manual that is provided with the product.
- For the details on the communication of the S8VK-X, refer to the *S8VK-X Communications Manual* (Cat. No. T213).





# CONTENTS

---

IMPORTANT .....	1
SOFTWARE LICENSE AGREEMENT .....	1
Safety Precautions .....	2
Precautions for Safe Use .....	3
Precautions for Correct Use.....	4
Revision History .....	5
Related Documents .....	6
CONTENTS.....	8

## Section 1 Overview

---

1-1 Overview and Features .....	1-2
1-2 Specifications .....	1-3

## Section 2 Installation

---

2-1 Installation.....	2-2
2-2 Uninstallation.....	2-6

## Section 3 Set IP address

---

3-1 Setting Procedures.....	3-2
-----------------------------	-----

## Section 4 Basic Operations

---

4-1 Description flow.....	4-2
4-2 PC settings .....	4-3
4-3 Creating a project.....	4-5
4-4 Monitoring .....	4-10
4-5 Automatic logging .....	4-13

## Section 5 Other functions

---

5-1 Perform alarm value settings .....	5-2
5-2 Confirm the margin of the power supply .....	5-4
5-3 Graph display of voltage and current.....	5-7
5-4 Setting the password .....	5-8

**Section 6      Troubleshooting**

---

**6-1    Troubleshoot List ..... 6-2**





# Overview

This section describes the overview of the Power Supply Monitoring Tool.

---

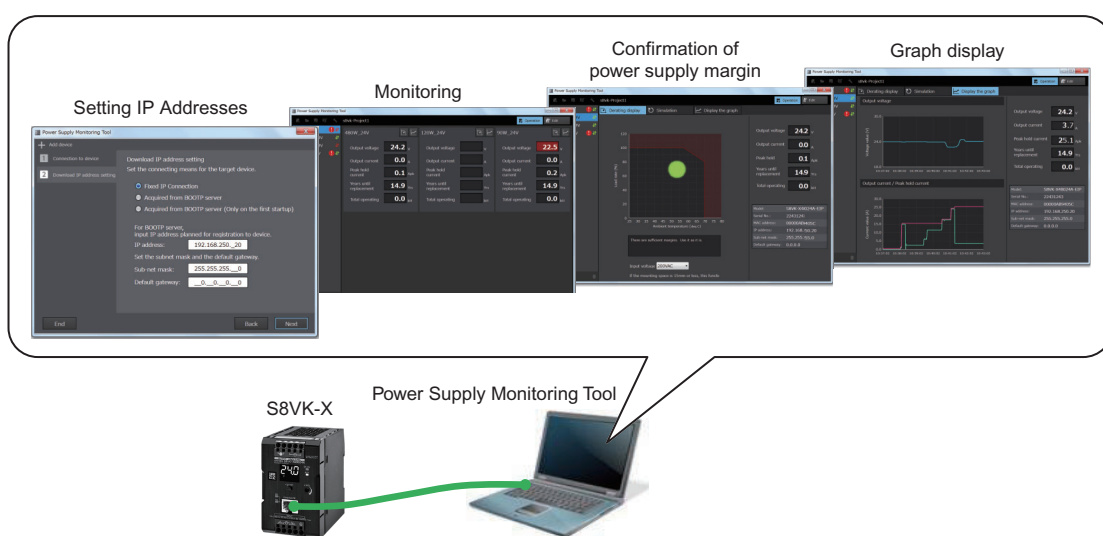
<b>1-1 Overview and Features</b> .....	<b>1-2</b>
<b>1-2 Specifications</b> .....	<b>1-3</b>

# 1-1 Overview and Features

The Power Supply Monitoring Tool performs IP address setting and monitoring of the S8VK-X.

## ● Features

- IP address setting of the S8VK-X is available.
- Monitoring and logging the measurement value of the S8VK-X are available (up to 18 Units).
- Alarm determination with the measurement value is available.
- The confirmation of a power supply margin and the simulations of changing power supply capacity are available.



# 1-2 Specifications

## ● Specifications

Item	Description
Maximum connection number	18 Units (6 Units when the data update cycle is 1 second)
Data update cycle	Select from 1 second, 10 seconds, 1 minute, or 1 hour

## ● Creating files

File type	File name	Extension	Default save location
Project file	User specified	.s8vk	C:\OMRON\Power Supply Monitoring Tool\
Automatic log data file	Project name_Date time (yyyy_mm_dd_hh_mm)	.txt	Project name_Data folder is automatically created in the same location as the above project file and saved in it.

## ● Operating Environment

Item	Description
OS	Windows 7, 8.1 or 10 (32-bit or 64-bit) (Japanese or English)
CPU	1 GHz or more, 32 bit or 64 bit processor
Memory	1 GB or more, or 2 GB or more (64-bit)
Free disk space	16 GB or more, or 20 GB or more (64-bit)
Monitor resolution	1024 × 768 (XGA), High Color 16-bit or more
Others	LAN port: For network connection







# Installation

This section describes how to install and uninstall the Power Supply Monitoring Tool.

---

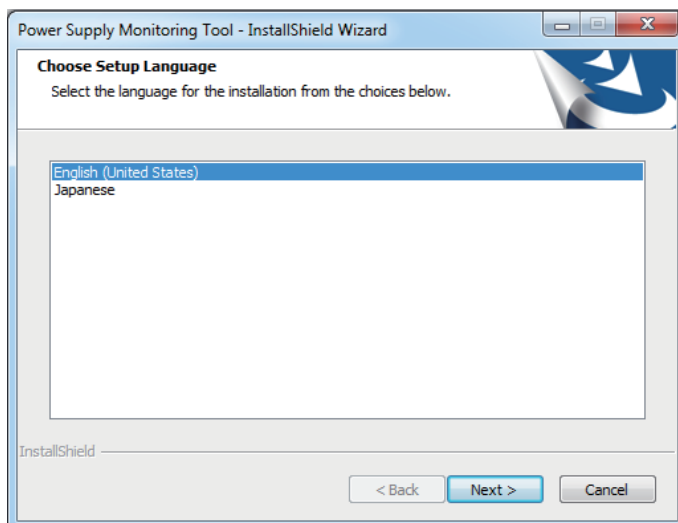
<b>2-1</b>	<b>Installation</b>	<b>2-2</b>
<b>2-2</b>	<b>Uninstallation</b>	<b>2-6</b>

## 2-1 Installation

---

Use the following procedure to install the Power Supply Monitoring Tool.

- 1 Double-click the **setup.exe**. The following dialog box is displayed.  
Select the language to use in Japanese or English, and then click the **Next** Button.



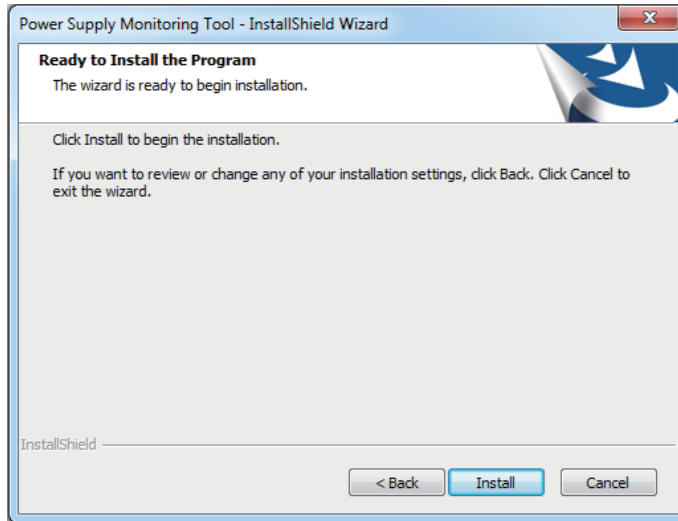
- 2 Click the **Next** Button.



- 3 The License Agreement dialog box is displayed.  
Read the License agreement for the product carefully. If you agree with all the articles, check *I accept the terms of the license agreement* and click the **Next** Button.

#### 4 Click the **Install** Button.

Installation of the Power Supply Monitoring Tool will start.



#### 5 Install the .NET Framework 4.0.

If .NET Framework 4.0 is not installed on the PC, the .NET Framework 4.0 Installation dialog box is displayed.

For PCs with Windows 8.1 or 10 OS, the above dialog box is not displayed.

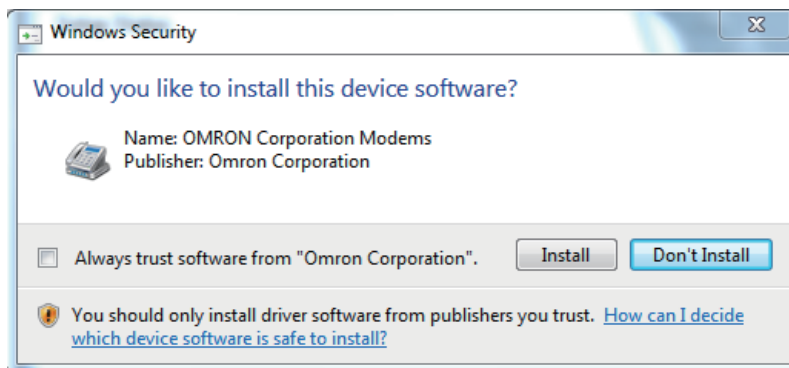
#### 6 Install the Communications Middleware.

Select *English* or *Japanese* for language setting and click the **Next** Button.

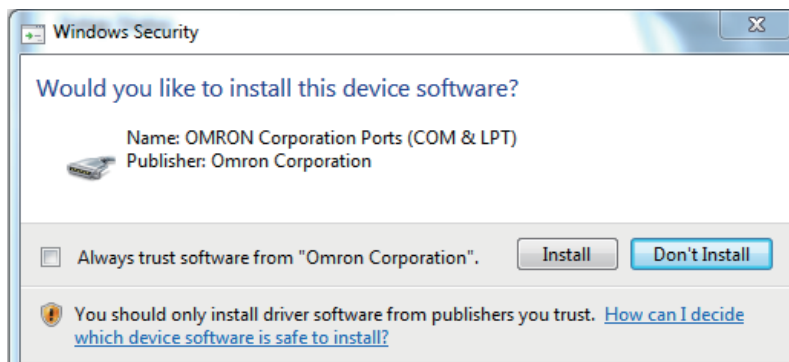
If the old version of Communications Middleware is installed, update it as required.

If the latest version is already installed, go to step 15.

#### 7 While the installation wizard is running, the following dialog box will be displayed, and then click **Install** Button.



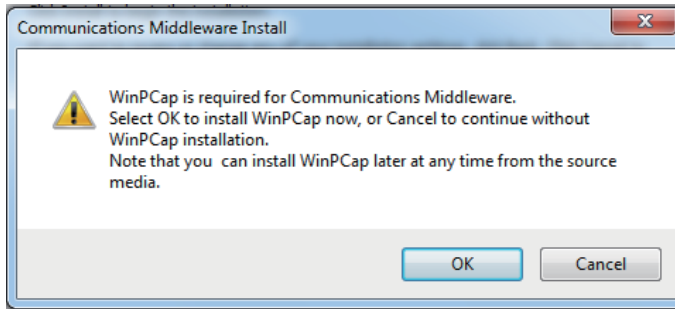
#### 8 The following dialog box will be displayed. Click **Install** Button.



**9** Install the WinPCap.

The following dialog box will be displayed, and click the **OK** Button.

If WinPCap is already installed, go to step 15.



**10** Click the **Next** Button.



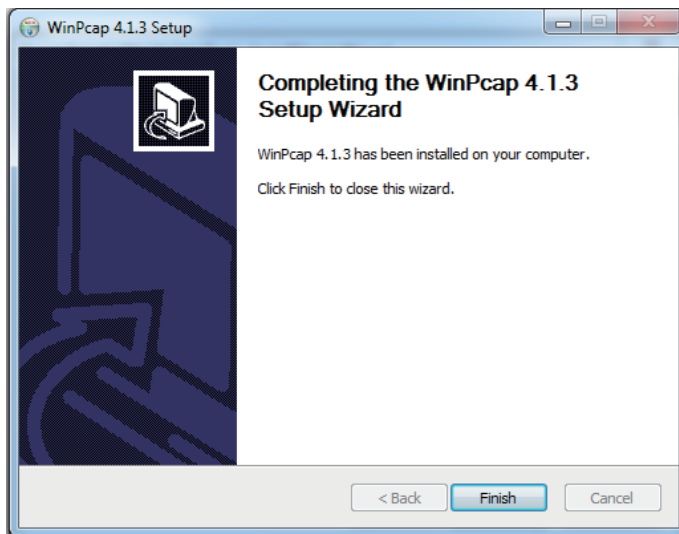
**11** After checking the contents, if there is no problem, click **I Agree** Button.

The Installation options dialog box is displayed.

**12** Select the *Automatically start the WinPcap driver at boot time* Option, click the **Install** Button.

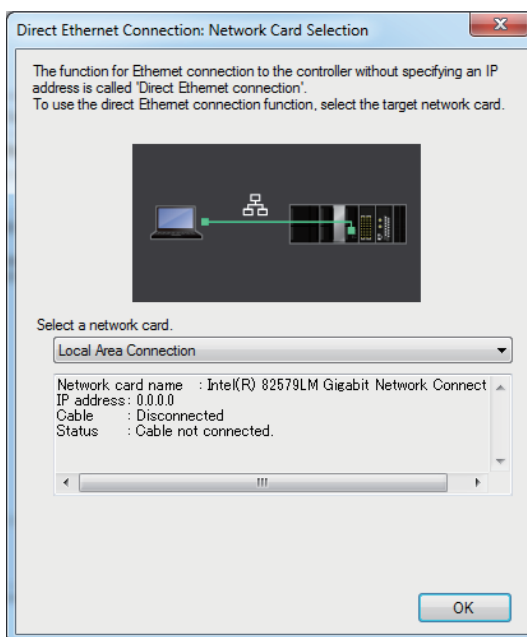
Installation of WinPCap will be started.

**13** After the installation is completed, click the **Finish** Button.



**14** Select the network card for communications.

Select the network card for communications from the pull-down list in the following dialog box, and then click the **OK** button.



#### Network Card Setting Example

If there is only one wired LAN port on the PC, select the following.

- With Windows 7, select *Local area connection* Option.
- With Windows 8.1 or 10, select *Ethernet* Option.

**15** Select the *Yes, I want to restart my computer now* Option, and then click the **Finish** Button.

Installation of the Power Supply Monitoring Tool completed.

## 2-2 Uninstallation

---

Uninstall the Power Supply Monitoring Tool with Uninstall a program on the Windows Control Panel.



# Set IP address

This section describes how to set an IP address of the S8VK-X.

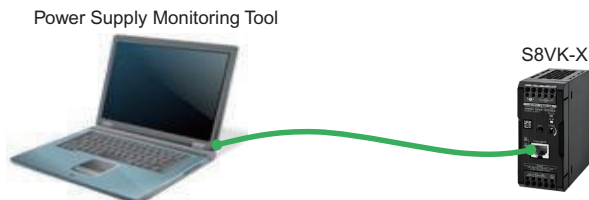
---

3-1	Setting Procedures .....	3-2
-----	--------------------------	-----

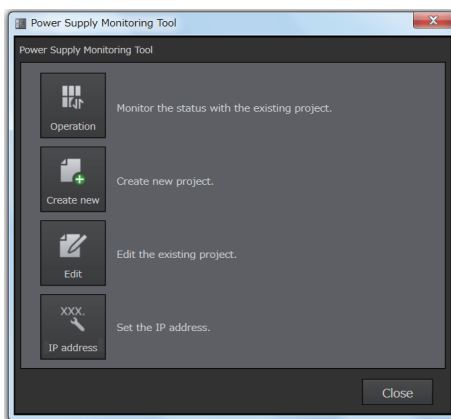
## 3-1 Setting Procedures

Set the IP address of S8VK-X using the following procedure.

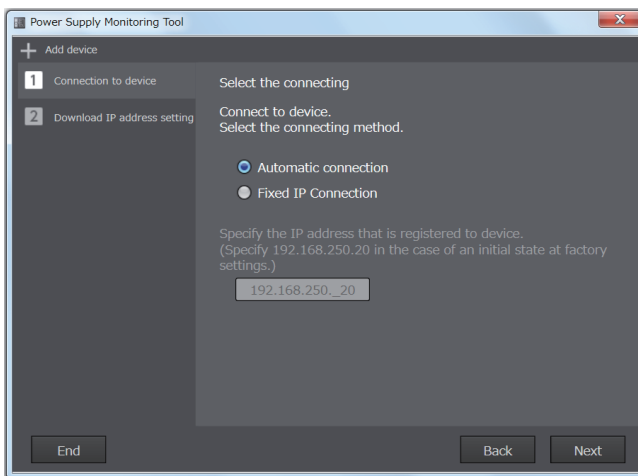
- 1 Connect the PC and the S8VK-X with an Ethernet cable directly.  
Even when connecting via the hub, be sure to connect them directly.



- 2 Start the Power Supply Monitoring Tool.  
Select **All Programs - OMRON - Power Supply Monitoring Tool** from the Windows Start Menu.
- 3 The following window will be displayed. Click **IP address** Button.

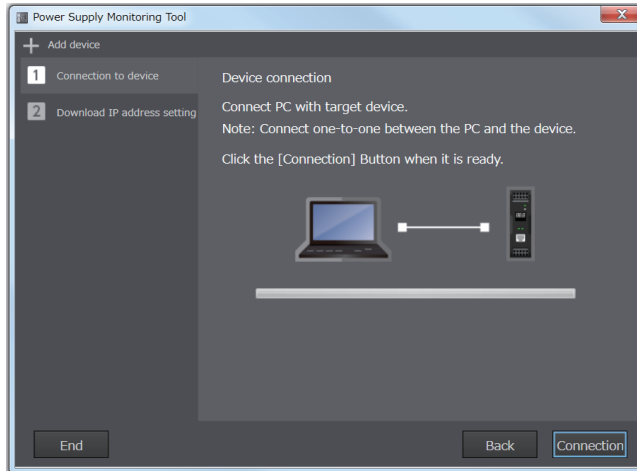


- 4 Select the *Automatic connection* Option in the following Tab Page, and then click **Next** Button.

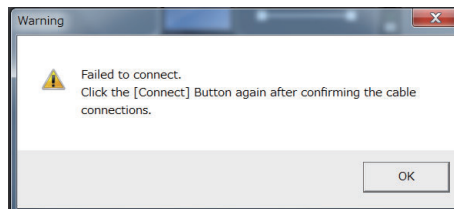




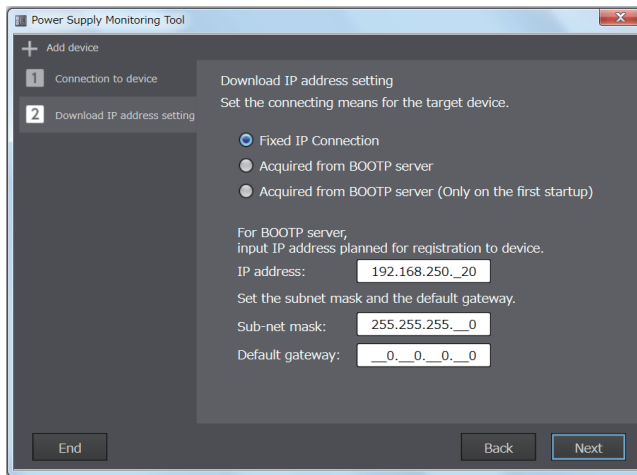
- 5** Click **Connection** Button, and wait for the connection to complete.  
*Connecting...* Message is displayed until the connection is completed.



**Note** If the connection to the S8VK-X fails, the following message will be displayed. Confirm cable connection, if connection can not be obtained refer to *6-1 Troubleshoot List* on page 6-2.



- 6** When the connection is successful, the following Tab Page will be displayed.



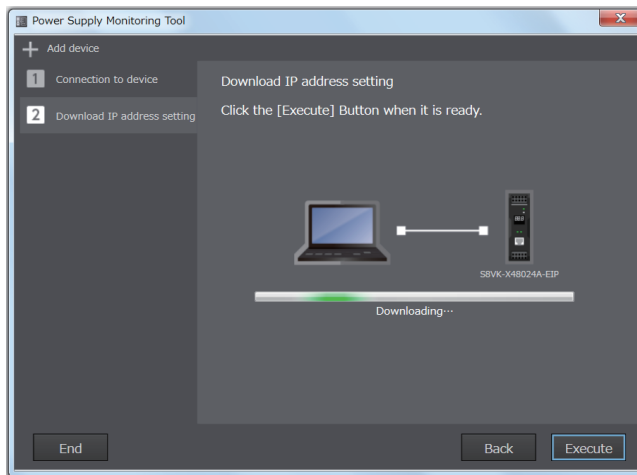
Normally, select the *Fixed IP Connection*, input the IP address, Sub-net mask, and Default gateway, and then click **Next** Button.

To acquire the IP address from the BOOTP server, select one of the usage scenes and input the IP address, sub-net mask, and default gateway to be acquired from the BOOTP server.

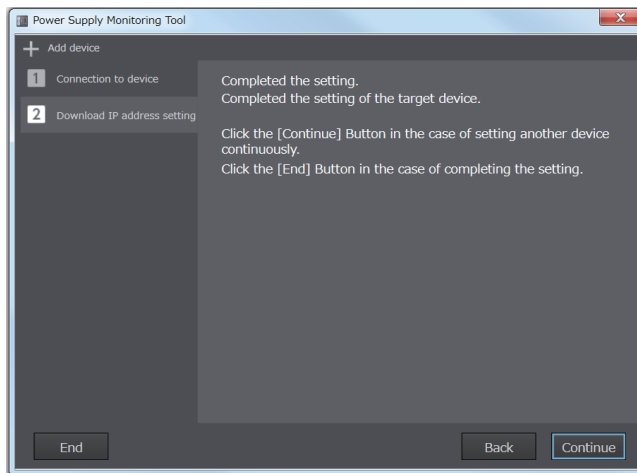
Acquired from BOOTP server	Every time the S8VK-X starts up, it acquires the IP address, sub-net mask, and default gateway from the BOOTP server.
Acquired from BOOTP server (Only on the first startup)	The above data is acquired from the BOOTP server only on the first startup of the S8VK-X. The S8VK-X does not acquire those data after that, it operates with the first data.

**Note** If the setting of IP address, sub-net mask, or default gateway is different from the value acquired from the BOOTP server, the S8VK-X cannot be monitored with this tool. In this case, set the IP address again.

**7** Click **Execute** Button to start the download.



**8** When the download is completed, the following Tab Page will be displayed.



Setting for the unit is complete.

If another S8VK-X setting is required reconnect the Ethernet cable to it, and then click **Continue** Button. Start with step 4.



# Basic Operations

This section describes the basic operations of this tool.

---

4-1	Description flow	4-2
4-2	PC settings	4-3
4-3	Creating a project	4-5
4-4	Monitoring	4-10
4-5	Automatic logging	4-13

## 4-1 Description flow

---

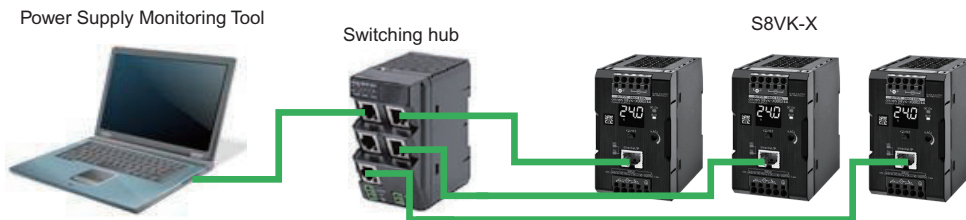
The basic operations of this tool are described in the following order.

Complete IP address setting of the S8VK-X before the following operations. Regarding to IP address setting, refer to *Section 3*.

Procedure	Outline
4-2 <i>PC settings</i> on page 4-3	Set the IP address of the PC for monitoring.
↓	
4-3 <i>Creating a project</i> on page 4-5	Create a new project and register a S8VK-X to be monitored.
↓	
4-4 <i>Monitoring</i> on page 4-10	Monitor the S8VK-X with the created project.
↓	
4-5 <i>Automatic logging</i> on page 4-13	Automatic logging of monitoring data.

## 4-2 PC settings

When monitoring S8VK-X with this tool, IP address settings are required for the PC.



Set the IP address with the following procedure.

However, when using the PC for other purposes, record the IP address used for the S8VK-X before setting and reset the IP address to the original value after use. If original settings are not correctly set the original network connection may not be available.

### Setting method for each Windows OS

#### ● Windows 7

- 1** Open the Control Panel from the Windows Start Menu and then select **Network and Sharing Center - Change adapter settings**.
- 2** Right-click **Local Area Connection**, and select **Properties**.
- 3** Select **Internet Protocol Version 4 (TCP / IPv4)** Option, and click **Properties**.
- 4** Check **Use the following IP address** and set the IP address by referring to the subsequent setting example.

#### ● Windows 8.1

- 1** Right-click **Start Button**, and select **Network connections**.
- 2** Right-click **Ethernet** icon, and click **Properties**.
- 3** Select **Internet Protocol Version 4 (TCP / IPv4)** Option, and click **Properties**.
- 4** Check **Use the following IP address** and set the IP address by referring to the subsequent setting example.

- **Windows 10**

- 1** Open the **Windows System Tools** from the Windows Start Menu, and select the **Control Panel** and then select **Network and Sharing Center - Change adapter settings**.
- 2** Right-click **Ethernet** icon, and click **Properties**.
- 3** Select **Internet Protocol Version 4 (TCP / IPv4)** Option, and click **Properties**.
- 4** Select **Use next IP address** Option, and set the IP address by referring to the subsequent setting example.

## IP Address Settings Example

Set the IP address and subnet mask using the following table. It is not necessary to set the default gateway.

Configuration Devices	IP address	Sub-net mask	Default gateway
Computer	192.168.250.100	255.255.255.0	Blank
S8VK-X 1st Unit	192.168.250.1	255.255.255.0	0.0.0.0
S8VK-X 2nd Unit	192.168.250.2	255.255.255.0	0.0.0.0
S8VK-X 3rd Unit	192.168.250.3	255.255.255.0	0.0.0.0

Set the subnet mask to the same value as the S8VK-X. When the subnet mask is "255.255.255.0", the range of IP addresses that can be set for the S8VK-X is 192.168.250.1 to 192.168.250.254. Set the IP address within this range so that it does not duplicate with the S8VK-X.

## 4-3 Creating a project

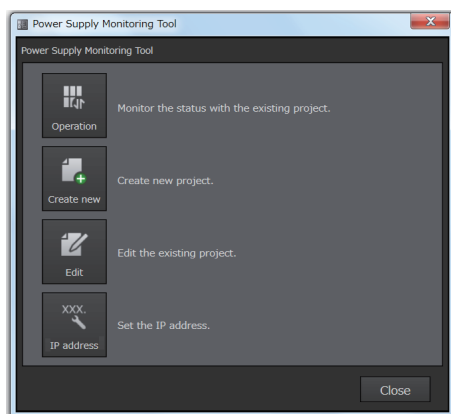
This section describes the procedure of creating a new project to register the S8VK-X.

### 1 Start this tool.

Select **All Programs - OMRON - Power Supply Monitoring Tool** from the Windows Start Menu.

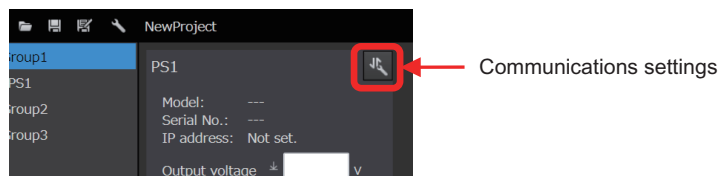
### 2 Create a new project.

The following screen is displayed. Click **Create new** Button.



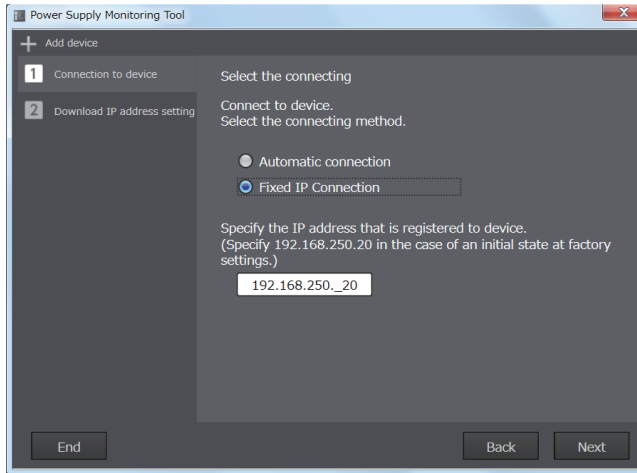
### 3 Register a S8VK-X in the project.

When the following is displayed, click **Communications settings** Button.



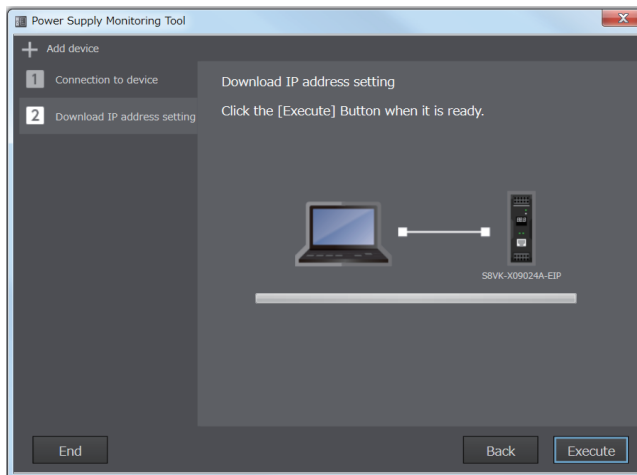
#### 4 Input the IP address and connect this tool to the S8VK-X.

When the following dialog box is displayed, select the *Fixed IP Connection* Option, enter the S8VK-X device IP address, and then click **Next** Button.

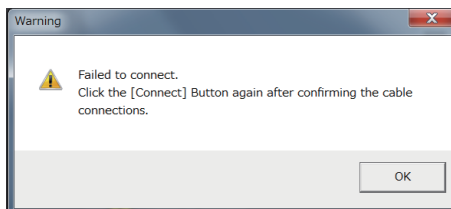


Click **Connection** Button, and wait for the connection to complete.

*Connecting...* Message is displayed until the connection is completed.

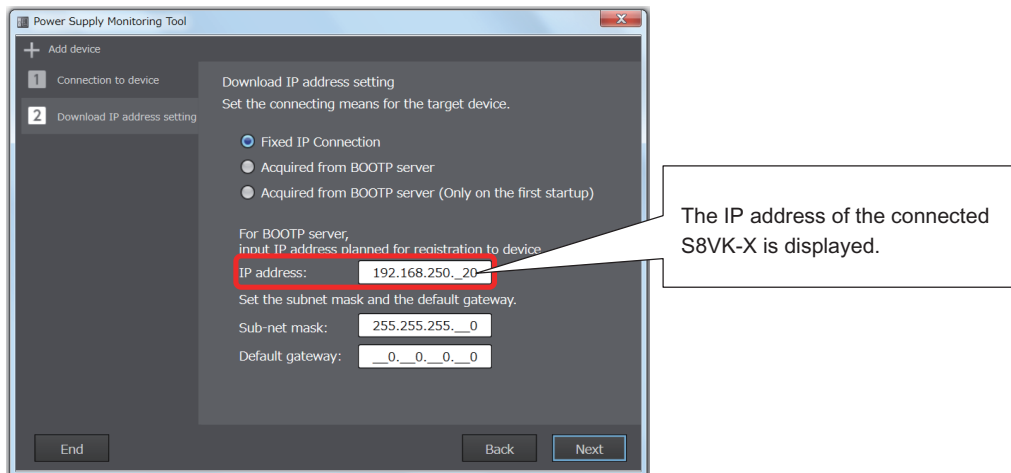


**Note** If the connection to the S8VK-X fails, the following message will be displayed. Operate according to the message. If you cannot connect, refer to *6-1 Troubleshoot List* on page 6-2.

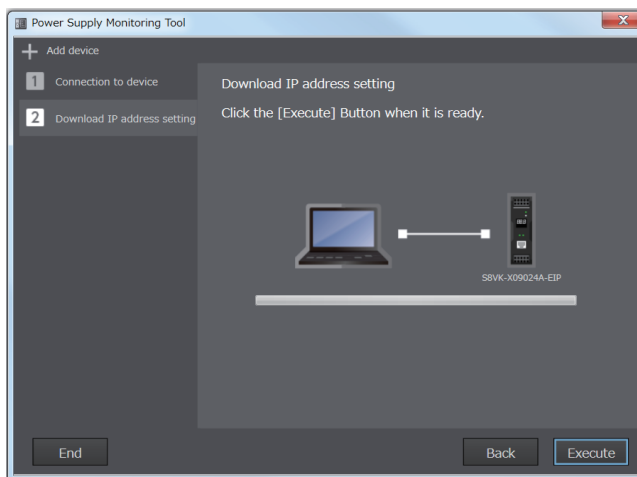




- 5 When the connection is successful, the following dialog box is displayed. Click **Next** Button.

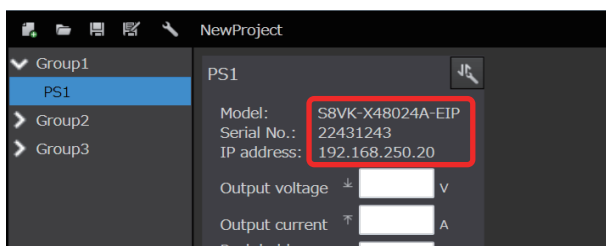


- 6 Click **Execute** Button to start the download.



- 7 Registration is complete.

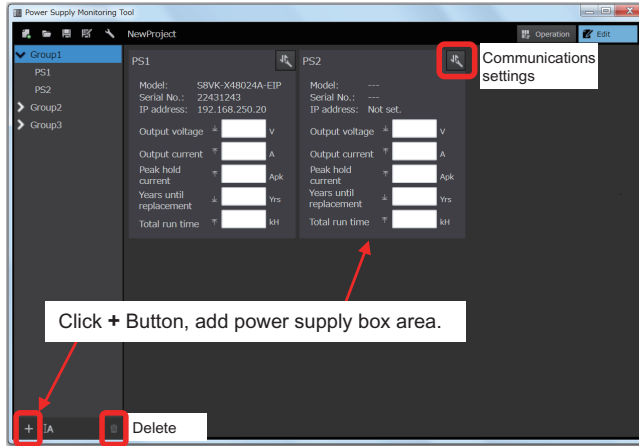
The screen returns to the Edit Screen and the information of the registered S8VK-X is displayed.



## 8 To continue to register any other S8VK-X.

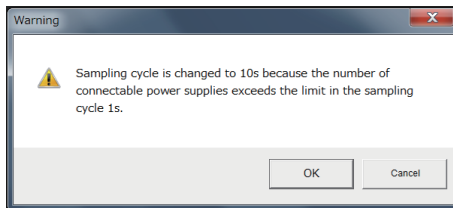
Click the **+** Button shown below and add the required number of S8VK-X. Then click **Communications settings** Button and perform the procedure from step 4 onward.

In case of adding an incorrect S8VK-X, select the power supply name to be deleted from the left end of the screen and click **Delete** Button.

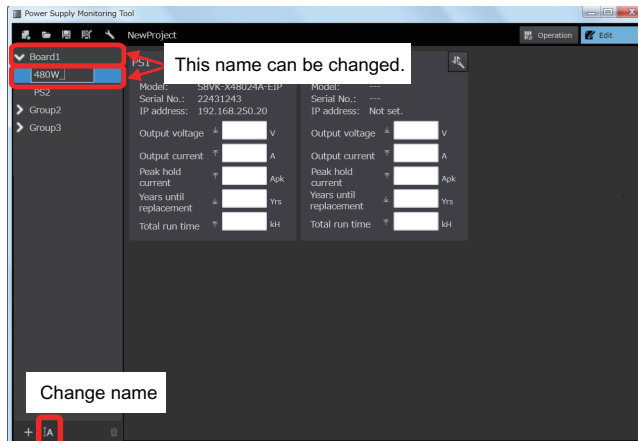


The maximum number of S8VK-X Units that can be registered on one screen is 6. To register more than 6, Select "Group 2" or "Group 3" at the left end of the screen and register the S8VK-X. Up to 18 Units can be registered.

In case of registering more than 6 Units, the following message will be displayed, click **OK** Button. For the sampling cycle, refer to step 3 in *4-4 Monitoring* on page 4-10.



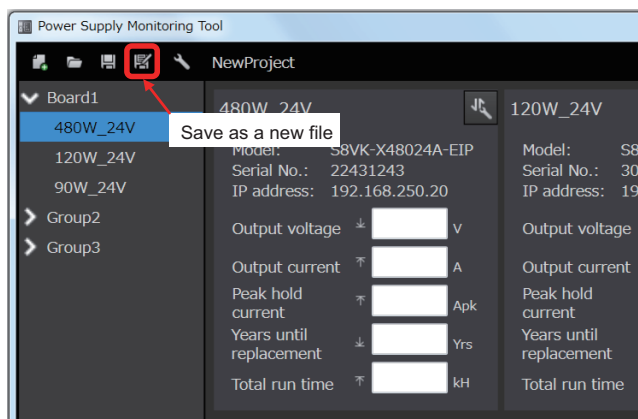
- 9** To change the registered power supply name and group name.  
Changing the name makes it easier to distinguish which power supply of which equipment.



- Double click the power supply name (or group name) or select the power supply name (or group name), and then click **Change name** Button.
- The name can be up to 20 characters. Do not duplicate the name.

**10** Save the project.

Finally, save the created project. Click **Save as a new file** Button and save according to the displayed dialog box.

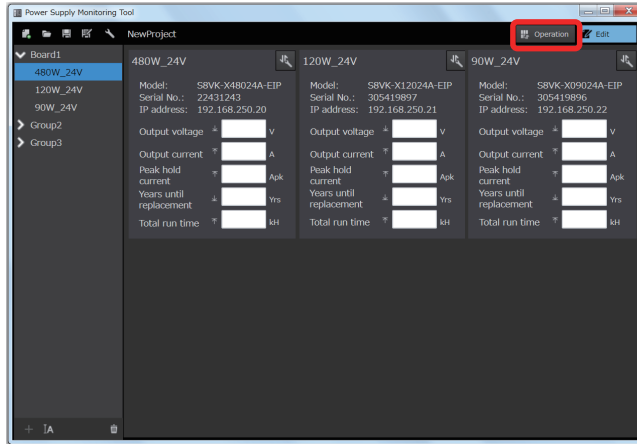


## 4-4 Monitoring

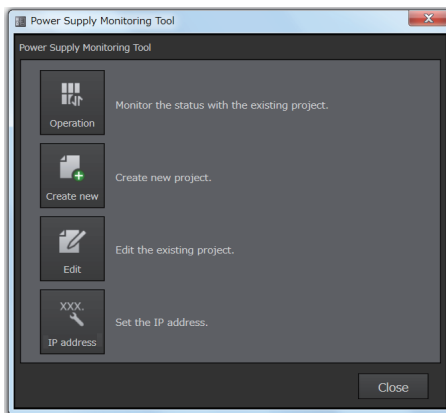
This section describes how to monitor with the created project.

### 1 Go to the operation mode.

After creating the project, click **Operation** Button.

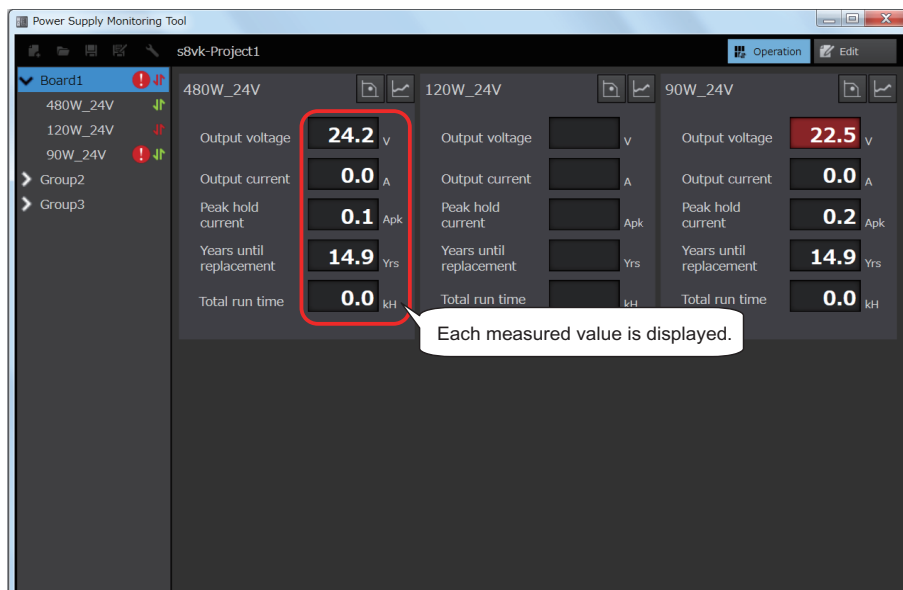


To exit this tool and restart it, click **Operation** Button on the Startup Screen and select the saved project file.



**2** Start monitoring.

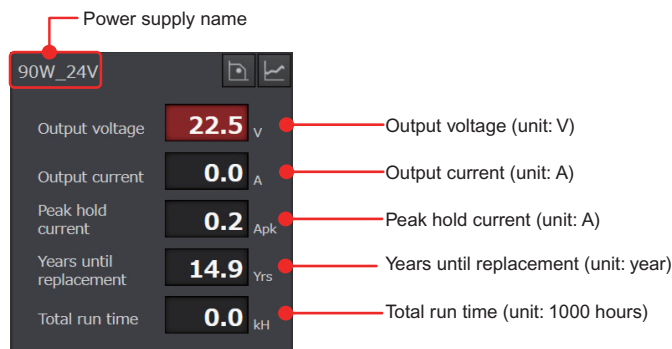
Communications with the S8VK-X begins, by displaying each measured value such as output voltage.



The names and functions of each part are below.

● **Power supply box area**

The following values can be monitored.

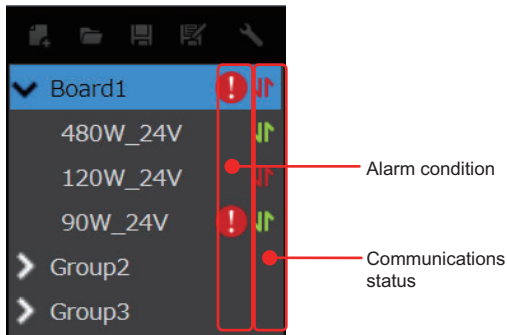


**Note** If a communications error occurs, all monitor values are blank. Also, if a power supply error occurs, the following will be displayed on the monitor value.

Monitoring value	Display	Error name	Description
Output voltage	ERR	Voltage measurement error	It cannot be measured normally due to noise or other effects.
Output current	ERR	Current measurement error	
Peak hold current			
Years until replacement	HOT	Overheating alarm	Product overheating has continued for less than 180 minutes. Lower the temperature.
	ERR	Product overheat abnormality	Product overheating has continued for over 180 minutes. Replace the S8VK-X, as the internal parts may be deteriorated.

● Configuration editing area

Displays the communications status and alarm status of each power supply and group.



When you click **Power supply name** on the left screen, it will move to the **Derating display** screen of the power supply you clicked (refer to 5-2 *Confirm the margin of the power supply* on page 5-4).

To return to the list display, click **Group name**.

Display part	Icon	Description
Communications status		Normal communication.
		A communications error has occurred.
Alarm condition		Normal operation.
		An alarm or a power supply error has occurred.

If a communications error or alarm occurs on one of the power supplies, the same icon is displayed next to the group name for which the power is registered. For a power supply error, refer to 6-1 *Troubleshoot List* on page 6-2. For alarms, refer to 5-1 *Perform alarm value settings* on page 5-2. For a power supply error, refer to the previous page.

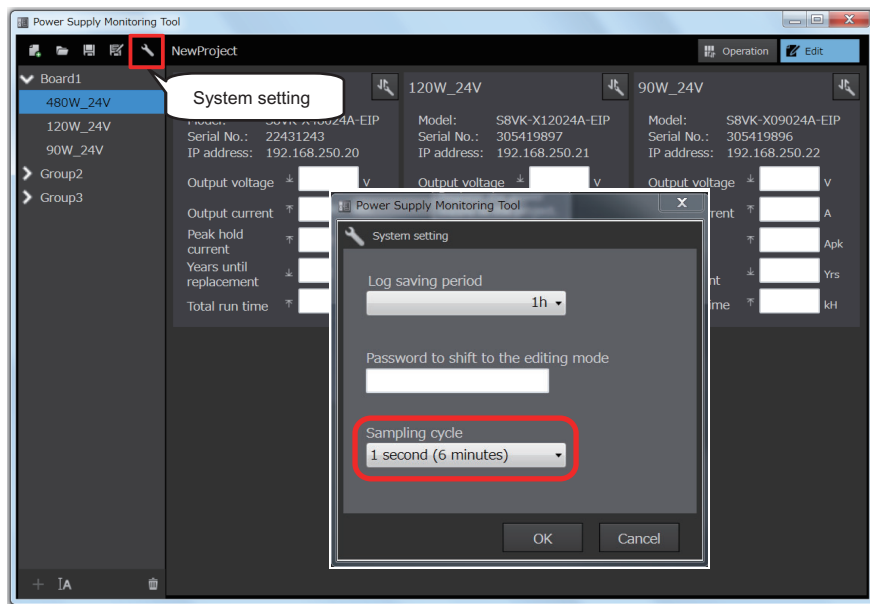
3 Change the update interval of monitoring

In the initial state, all monitored values are updated at intervals of 1 second (10 seconds in case of 7 or more).

To change the update interval, click **Edit Button** and **System setting Button** in order, and then change *Sampling cycle*.

Select *Sampling cycle* from 1 second, 10 seconds, 1 minute, and 1 hour in the following dialog box. If the number of registered Units is 7 or more, 1 second cannot be set.

Note Depending on the operating conditions, such as PC processing speed, number of S8VK-X Units to be monitored, and communications error, data may not be collected at the set update interval of monitoring.



## 4-5 Automatic logging

This tool logs the monitored data during operation mode.

For the logging specifications, refer to the table below.

Item	Description
Log data	<p>The following data of S8VK-X X number of registered units</p> <ul style="list-style-type: none"> <li>• Group name</li> <li>• Power supply name</li> <li>• Model</li> <li>• Serial No</li> <li>• IP address</li> <li>• Date time</li> <li>• S8VK-X status *1</li> <li>• Output voltage (unit: V)</li> <li>• Output current (unit: A)</li> <li>• Peak hold current (unit: A)</li> <li>• Years until replacement (unit: years)</li> <li>• Percentage until replacement (unit: %)</li> <li>• Total run time (unit: hours)</li> <li>• Continuous run time (unit: minutes)</li> </ul> <p>Tab-delimited text file.</p>
Interval for saving log data	<p>1 to 24 hours</p> <p>It can be changed by system setting. Refer to step 3 in <i>4-4 Monitoring</i> on page 4-10 for the moving to system settings.</p>
Log data saving timing	<p>Other than the storage interval, data is saved during the following actions:</p> <ul style="list-style-type: none"> <li>• Entering edit mode</li> <li>• Exiting this tool</li> </ul>
Log data save location	<p>Within the [Project name_ Data] folder in the same location as the project file.</p> <p>The default save location is below.</p> <p>C: \OMRON\ Power Supply Monitoring Tool \ [project name_ +Data]</p>
File name of log data	<p>Project name_ Date time when saved (yyyy_mm_dd_hh_mm).txt</p>

\*1. For details of the status, refer to the *Switch-mode Power Supplies Communications Manual* (T213).





# 5

## Other functions

This section describes functions such as alarm determination and power supply margin.

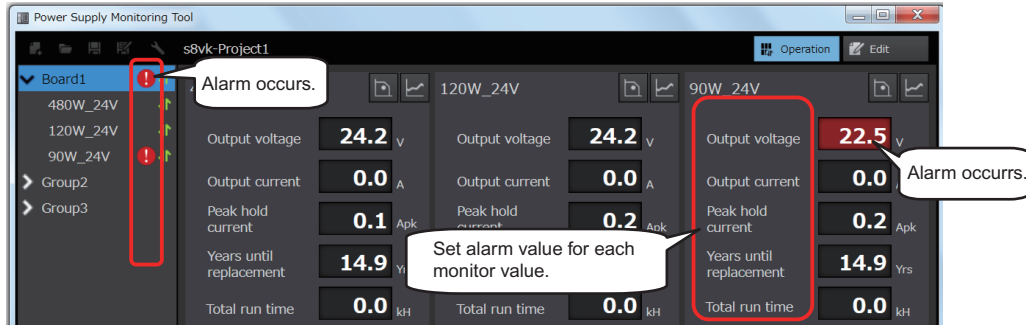
---

<b>5-1</b>	<b>Perform alarm value settings</b>	<b>5-2</b>
<b>5-2</b>	<b>Confirm the margin of the power supply</b>	<b>5-4</b>
<b>5-3</b>	<b>Graph display of voltage and current</b>	<b>5-7</b>
<b>5-4</b>	<b>Setting the password</b>	<b>5-8</b>

# 5-1 Perform alarm value settings

Alarm setting can be performed on the monitor value.

Alarm values can be set for each monitor value, and when the monitor value exceeds or falls below the alarm value, it will be shown on the screen.



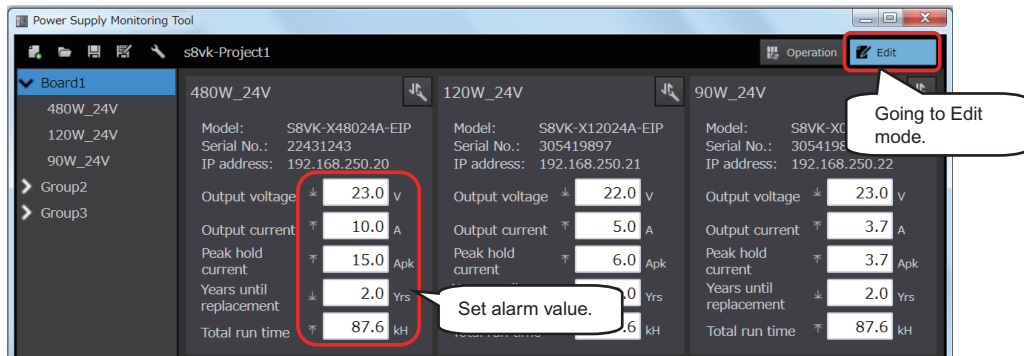
Use the following procedure.

- 1 Go to the edit mode and set an alarm value for each monitor value.

Set an alarm value for the monitor value you want to perform alarm value settings. The alarm has an upper and lower limit alarm, and the icon at the beginning of each monitor value gives an available alarm type.

Icon	Alarm	Notification condition	Types of monitor values
	Upper limit alarm	The monitor value is greater than the alarm value	Output current, Peak hold current, Total run time
	Lower limit alarm	The monitor value is smaller than the alarm value	Output voltage, Years until replacement

Leave it blank if you do not want to use the alarm value setting function. However, even if the alarm value is not set for the output current and the peak hold current, the rated current value is automatically set as an alarm value.



## 2 Go to the operation mode.

Alarm value setting is performed on the monitor value for which it is set. When an alarm occurs, the background of the monitor value turns red. At the same time the alarm mark is displayed both at the power supply name on the left end of the screen and on the group name to which the power supply belongs.



## 5-2 Confirm the margin of the power supply

To confirm the margin of the power supply to the load ratio and ambient temperature under the usage environment is available.

Be sure to use this function under the following conditions. If this condition cannot be satisfied, it will not operate properly.

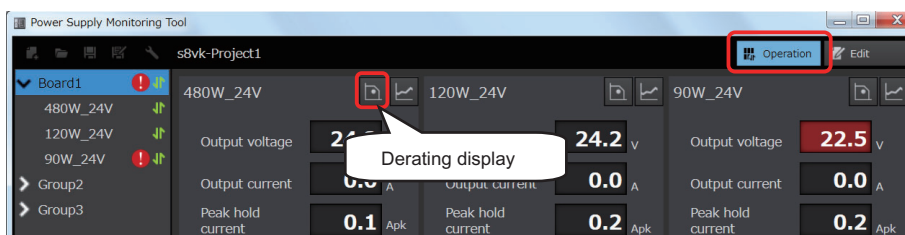
- The mounting interval of the S8VK-X is 15 mm or more
- The output voltage is within 100 to 101% of the rated voltage.
- Use at altitude less than 2,000 m

The method to confirm the margin of the power supply is shown below.

### 1 Go to *Derating display* Tab Page.

In operation mode, click the **Derating display** icon or **Power supply name**.

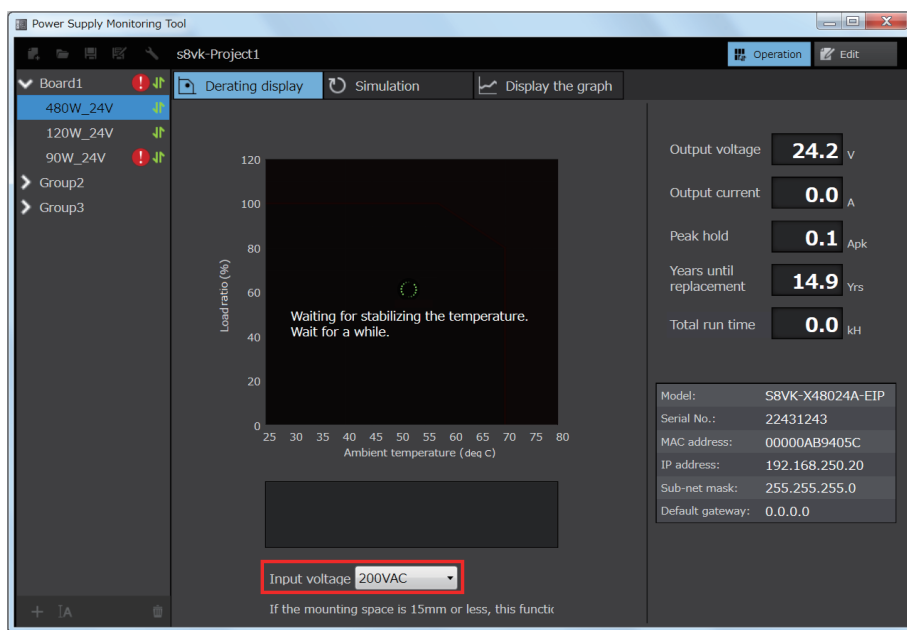
If you want to display the list again, click **Group name**.



### 2 Set the Input voltage.

The following is displayed. Set the input voltage applied to the S8VK-X using *Input voltage* pull-down list at the bottom of the Tab Page. The input voltage can be selected from 100 VAC, 115 VAC, 200 VAC, or 230 VAC. Select a value close to actual input voltage.

The default value of Input voltage is 200 VAC.

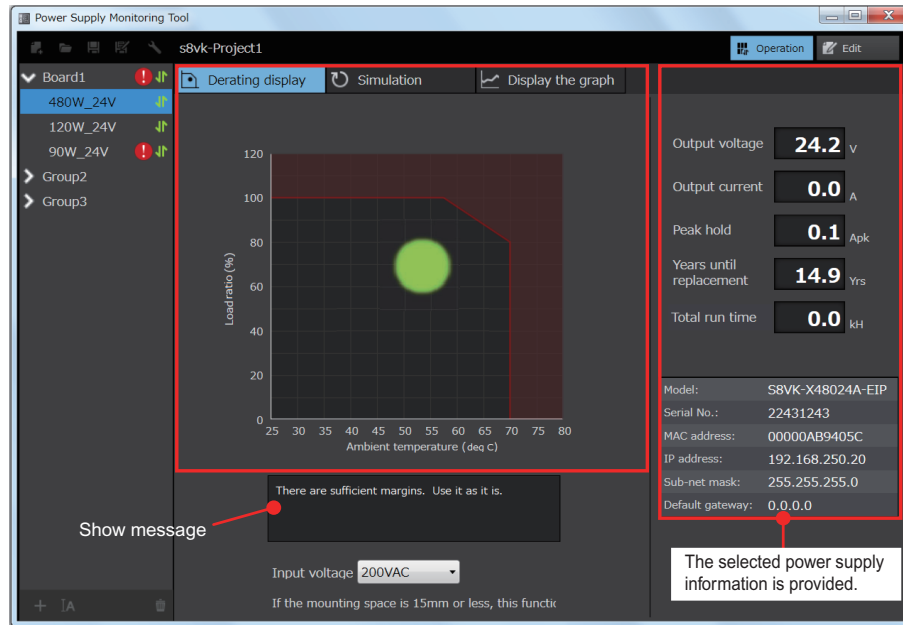


**3** Estimate the ambient temperature.

It takes 10 minutes for the estimation to shift in the operation mode. After 10 minutes, a green circle is displayed in the derating display. At this circle position, verify the load ratio and ambient temperature margin.

However, if the ambient temperature or load on the power supply is not stable, the state will wait for the temperature to become stable.\*1

\*1. This condition occurs when the ambient temperature is within  $\pm 1$  °C.



5-2 Confirm the margin of the power supply

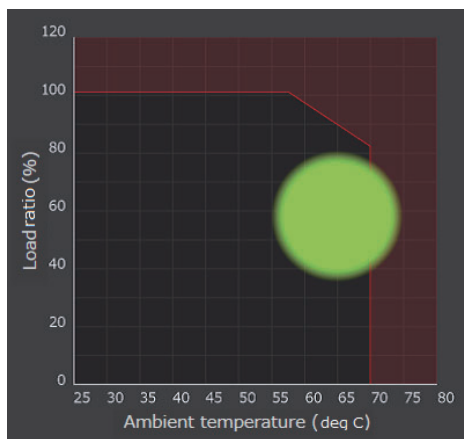
5

**4** Check the load ratio and ambient temperature margin.

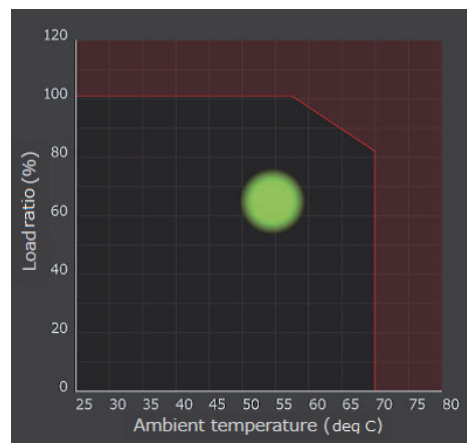
The horizontal axis of the derating display is the estimated ambient temperature and the vertical axis is the load ratio. The graph is updated every minute.

When the ambient temperature is not stabilized, the circle is displayed large. When it is stabilized, the dot will become smaller.

Unstable temperature condition



Stable temperature condition



Estimated Ambient Temperature:

Temperature estimated from internal temperature of the S8VK-X.

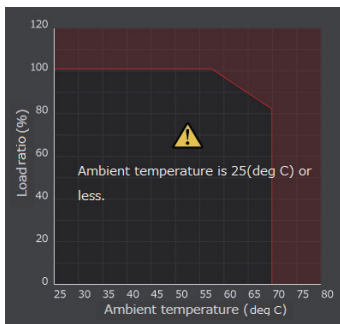
Load ratio: Output current value (A) ÷ Rated output current (A)

The advice according to the derating condition is displayed at the bottom portion of the graph. Review application conditions according to the message.

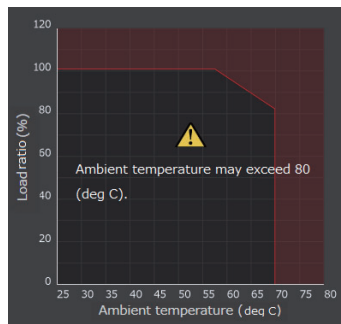
- There are sufficient margins. Use it as it is.
- There is no margin on load ratio. Consider increasing the capacity.
- There is no margin on ambient temperature. Consider improving the operating environment.
- The load ratio may exceed 100%. Consider increasing the capacity, otherwise, the S8VK-X failure may occur.
- The ambient temperature may exceed 70°C. Consider increasing to improving the operating environment, otherwise, the S8VK-X failure may occur.

When the estimated ambient temperature exceeds the display range, or if a communications error occurs, the following display will be shown.

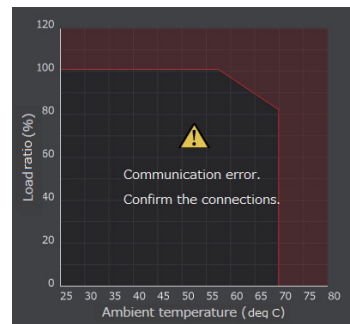
Estimated ambient temperature is 25°C or less.



Estimated ambient temperature may exceed 80°C.



Communications error occurred.



## 5 Simulate the capacity change

In addition to the review of the power supply capacity, simulation can be done with this tool.

Select the **Simulation** tab below and select the model number to simulate from the **Model** pull-down list. Output voltages 5 V and 12 V are not subject to simulation because there are no other types with this output.



The left side is the current value and the right side is the simulation value. The graph is updated every minute.

Refer to this result and to review the power supply capacity.

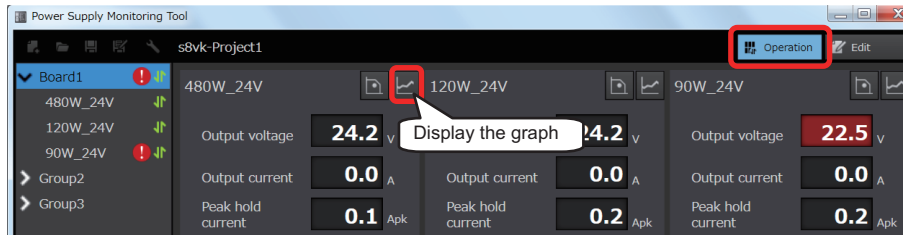
## 5-3 Graph display of voltage and current

The output voltage and current can be displayed on the graph, and can be trended.

The method to review the alarm setting and graphed trend is below.

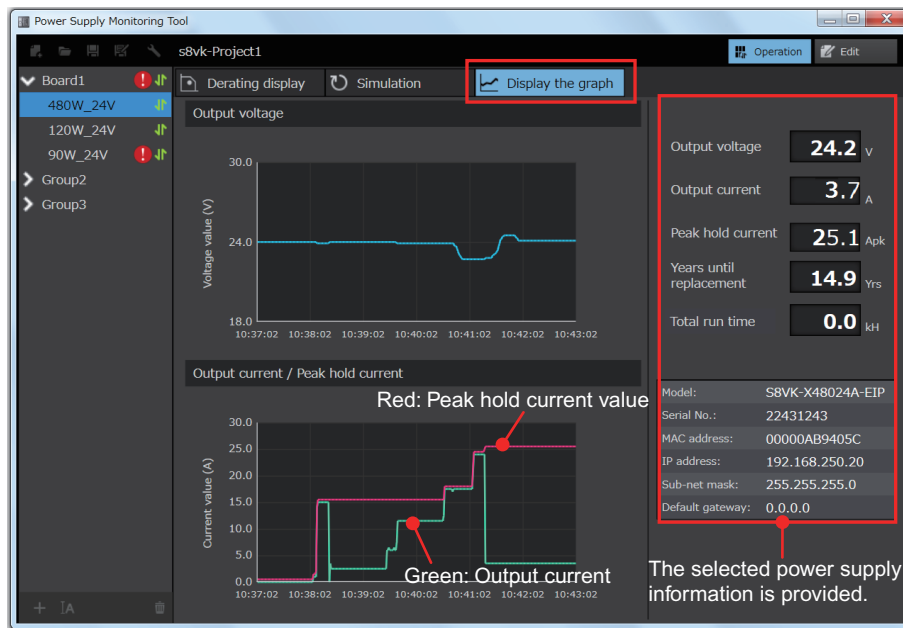
- 1 Go to *Display the graph* Tab Page.

In the operation mode, click **Display the graph** Button of the power supply to be displayed in the graph. If you want to return to the list again, click **Group name**.



- 2 The output voltage and current is displayed on the graph.

As shown below, a graph of the output voltage is displayed on the top and a graph of the output current (green line) and the Peak hold current (red line) is displayed on the bottom.



Note When the mouse is placed on the graph, the current value will be displayed on the tooltip.

The graph is updated every sampling cycle and the data of the past 360 samplings are shown from the latest data.

The graph display section for each sampling cycle is as follows.

Sampling cycle	Graph display section
1 second (default)	6 minutes
10 seconds	60 minutes
1 minutes	360 minutes
1 hour	360 hours

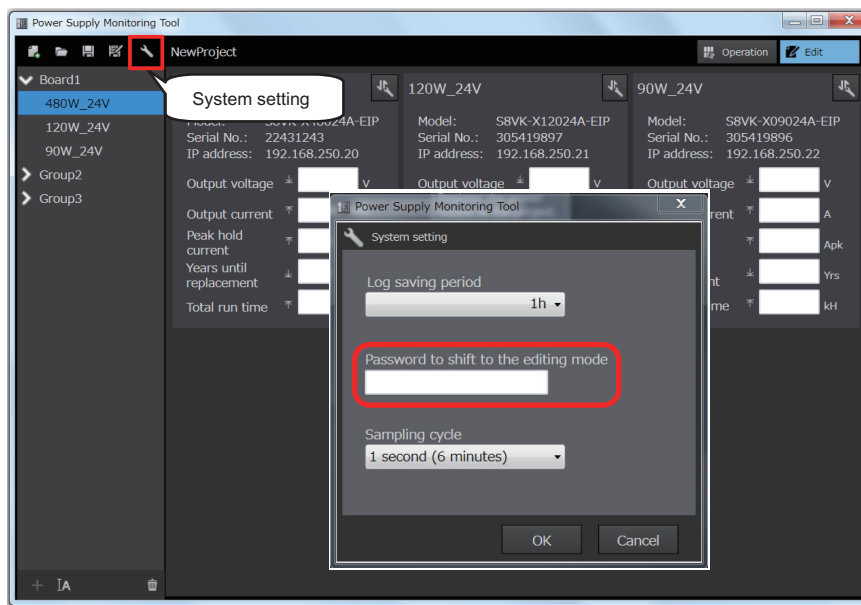
For setting the sampling cycle, refer to step 3 in 4-4 *Monitoring* on page 4-10.

## 5-4 Setting the password

The administrator can set the password so that the settings cannot be changed by anyone other than the administrator.

Click **Edit** Button, and then click **System setting** Button, and then set *Password to shift to the editing mode*.

Passwords can be only alphanumeric characters, up to 8 digits. If the password is not set, this function is invalid.



When the password is set, the password entry dialog box will be shown during the following operation.

- Entering edit mode.
- Click the **Edit** Button from the Startup Screen to read the project file.

If the password is forgotten, confirm the following file and save location.

Save location: C:\OMRON\Power Supply Monitoring Tool\Password

File name: (project name)\_PASSWORD.txt





# Troubleshooting

---

This section describes troubleshooting when using the Power Supply Monitoring Tool and other countermeasures.

---

<b>6-1</b>	<b>Troubleshoot List .....</b>	<b>6-2</b>
------------	--------------------------------	------------

## 6-1 Troubleshoot List

First, check the following:

- Make sure that the DC ON indicator of the S8VK-X is lit.
- Make sure that the MS indicator of the S8VK-X is lit green. When this is lit, there is an issue with the power supply and it should be replaced.
- LAN cable is connected correctly.

If that cannot be solved, follow the situations below.

Situation	Problems	Cause	Possible Correction
IP Address settings	When you entered the IP address, "The setting has the value that is impossible to use." was displayed.	Setting IP address is out of range.	Enter an IP address according to the IP address rule.
	<b>Automatic connection</b> is not available.	Multiple S8VK-Xs are connected.	With <b>Automatic connection</b> , only one S8VK-X can be connected. Connect only one.
		The network card setting of Communications Middleware Utilities is incorrect.	Select <b>All Programs - OMRON - Communications Middleware Utilities - DirectEthernetUtility</b> and change the setting. For the setting example, refer to the step 14 in 2-1 <i>Installation</i> on page 2-2.
	<b>Fixed IP Connection</b> is not available.	The input IP address is incorrect.	Input correct value.
		The IP address of S8VK-X or the subnet mask is not set, or the setting is incorrect.	Refer to <i>Section 3 Set IP address</i> .
		The IP address of the PC has not been set or the setting is incorrect.	Refer to 4-2 <i>PC settings</i> on page 4-3.
When monitoring begins.	Monitoring is not available (The monitor value is blank, and a communications error occurred).	The IP address of the PC has not been set or the setting is incorrect.	Refer to 4-2 <i>PC settings</i> on page 4-3.
		After the S8VK-X was replaced, IP address has not been set.	Refer to <i>Section 3 Set IP address</i> .
While monitoring	The interval for updating the monitor value is long.	A communications error occurred in the monitoring S8VK-X.	Refer to the step 2 in 4-4 <i>Monitoring</i> on page 4-10 and confirm the S8VK-X model of communications error.
Displaying derating	The Tab Page does not change from <i>Waiting for stabilizing the temperature</i> Message.	10 minutes have not passed since entering Operating mode.	Wait for 10 minutes.
		10 minutes have elapsed, but the ambient temperature is not stable.	Check the opening and closing of the cabinet. Stabilize the ambient temperature.

The countermeasures for other cases are as follows.

Case	Action
Replace S8VK-X with new one.	Set the IP address of a new S8VK-X and replace the old S8VK-X with the new S8VK-X. For how to set the IP address, refer to <i>Section 3 Set IP address</i> .
Forgotten password	Refer to <i>5-4 Setting the password</i> on page 5-8.





**OMRON Corporation Industrial Automation Company**

**Kyoto, JAPAN**

**Contact : [www.ia.omron.com](http://www.ia.omron.com)**

**Regional Headquarters**

**OMRON EUROPE B.V.**

Wegalaan 67-69, 2132 JD Hoofddorp  
The Netherlands

Tel: (31) 2356-81-300 Fax: (31) 2356-81-388

**OMRON ASIA PACIFIC PTE. LTD.**

438B Alexandra Road, #08-01/02 Alexandra  
Technopark, Singapore 119968

Tel: (65) 6835-3011 Fax: (65) 6835-2711

**OMRON ELECTRONICS LLC**

2895 Greenspoint Parkway, Suite 200  
Hoffman Estates, IL 60169 U.S.A.

Tel: (1) 847-843-7900 Fax: (1) 847-843-7787

**OMRON (CHINA) CO., LTD.**

Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China

Tel: (86) 21-5037-2222 Fax: (86) 21-5037-2200

**Authorized Distributor:**

©OMRON Corporation 2018-2022 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

**Cat. No. T215-E1-03**

0922