

# Switch Mode Power Supplies

S8VK-X

A New Standard in Preventative Maintenance

## The Connected Power Supply



# Production Site Innovation inspired by IoT

OMRON aims to create the production site of the future where the health of critical components is accessible from anywhere.

- Machine health is visible 24/7
- Information is displayed by individual machine and production site location
- Historical data is available for analytics

Facility conditions will be accessible through IoT connectivity all over the world. The data collected will help optimize each facility's operating rates and drastically change preventative maintenance activities.







# Innovative Facility Maintenance through Power

Retrieving and centrally monitoring the status of power supplies enables you to plan equipment maintenance activity more effectively. This eliminates unexpected downtime and premature power supply replacement, thus reducing overall maintenance costs.


## Currently



Equipment status is not accessible. Maintenance personnel must physically inspect each machine to identify defective equipment.



Maintenance personnel must respond quickly to any machine experiencing an issue.



Existing preventative maintenance programs replace equipment far before the service life of the component, increasing their maintenance costs.



# Supply Monitoring

From now on

## Centralized monitoring of equipment

Each machine and facility site can monitor the voltage, current, and expected life of their power supplies from a central location.

	Tokyo	Shanghai	Beijing		
Voltage	24.1 V	24.2 V	12.1 V	23.8 V	24.1 V
Current	1.3 A	2.0 A	0.5 A	9.1 A	18.8 A
Replacement time	4 years	3 years	1.5 years	0.6 years	0.4 years

## Improved Maintenance Planning

Historical data analysis can help plan machine maintenance activity more strategically.

## Enhanced facility uptime and reduced maintenance costs

Improved maintenance activity planning prevents unexpected downtime and reduces premature component replacement, thus lowering maintenance costs.

# The first step in scheduled maintenance: knowing when to replace your power supply.

S8VK-X calculates the deterioration of the internal electrolytic capacitor based on its component's temperature. It is indicated on the display as well as via the communications system.

Years until replacement



Percentage until replacement

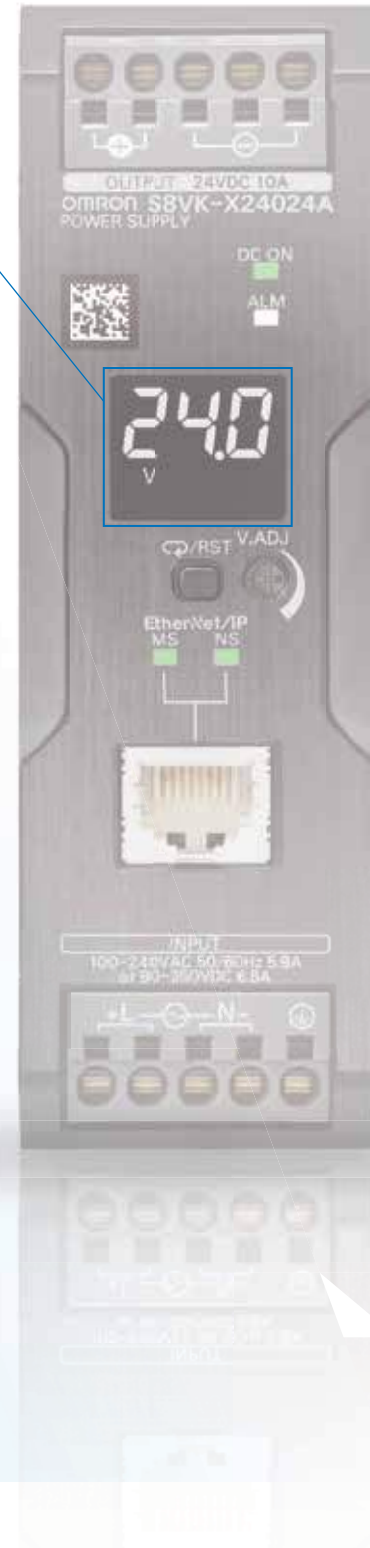
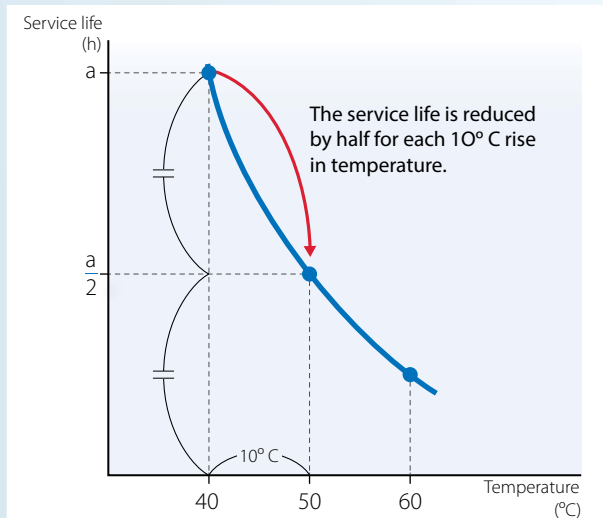


Did you know?

## A power supply has a service life.

In general, aged deterioration of the internal electrolytic capacitor degrades the original performance (service life) of a power supply and ceases to function in the end. Using a power supply close to its service life may cause a disruption of output voltage even at power-on state and unexpected shutdown of equipment.

### Relationship between service life of a electrolytic capacitor and temperature



# S8VK-X power supplies help promote an innovative style of facility maintenance.

S8VS 240-W models



World's smallest class\*<sup>1</sup> of power supplies with a communication function

The space-saving design enables you to mount side-by-side and replace conventional power supplies in a control panel smoothly.

\*1. According to OMRON investigation in October 2017.

Switch Mode Power Supplies

## S8VK-X

\*2. Two units of S8VK-X 240 W and W451-03B Switching Hub

## Excellent environmental resistance contributes to stable equipment operation.

Temperature



-40 to 70 °C

Vibration and shock



Vibration: 5 G  
Shock: 15 G

Humidity and gases



Coated PCBs

Altitude



3,000 m

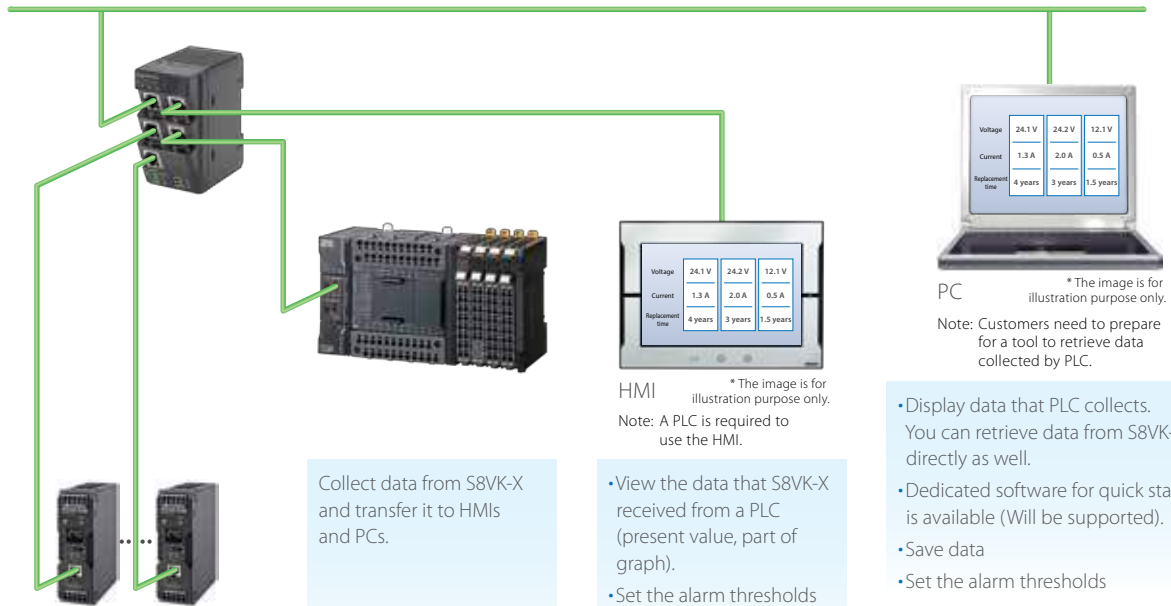


Our shared Value Design for Panel (herein after referred to as Value Design) concept for the specifications of products used in control panels will create new value to IEI our customer's control panels. Combining multiple products that share the Value Design concept will further increase the value provided to control panels.

Compatible with multiple communication methods covering a wide range of applications globally.

Compatible with **EtherNet/IP** / **Modbus**

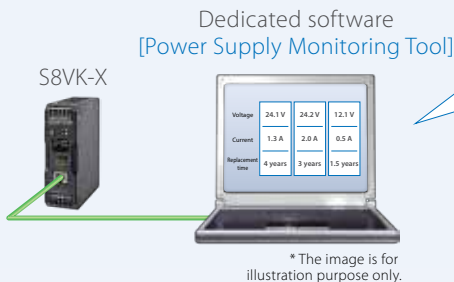
System configuration example



I want to start right away.

## Quick start

You can start easily using a dedicated Power Supply Monitoring Tool.



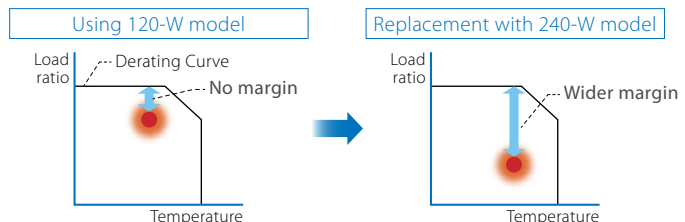
## FUTURE RELEASE

### What you can do with Power Supply Monitoring Tool

- Default setting of Power Supply (IP address etc.)
- Collective display of data, saving data, and the alarm display

Voltage	24.1 V	24.2 V	12.1 V
Current	1.3 A	2.0 A	0.5 A
Replacement time	4 years	3 years	1.5 years

- Verification of current operating environment & replacement simulation



Simulation can be performed to see how much margin will be created when you replace the current product with bigger capacity one.

etc.



# Convenient local indicator displays current power supply status.



## Easy-to-read Local Indicator

### Advantages during design and measurement

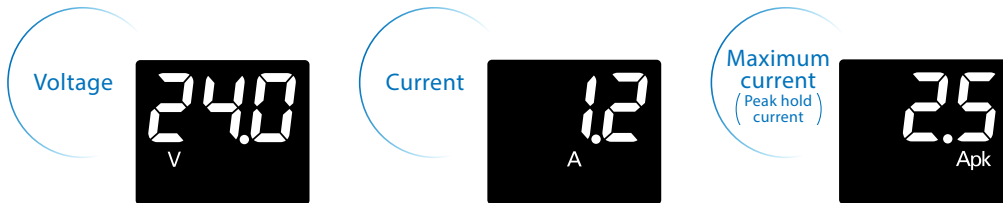
You can easily check the expected output voltage and the designed current (steady-state and maximum) without using measuring equipment.

Display example



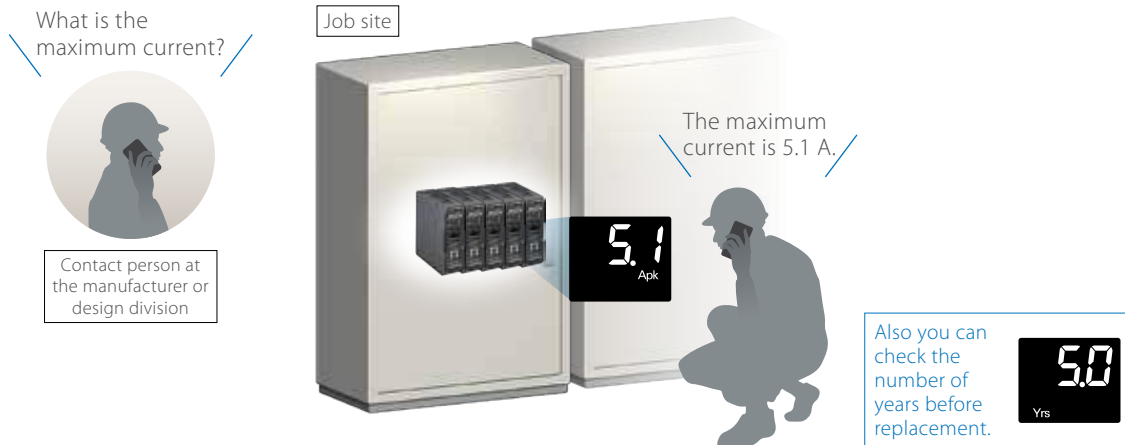
### Advantages during operation

You can check the output voltage and current of the power supplies on site without using measuring equipment. Furthermore, you can check the maximum current value recorded.



### Advantages during malfunction and maintenance

You can diagnose issues, while checking the output voltage and current, by using the local indicator without using measuring equipment.



# Communications and display items

Item		Monitor display	Communication		
			Ethernet/IP		Modbus TCP
			CIP message	Tag data link	
Output voltage		✓	Read	Read	Read
Output current		✓	Read	Read	Read
Output peak hold current		✓	Read and write*	Read	Read and write*
Years until replacement Percentage until replacement		✓	Read	Read	Read
Total run time		✓	Read	Read	Read
Continuous run time		✓	Read	Read	Read
Self-diagnostics	Overheating alarm	✓	Read	Read	Read
	Measured value error	✓	Read	Read	Read
	Memory error	✓	Read	Read	Read
Product model		—	Read	Read	Read
Serial number		—	Read	Read	Read
Firmware version		—	Read	Read	Read
IP address Subnet mask Default gateway		—	Read and write	Read	Read and write
MAC address		—	Read	Read	Read





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