

Référence	S8VK-X
Révision	1.0
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+ Support	http://support-omron.fr/

Power Supply S8VK-X

Function view	Get and display information
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Ethernet/IP (Through NJ/NX)</p> </div> <div style="text-align: center;"> <p>Direct (Modbus TCP)</p> </div> </div>
File	S8VKX.iag Demo_S8VK-X

Conditions of use	The IAG S8VKX should be integrated in a Sysmac NA project.
Principe	<p>The S8VKX IAG library provide 2 types of IAG :</p> <ul style="list-style-type: none"> - EIP version - Direct version <p>The EIP version obtains information from the EIP Tag provided by the Ethernet/IP Tag Data link exchanged between a NJ/NX controller and the S8VK-X power supply.</p> <p>The Direct version send Modbus TCP request directly to the S8VK-X power supply.</p>

1- Input/Output variables

Input variables of EIP version

Name	type	Description
TagSet_S8VKX	Structure	Structure S8VKX

Input variables of Direct version

Name	type	Description
IP_Address	String	Status of the serial port (open/close)
Port	Integer	S8VK-X TCP port. 502 by default

Structure S8VKX

Member name	Type	description
Status	UShort	16 status bits (see below)
Voltage	UShort	Output voltage measured
Current	UShort	Output current measured
PeakholdCurrent	UShort	Peak hold current measured
YearB4replace	UShort	Years until replacement
PercentB4replace	UShort	Percentage until replacement
TotalRunTime	UInteger	Total run time
ContinuousRunTime	UInteger	Continuous run time

Status

Bit position	Status description
0	Memory error
1	Product overheat abnormality
2	Current measurement error
3	Voltage measurement error
4	Overheating alarm
:	reserved
8	Years until replacement reached FUL (Full life) *
9	Years until replacement reached HLF (Half life)
:	reserved

*: FULL is indicated at the time of purchase (when initially powered on), and continues to be indicated for approximately one month.

2- Using the direct version

The direct version communicates directly to the S8VK-X using Modbus TCP protocol. The S8VK-X uses IP address 192.168.250.20 by default and can be modify using Network Configurator.

The procedure can be found in the manual [T213](#).

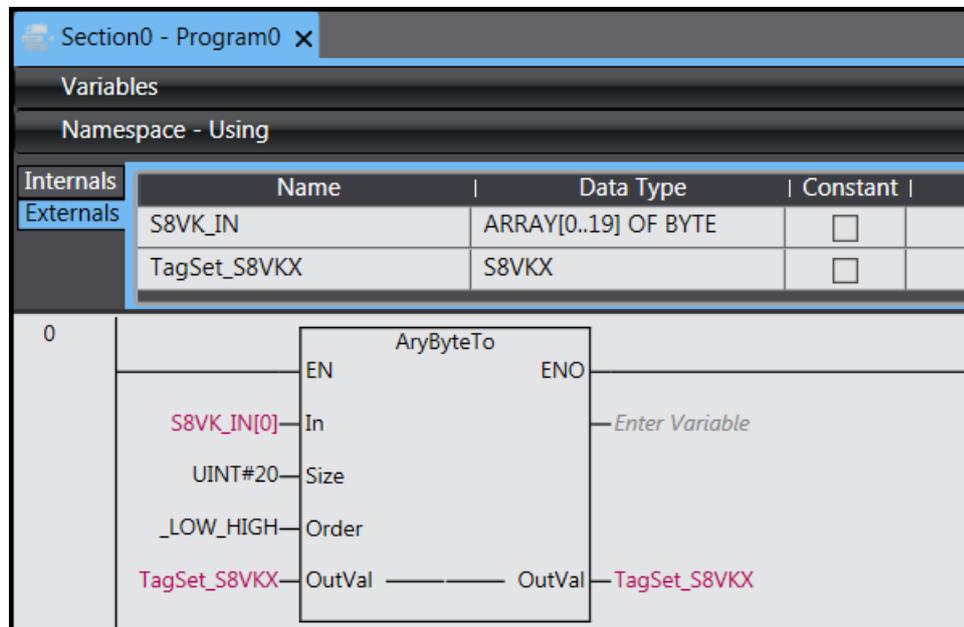
3- Using the EIP version

The status information of the power supply S8VK-X are read using the Ethernet/IP data link. The Ethernet/IP Input assembly 100 of the S8VK-X provide 10 variables containing status information.

Target Device	Connection Name	Connection I/O	Input/Output	Target Variable	Size [Byte]	Originator Variable	Size [Byte]
192.168.250.20 S8VK-X240	default_001	Input Assembly	Input	100	20	S8VK_IN	20

Details on status and procedure to establish the Data Link could be find in the manual [T213](#).

This status information should be passed to the IAG using a S8VK-X structure. The example below show how to convert the Tagset array into structure.



Replacement Time Calculation Function

Principle of Operation

The deterioration speed of the electrolytic capacitors varies considerably with the ambient temperature. (Generally the speed follows the Arrhenius Law, i.e., for every 10°C increase in the temperature, the rate of degradation doubles.) The S8VK-X monitors the temperature inside the Power Supply, and calculates the amount of deterioration according to the running hours and internal temperature.

- Note:
1. Due to degradation of internal electronic parts, replace the Power Supply approximately 15 years after purchase even if the replacement time calculation for years and percentage do not appear.
 2. The replacement time is accelerated or decelerated according to operating conditions. Periodically check indication.
 3. The accuracy of the replacement time calculation function will be reduced in applications where the input power turns ON and OFF frequently.

Years until replacement

FULL is indicated at the time of purchase (when initially powered on), and continues to be indicated for approximately one month.

Afterward, the state of deterioration for the electrolytic capacitor is calculated based on the usage environment, and is indicated when deterioration progresses. When the years until replacement reaches 5 years or less, it is indicated in 0.1 step increments within the range of 4.9 to 0.0. (Depending on the usage environment, the number of years may be indicated after without being indicated.)

Communication:

Communication is calculated in 0.1 step increments within a range of 15.0 to 0.0.

Note: The number of years until replacement may vary if there are frequent load variations or in locations where the ambient temperature fluctuates drastically.

Percentage until replacement

With the number of years until replacement at the time of manufacture set as 100%, as deterioration of the electrolytic capacitor progresses through use, it decreases in 0.1% step increments.

