

OMRON

MODEL S8VK-T(960W)

SWITCHING POWER SUPPLY

EN INSTRUCTION MANUAL

DE Bedienungsanleitung

FR Manuel d'instructions

Thank you for purchasing the S8VK-T.
This Instruction Manual describes the functions, performance, and application methods required to use the S8VK-T.

• Make sure that a specialist with electric knowledge operates the S8VK-T.

• Read and understand this Instruction Manual, and use the product with enough understanding.

Keep this Instruction Manual close at hand and use it for reference during operation.

Herzlichen Glückwunsch zum Kauf des S8VK-T.

Diese Bedienungsanleitung beschreibt die Funktionen, Leistungen und Anwendungsmethoden, die für den Betrieb des S8VK-T erforderlich sind.

• Vergewissern Sie sich, dass das S8VK-T von Elektro-Fachleuten bedient wird.

• Lesen Sie diese Bedienungsanleitung sorgfältig durch und verwahren Sie sie vor dem Betrieb, alles versteckt zu haben.

Heben Sie die Bedienungsanleitung griffbereit auf und nutzen Sie sie während des Betriebs als Referenz.

Nous vous remercions d'avoir fait l'acquisition de la S8VK-T.

Ce manuel d'instructions apporte une description des fonctions, des performances et des méthodes d'application nécessaires à son utilisation.

• Assurez-vous qu'un spécialiste ayant une bonne connaissance de l'électricité soit chargé de sa manipulation.

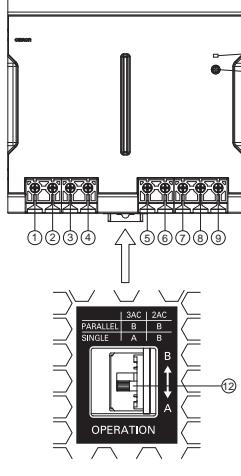
• Veuillez lire attentivement ce manuel d'instructions et vous assurer d'avoir bien compris le fonctionnement de l'appareil avant de l'utiliser.

Gardez ce manuel à portée de main et utilisez-le comme référence pendant son utilisation.

OMRON Corporation

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Fig. 1 Nomenclature / Bezeichnungen / Nomenclature



Key to Warning Symbols

CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.
Warning Symbols	
CAUTION	
• Minor electric shock, fire, or Product failure may occasionally occur. Do not disassemble, modify, or repair the Product or touch the interior of the Product.	
• Minor burns may occasionally occur. Do not touch the Product while power is being supplied or immediately after power is turned OFF.	
• Slight risk of fire. Tighten terminal screws to the specified torque.	
• Minor injury due to electric shock may occasionally occur. Do not touch the terminals while power is being supplied. Working voltage can be 815 V max. This voltage can be available 30 s after the switch off.	
• Minor electric shock, fire, or Product failure may occasionally occur. Do not allow any pieces of metal or conductors or any clippings or cuttings resulting from installation work to enter the Product.	
• If an external circuit-breaker trips or a fuse blows, it is possible that a serious failure has occurred in the device. Do not re-apply the input.	

EN Precautions for Safe Use

- (1) Installing/Storing Environment
1. Store the product with ambient temperature -40 to +85 °C, and relative humidity 0 to 95%.

2. Do not expose the product to direct sunlight, or otherwise overheat.

3. Use the product where the relative humidity is 95%.

4. Avoid places where the product is subjected to liquid, foreign substance, or corrosive gas.

5. Avoid places subject to shock or vibration. A device such as a contact breaker may be a vibration source.

6. Set the Power Supply as far from possible sources of shock or vibration. For application on a ship, always attach an End Plate (PFP-M) to the end to hold the Power Supply in place.

7. If the Power Supply is used in an area with excessive electronic noise or surge, be sure to separate the Power Supply as far as possible from noise sources.

8. This internal part may occasionally deteriorate and be broken due to adverse heat radiation. Do not tighten the screw on the side face of the main body.

(2) Arrangement/Wiring
1. Connect the ground completely. A protective earthing terminal stipulated in safety standards is used. Electric shock or malfunction may occur if the ground is not connected completely.

2. The light ignition may possibly be caused. Ensure that input and output terminals are wired correctly.

3. Use the following material to the wire to be applied to the product for preventing from the occurrence of smoking or ignition caused by the abnormal load or phase failure.

(3) Recommended Wire Type:
Terminal AWG 16 to 6 1.5 to 16 mm² 1.5 to 16 mm²

Input Output Ground / PE AWG 8 to 6 10 to 16 mm² 10 to 16 mm²

All terminals Wires to stripped: 13 to 16 mm

4. To comply with safety standards, an external circuit-breaker must be connected.

Be sure to use following recommended circuit-breakers. #3

Input	Recommended power circuit-breakers
3-phase	Circuit breaker Conforming UL/ CE 480 V, 4 A, characteristic C, 3-pole, 480 V, 5 A, characteristic D, 3-pole, or equivalent breaker
2-phase	Fuse Conforming UL/ CE 600 V 10 A Fast Acting or identical function fuse

Note: You cannot use with a DC input.

5. Do not apply more than 75N force to the terminal block when tightening it.

6. Be sure to remove the sheet covering the product for machining before power-on.

7. The internal parts may occasionally be deteriorated or broken. Be sure to set the OPERATION SWITCH to B when using for 2-phase input or parallel operation.

(3) Output Voltage Adjustment
1. The output voltage adjuster (V.ADJ) may possibly be damaged. Do not add unnecessary power.

2. Do not exceed the rated output capacity and current after adjusting the output voltage.

(4) See product catalogue for details.

EN Suitability for Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will apply third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for determining the suitability of the Product for the specific application or system. In combination with other products, the Product may not be suitable for the specific application or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

EN Nomenclature

① Input terminal (+L1)	⑩ Output indicator (DC ON: green)
② Input terminal (-L2)	⑪ Output voltage adjuster (V. ADJ)
③ Input terminal (L3)	⑫ Switch for operation select
④ Ground / PE (protective earthing) terminal (⑤)	A: The current output can use 100 % of the rated output current.
(A) PE (protective earthing) terminal stipulated in the standards is used. Connect fully to ground.	B: The current output limits the output current to 80 % of the rated output current.
⑥ DC output terminal (+V)	*Input terminals ① to ⑤: The fuse is not located on internal.
⑦,⑧,⑨ DC output terminal (-V)	Matters related to EN61558-2-16/ IEC61558-2-16

2. Overvoltage category III.

3. This equipment is for protection class 1.

4. Climatic class: 3K3
*According to EN50178.

1. Overvoltage category II.

2. This power supply is intended to be used in connection with information technology equipment.
*According to UL6950-1.

This device is open-type and is required to be installed in an enclosure suitable for the environment and can only be accessed with the use of a tool or key.
Compliance with Class I Division 2 Hazardous Location.

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NON-HAZARDOUS LOCATIONS ONLY.

WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE FROM EXPLOSIVE CONCENTRATIONS.

WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

Ambient temperature as specified in UL508: 40°C

Use in a pollution degree 2 environment.

EN Safety standards

1. DC output terminals ⑤ to ⑨ are galvanically isolated from the input terminals ① to ④.

2. Overvoltage category III.

3. This equipment is for protection class 1.

4. Climatic class: 3K3
*According to EN50178.

1. Overvoltage category II.

2. This power supply is intended to be used in connection with information technology equipment.
*According to UL6950-1.

This device is open-type and is required to be installed in an enclosure suitable for the environment and can only be accessed with the use of a tool or key.
Compliance with Class I Division 2 Hazardous Location.

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NON-HAZARDOUS LOCATIONS ONLY.

WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE FROM EXPLOSIVE CONCENTRATIONS.

WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

Ambient temperature as specified in UL508: 40°C

Use in a pollution degree 2 environment.

EN Precautions for Correct Use

When the output current returns within the rated range, overload protection is automatically cleared.

Notes:
1. If the power supply has been short-circuited or supplied with an overcurrent longer than 10 seconds, the internal parts of the power supply may occasionally be deteriorated or damaged.

2. The internal parts may possibly be deteriorated or damaged. Do not use the product for applications where the load causes frequent inrush current and overload.

■ Overvoltage Protection
This power supply automatically protects itself and the load from overvoltage.

Overvoltage protection is activated if the output voltage rises above approx. 130% of the rated output voltage.

To reset the power supply, leave the power supply off for more than 5 minutes and then turn it on again.

Note:
Be sure to clear the cause of the overvoltage, before turning on the power supply.

■ In Case there is No Output Voltage
The possible cause for no output voltage may be the presence of an overload or overvoltage condition, or may be due to the functioning of an latching protective device. The latching protection may operate at a large amount of surge voltage such as lightning strike or surge while turning on the power supply. In case there is no output voltage, please check the following points before contacting us.

Check the Overload Protected Status:
• Check whether the load is in overload status or is short-circuited. Remove wires to load when checking.

• Attempt to clear the overvoltage or latching protection function: Turn the power supply off once, and leave it off for at least 5 minutes. Then turn it on again to see if this clears the condition.

■ Conformance to EU Directives
Refer to the catalogue and this instruction manual for details on the operating condition for compliance with the EMC Directive.

Warning:
When used in 2-phase input mode, the rating is Class A under the given conditions.

When used at the rated output voltage and at 45% to 100% of the rated output current

Use this product in residential, commercial, and light industrial applications which may cause radio interference.

This product is not designed for use in residential systems connected to commercial power supplies or in commercial or light industrial applications. Users who are planning to use it in such environments have to implement adequate measures to protect against radio interference.

■ Dielectric Strength Test
Testing dielectric strength:

3000 VAC between input terminals ① to ⑤ together > and <output terminals ⑤ to ⑨ together > for 1 minute.

When testing, set the cutoff current for the withstand voltage test device to 20 mA.

Notes:
1. Suddenly switching off 3000 VAC may possibly cause a voltage surge, damaging the power supply.

Increase/decrease test voltage gradually.

2. Be sure to short-circuit all the output terminals of the power supply to protect the power supply from damage.

■ Insulation Resistance Test
When testing the insulation resistance of the power supply, use a DC ohmmeter at 500 VDC.

Note:
Be sure to short-circuit all the output terminals of the power supply to protect the power supply from damage.

■ Overload Protection
The load and the Power Supply are automatically protected from overcurrent damage by the overload protection function.

Fig. 2 Standard mounting / Standard Montage / Montage Standard

Fig. 3 Mounting / Montage / Montage

Fig. 4 Network Types / Netzformen / Types de réseau / 配電方式 / Tipi di rete / Formas de red

TN-S

L1 L2 L3 N PE

*3

TN-C

L1 L2 L3 N PEN

*3

TT

