

型 S8VS 开关电源

CHN 使用说明书

感谢您购买了S8VS的产品。此说明书内记载了S8VS使用时的功能、性能及使用方法。...

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警告标识的含义

注意 若操作不当的话有可能发生轻度伤害或设备损坏的危险。

警告标识

Table with 2 columns: Warning Symbol and Description. Includes symbols for fire, electric shock, and high voltage.

CHN 安装使用要求

- (1) 安装/存储环境: 请在环境温度-25~+65°C, 相对湿度为25-90%的条件下储藏本产品。...

Table with 4 columns: Terminal, Model, Recommended Wire Gauge, and Notes. Lists input, output, and alarm terminals for various models.

- (4) 紧固端子时, 请不要用100N以上的力去按压端子台。...

CHN 使用时的注意事项

以下使用用途时, 与本公司营业人员商谈、认真确认规格书的同时, 需确保额定·性能上保有余量。...

MODEL S8VS SWITCHING POWER SUPPLY

EN INSTRUCTION MANUAL

Thank you for purchasing the S8VS. This Instruction Manual describes the functions, performance, and application methods required to use the S8VS.

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CAUTION

CAUTION: FOR USE IN A CONTROLLED ENVIRONMENT. REFER TO MANUAL FOR ENVIRONMENTAL CONDITIONS.

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

- Minor electric shock, fire, or product failure may occasionally occur. Do not disassemble, modify, or repair the Product...

EN Precautions for Safe Use

- (1) Installing/Storage Environment: Store the product with ambient temperature -25 to +65°C, and relative humidity 25 to 90%.

- (2) Arrangement/Wiring: Connect the ground completely. A protective earthing terminal stipulated in safety standards is used.

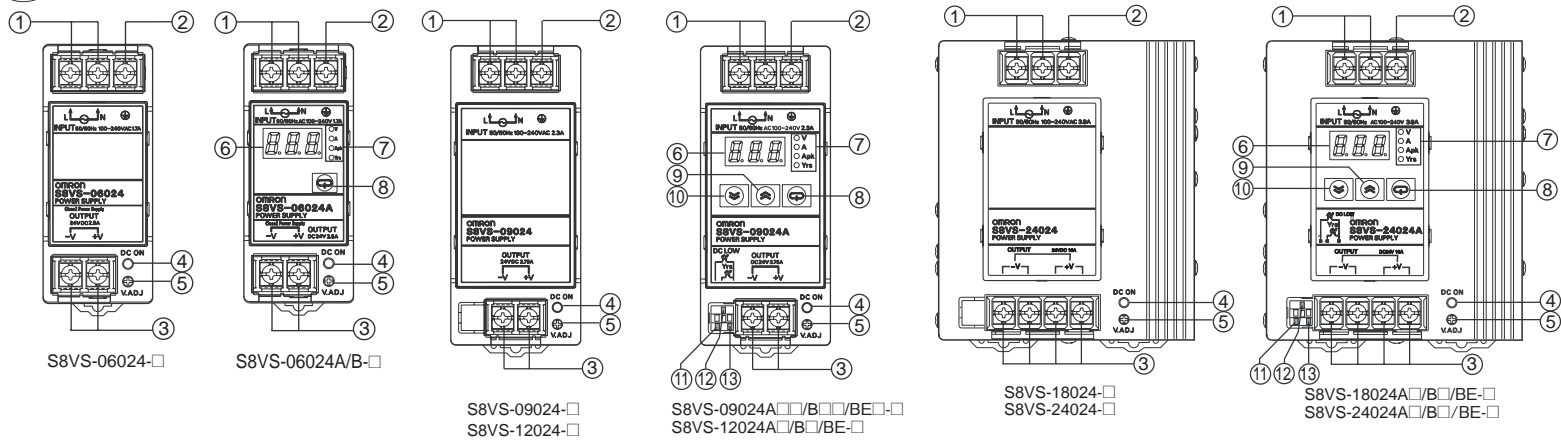
Table with 3 columns: Terminal, Model, and Recommended Wire Type. Lists input, output, and alarm terminals.

- (4) Do not apply more than 100N force to the terminal block when tightening it. Be sure to remove the sheet covering the product for machining before power-on.

EN Suitability for Use

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the products in the customer's application or use of the product.

Fig.1 各部位名称/Nomenclature



CHN 各部位名称

- ①输入端子(保险丝位于L侧, 对DC输入而言, L侧必须为+) ②DC输入超出安全标准认证范围。...

CHN 安全规格

- 1. DC输出端子(③)与输入端子(①)及相互绝缘。 2. 过电压 category III。...

EN Nomenclature

- ① Input terminal (The fuse is located on the L side. For DC input, L side must be +) ② DC input is out of the scope of safety standard certificate.

EN Safety standards

- 1. DC output terminals (③) are galvanically isolated from the input terminals (①). 2. Overvoltage category III.

CHN 正确的使用方法

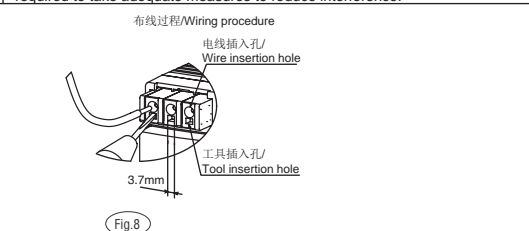
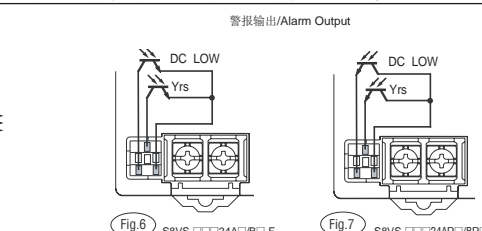
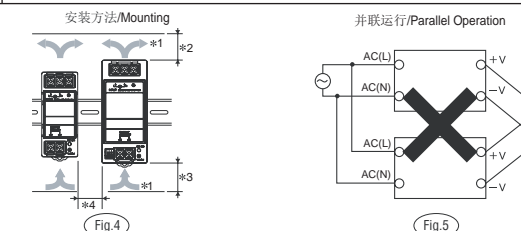
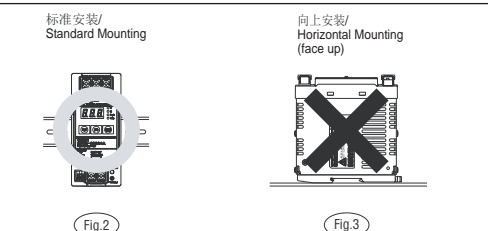
■安装: 安装方向: 标准安装 (可以), 向上安装 (不可以), 其他安装 (不可以)。...

■过载保护: 该功能可以自动保护负载和电源免受电流的损害。如果负载超过额定值的105%, 过载保护开始工作。...

EN Precautions for Correct Use

■Mounting: Mounting Direction: Standard Mounting (Valid), Horizontal Mounting (Invalid), Others Mounting (Invalid). Mounting Space: Install the power supply so that the air flow circulates around the power supply...

■Overload Protection: The load and the power supply are automatically protected from overcurrent damage by this function. Overload protection is activated if the output current rises above 105% of the rated current.



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技术咨询: 欧姆龙自动化(中国)有限公司, 地址: 中国上海市浦东新区银城中路200号中银大厦211室。

技术规格: 3000VAC max., 50mA max. Residual voltage upon power-on: 2V or smaller.

型 S8VS 开关电源

CHN 操作说明

感谢购买使用欧姆龙产品。为了安全、正确使用本产品，使用前请认真阅读、理解《操作说明》，阅读后请放在身边，便于需要时使用。

阅读时请结合《S8VS使用说明书》。

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更换时间提示功能（显示·输出） （仅限S8VS-□□□24A□□□□）

Fig.3

■所谓更换时间提示功能

电源内置有电解电容。电解电容从生产成品（※2）开始，其电解液就会逐渐渗透密封橡胶，随时间增长渐渐挥发，从而产生以静电容量减少（※3）为主的特性恶化。由于电解电容特性恶化，电源经过一段时间后便不能发挥出预期的性能。更换时间提示功能可以显示随电容特性恶化，电源还能发挥预期性能的预计时间。另外，达到设定值时，会提示并输出警报。

可利用此功能来预计电源本体的更换时间。

注：更换时间提示功能只提示由于电解电容恶化引起的电源性能不能发挥的预计时间，不包括由其他原因引起的故障。

■动作原理

电解电容的恶化速度与周围温度密切相关。（一般为10°C时的2倍、遵照阿伦尼乌斯法则）。仅限S8VS-□□□24A□□□□通过监测通电状态下电源的内部温度，根据工作时间与内部温度计算出电解电容的恶化量，然后通过显示与输出提示更换时间。

注：

1. 由于电子产品的耐久性，无论更换时间提示与否，在购买15年后请进行更换。
2. 更换时间会随着使用条件发生增减变化。请定期进行确认。
3. 由于更换时间的增减变化，有时输出会ON、OFF反复。
4. 交流输入ON/OFF的反复应用，有时会影响更换时间提示功能的精度。

■显示与输出

购买时显示为FUL（※4）。由于使用，随着电解电容恶化，显示变为HLF（※5）。到距离更换不足2年时自动变为数字显示（※6），并随着工作时间的增加逐步减少为1.5、1.0、0.5、0.2（年）。当更换时间提示的设定值大于2年时，一旦距离更换剩余时间低于设定值，自动变为数值显示。

剩余时间少于设定值L（0~5.0年间可任意设定）时，警报（※2）与剩余时间交替显示。

S8VS-□□□24A□□□□（-06024A-□除外）为晶体管（※2Yrs）输出，提示更换时间。（到达更换时间时OFF；※2-※3非导通）



在距离替换时间0.5年以下时，会有警报输出

注：

1. 剩余时间不包括非通电时间。
2. 工作时间累计达到约1个月前，由于推断恶化速度，显示固定为FUL，输出保持ON（※2-※3导通）。

■定期检查（S8VS-□□□24A□□□□/BE□□□□，-06024A/B-□除外）
一般使用条件下，本产品到达提示更换时间需要几年到十几年（S8VS-□□□24A□□□□）。另外，累计工作时间根据设定值有时会与更换时间提示的年数相同。（S8VS-□□□24B□□□□）长期使用，请定期按照以下步骤对更换时间提示输出（※2Yrs）或累计工作时间输出（※2kh）是否正常工作进行确认。

1. 设为运行模式。
 2. 请确认输出（※2Yrs/kh）为ON（※2-※3导通）。
 3. 运行模式下，※(※)和※(※)同时连续按3秒以上。主显示部（※6）变为※2。※2显示中输出（※2 Yrs/kh）如果为OFF（※2-※3 非导通）则正常。
 4. 松开按键即返回通常状态。
- 注：定期检查中，直流输出不为OFF。

MODEL S8VS SWITCHING POWER SUPPLY

EN Operation Manual

Thank you for purchasing this OMRON product. This manual primarily describes precautions required in operating the power supply. Before operating the product, read this manual thoroughly to acquire sufficient knowledge of the product to use it safely and correctly. Keep this manual close at hand and use for reference during operation. Read the S8VS Instruction Manual together with this manual without fail.

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Maintenance Forecast Monitor Function (Indication and output) (Only for S8VS-□□□24A□□□□)

Fig.3

■What is "Maintenance Forecast Monitor Function" ?

The power supply unit is equipped with electrolytic capacitors. The electrolyte inside the electrolytic capacitor penetrates the sealing rubber and evaporates as time passes since it is manufactured, which causes deterioration of characteristics such as decreasing the capacitance (3), etc. Due to this deterioration of the characteristics of the electrolytic capacitor, the power supply unit decreases its performance as time passes. The maintenance forecast monitor function shows an approximate period left for maintenance of the power supply unit due to deterioration of electrolytic capacitors. When the period left for maintenance that the power supply forecasts reaches the set value, an alarm is indicated and an output signal is triggered. Use this function to know the approximate replacement timing of the power supply unit.

Note: THE MAINTENANCE FORECAST MONITOR FUNCTION INDICATES AN APPROXIMATE PERIOD LEFT FOR MAINTENANCE, BASED ON DETERIORATION OF THE ELECTROLYTIC CAPACITOR. IT DOES NOT PREDICT FAILURES CAUSED BY OTHER REASONS.

■Principle of operation

The deterioration speed of the electrolytic capacitor varies considerably according to the ambient temperature. (Generally the speed follows "Rule of Two for every 10°C": for every 10°C increase in temperature the rate of degradation doubles according to Arrhenius's equation.) The S8VS-□□□24A□□□□ only monitors the temperature inside the power supply, and calculates the amount of deterioration according to the running hours and inside temperature. Judging by this amount of deterioration, the power supply will give the alarm indication and output when the period left for maintenance reaches the set value.

Notes:

1. Due to degradation of internal electronic parts, replace the power supply at least once every 15 years even if indication and output of maintenance forecast monitor are not issued.
2. The maintenance forecast is accelerated or decelerated according to operating conditions. Periodically check indication.
3. The output may turn ON and OFF alternately according to the acceleration or deceleration of Maintenance forecast.
4. The accuracy of Maintenance forecast monitor may become worse in the application having frequent ON/OFF for AC power.

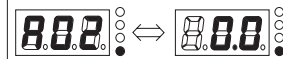
■Indication and Output

When the product is purchased, "FUL" (※4) will be indicated. As electrolytic capacitors deteriorate, indication changes to "HLF" (※5). After the remaining time to maintenance is reduced to two years, indication automatically changes to a value (※6), which decreases from "1.5" to "1.0" to "0.5" to "0.2" (year) as the running hours increase.

If the maintenance forecast monitor setting is set to a value larger than two years, value indication automatically begins after the remaining time to maintenance is reduced to the set years.

If the remaining time becomes smaller than setting L (which can be set arbitrarily between 0 and 5.0 years), an alarm (※2) and the remaining time are indicated alternately.

With the S8VS-□□□24A□□□□ (except for -06024A-□), an output is given to an external device from a transistor (※2 Yrs) to notify of the replacement timing, together with indication. (The output is turned off after the replacement timing is reached; with no continuity across ※2 and ※3.)



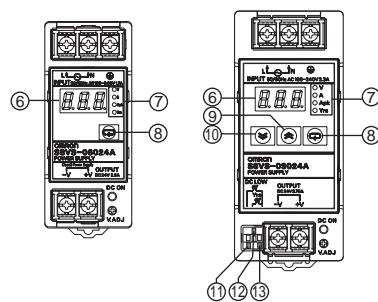
In the case that the remaining time is reduced to smaller than 0.5 year and an alarm is issued.

1. The remaining time to maintenance is based on continuous operation, not including the time when the power supply is turned off, and so may take longer to reach than the actual time indicated.
2. Until the power supply has been turned for about one month in total, indication is fixed at "FUL" to estimate the extent of deterioration, while the output remains turned on (with continuity across ※2 and ※3).

■PERIODIC CHECK (S8VS-□□□24A□□□□/BE□□□□, except for -06024A/B-□) It may take from several years to several tens of years under general operating conditions for the power supply to give the maintenance forecast monitor alarm (S8VS-□□□24A□□□□). The total run time monitor (S8VS-□□□24B□□□□) may be a similar number of years to the maintenance forecast monitor according to some setting. During operation over an extended period of time, periodically check if the maintenance forecast monitor output (※2 Yrs) or total run time monitor output (※2 kh) is correctly functioning by the following procedure.

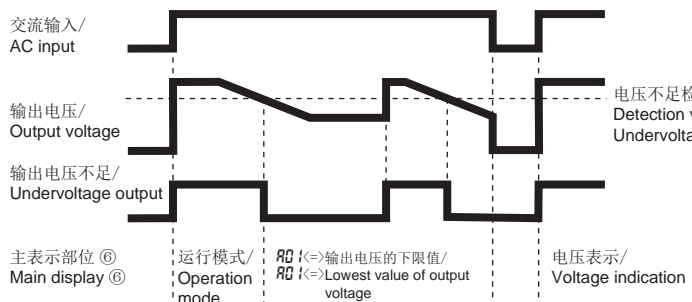
1. Select the operation mode.
 2. Check that the output (※2 Yrs / kh) is turned on (with continuity across ※2 and ※3).
 3. In the operation mode, press and hold the ※(※) and ※(※) keys simultaneously for at least three seconds. The main display (※6) changes to "※2". An inactive output (※2 Yrs / kh) (no continuity across ※2 and ※3) in the "※2" indication indicates the correct function.
 4. Release keys to return to the regular state.
- Note: DC output stays ON while the periodical check.

Fig.1 各部位名称/Nomenclature



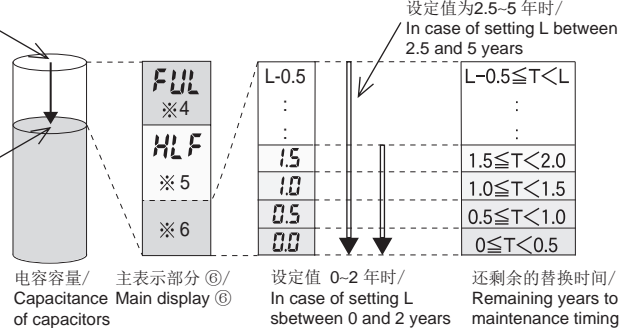
S8VS-06024A/B-□ S8VS-□□□24A□□□□/BE□□□□ (-06024A/B-□除外)
轮廓尺寸图适用于S8VS-09024A。
S8VS-□□□24A□□□□/BE□□□□ (except for -06024A/B-□)
The outline dimensional drawing is for S8VS-09024A.

Fig.2 电压不足检测机能/Undervoltage alarm function



注：产品通电约3秒后动作开始/
Note: Operation begins after about 3 seconds since the AC power is supplied.

Fig.3



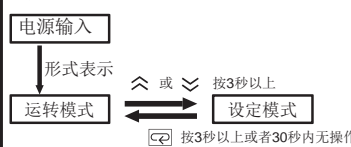
电容容量/ Capacitance Main display ※6
设定值 0~2 年时/ In case of setting L between 0 and 2 years
还剩余的替换时间/ Remaining years to maintenance timing

操作方法和功能

■部品名称与功能

名称	功能
⑥主显示部	显示测量值或设定值。
⑦动作显示部	V 输出电压显示中连续发光。不足电压检出值设定中闪烁。 A 输出电流显示中连续发光。 Apk 峰值电流显示中连续发光。 Yrs 显示更换时间提示中连续发光。更换时间提示设定中闪烁 (S8VS-□□□24A□□□□)。 kh 累计工作时间显示中连续发光。累计工作时间值设定中闪烁 (S8VS-□□□24B□□□□)。
⑧模式键	切换显示参数时或设定峰值电流值时使用。
⑨上调键	转为设定模式时或调高设定值时使用。
⑩下调键	转为设定模式时或调低设定值时使用。

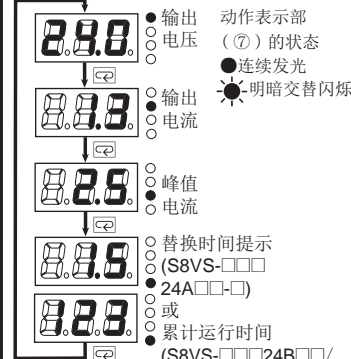
■模式切换



注：S8VS-06024A/B-□没有设定模式

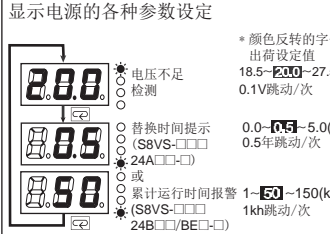
■运行模式

显示电源的各种状态。



注：出厂时以输出电压显示状态启动。以后以输入断路前的状态启动。

■设置模式 (S8VS-06024A/B-□除外)



1. ※(※)或※(※)连续按2秒以上，设定值可以快进。
2. S8VS-06024A/B-□没有设置模式。各种参数为出厂时的固定值。

■输出电压·电流显示功能

监视、显示电源的输出电压和电流。

注：本体通电约3秒后启动。

■峰值电流显示功能

记忆、显示输出电流的最大值。与显示模式无关，输出电流的最大值一直保持更新。另外，即使输入断路，峰值电流也会保持。

注：本体通电约3秒后启动。

■峰值电流重置

注：峰值电流不能在设置模式下重置。

■自我诊断功能

主显示部分	内容	输出状态	复位方法	复位后的设定值
FUL	输出电压或电流值中有干扰	没有变化	自动复位	没有变化
HLF	本体异常过热	※OFF	自动复位	没有变化
1.5	不足电压设定值记忆异常	※OFF	※(※)或※(※)按3秒，确认该处的设定值，返回出厂设置。	出厂设定值或设置模式下次设定的值
0.5	更换时间提示或累计工作时间报警设定值的记忆异常	※OFF	※(※)或※(※)按3秒，确认该处的设定值，返回出厂设置。	出厂设定值或设置模式下次设定的值
0.2	其他记忆异常	※OFF	请重新输入电源，仍不回复时，请与购买代理商联系。	没有变化

1. ---, ED* 发生的原因，主要考虑为外部有干扰侵入。
2. HLF 发生的原因，主要考虑为超过降额曲线条件下的使用、通风异常、安装方向错误等。
3. HLF 状态持续3小时以上时，更换时间提示功能无效。即使过热状态解除，更换时间提示显示仍持续显示为 HLF Yrs 输出 (※2) 持续为 OFF (※2-※3 非导通)。即便能够正常直流输出，由于内部部品可能已经恶化，请更换本体。
4. 只有 S8VS-□□□24A□□□□ 有 HLF 的检出功能。

■不足电压检出功能 (显示·输出)

如果检出输出电压过低，警报 (※2) 和输出电压下限值会交替显示。检出电压可在设定模式下变更。(S8VS-06024A/B-□固定为20.0V) (S8VS-□□□24A□□□□/BE□□□□ (-06024A/B-□除外) 通过晶体管 (※1) DC LOW) 输出提示异常。(输出电压过低时 OFF；※1-※3 非导通)

注：

1. 本体通电约3秒后启动。
2. 警报显示在设置模式下不能显示。
3. 输出电压过低恢复后，按 ※(※) 可解除警报显示。
4. 不足电压检出功能监视的是电源输出端子的电压。确认正确的电压状态时，请测量负荷端的电压。
5. 即使交流输入20ms以上的断电复归，不足电压检出功能有时仍能运作。
6. 启动时输出电流超过额定的情况下，有时电压检出功能仍能运作。

■累计工作时间显示·警报输出

(S8VS-□□□24B□□□□) 累计工作时间显示电源工作时间的累计值。累计工作时间超过预定的警报设定值时，警报 (※2) 和累计工作时间交替显示，同时会通过晶体管 (※2kh) 输出。(到达警报设定值时 OFF；※2-※3 非导通) 警报设定值可在设置模式下变更。

注：

1. 累计工作时间不能重置。解除警报时，请将警报设定值变更为大于累计工作时间显示值的数值即可。
2. S8VS-06024B-□没有警报功能 (设置、显示、输出)。
3. 报警器输出功能不适用于 S8VS-□□□24BE□□□□。

■自我诊断功能

主显示部分	内容	输出状态	复位方法	复位后的设定值
FUL	输出电压或电流值中有干扰	没有变化	自动复位	没有变化
HLF	本体异常过热	※OFF	自动复位	没有变化
1.5	不足电压设定值记忆异常	※OFF	※(※)或※(※)按3秒，确认该处的设定值，返回出厂设置。	出厂设定值或设置模式下次设定的值
0.5	更换时间提示或累计工作时间报警设定值的记忆异常	※OFF	※(※)或※(※)按3秒，确认该处的设定值，返回出厂设置。	出厂设定值或设置模式下次设定的值
0.2	其他记忆异常	※OFF	请重新输入电源，仍不回复时，请与购买代理商联系。	没有变化

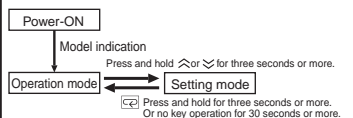
1. ---, ED* 发生的原因，主要考虑为外部有干扰侵入。
2. HLF 发生的原因，主要考虑为超过降额曲线条件下的使用、通风异常、安装方向错误等。
3. HLF 状态持续3小时以上时，更换时间提示功能无效。即使过热状态解除，更换时间提示显示仍持续显示为 HLF Yrs 输出 (※2) 持续为 OFF (※2-※3 非导通)。即便能够正常直流输出，由于内部部品可能已经恶化，请更换本体。
4. 只有 S8VS-□□□24A□□□□ 有 HLF 的检出功能。

Operation and Function

■Name and Function of Each Part

Name	Function
⑥ Main display	Indicates the measurement or set value.
V	Lights up when the output voltage is indicated. Blinks during setup of undervoltage alarm value.
A	Lights up during indication of output current.
Apk	Lights up during indication of peak hold current.
⑦ Operation indicator	Lights up during indication of maintenance forecast monitor. Blinks during setup of maintenance forecast monitor setting. (S8VS-□□□24A□□□□) Lights up during indication of total run time monitor. Blinks during setup of total run time monitor. (S8VS-□□□24B□□□□)
⑧ Mode key	Use the mode key to change the indicated parameter or reset the peak hold current value.
⑨ Up key	Use the up key to change to the setting mode or to increase the set value.
⑩ Down key	Use the down key to change to the setting mode or to decrease the set value.

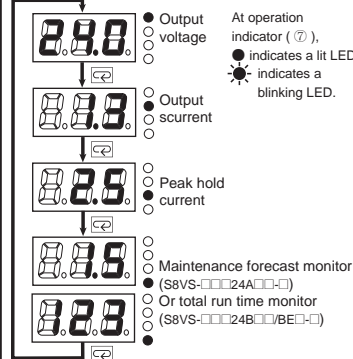
■Mode Change



Note: No setting mode is provided for the S8VS-06024A/B-□.

■Operation Mode

Various states of the power supply unit are indicated.



Note: The output voltage will be displayed when the power supply is first turned on after it is received from the factory. Thereafter, the output voltage will be indicated in the same display when shutting down.

■Setting Mode (except for S8VS-06024A/B-□)

Set various parameters of the power supply unit.

■Output Voltage and Current Indication Function

The output voltage and current of the power supply unit are monitored and indicated. Note: Operation begins after about 3 seconds since the AC power is supplied.

■Peak Hold Current Indication Function

The maximum output current is memorized and indicated. The maximum output current is always updated whatever the indication mode is. The peak hold current is retained even if the AC power is turned off. Note: Operation begins after about 3 seconds since the AC power is supplied.

■Peak Hold Current Reset

Note: The peak hold current value is not reset in the setting mode.

■Undervoltage alarm Function (Indication and output)

When output voltage drop is detected, an alarm (※2) and lowest output voltage value are indicated alternately. The preset value of detection voltage can be changed in the setting mode. (S8VS-06024A/B-□: The value of detection voltages is fixed at 20.0V)

■Total run time monitor Indication and Alarm

The cumulative running hours of the power supply unit are monitored as total run time. When the total run time reaches the predetermined alarm set value, an alarm (※2) and the total run time monitor are indicated alternately with an output issued from the transistor (※2 kh) to an external device. (The output is turned off when the total run time reaches the alarm set value; with no continuity across ※2 and ※3.) The alarm set value can be changed in the setting mode.

Note: In the case that the total run time reaches the set value (※2kh) and an alarm is issued

■Self-diagnostic Function

Main display	Description	Output state	Restoration method	Setting after restoration
FUL	Noise detected in voltage or current	No change	Automatic restoration	No change
HLF	Overheated	※OFF	Automatic restoration	No change
1.5	Undervoltage alarm set value memory error	※OFF	Press and hold ※(※) or ※(※) for three seconds and check the set value of the corresponding point. The set value must return to the shipment setting	Shipment setting or value set in the setting mode again
0.5	Memory error of alarm set value of maintenance forecast monitor or total run time monitor	※OFF	同上	同上
0.2	Other memory error	※OFF	Turn the AC input off then on again. If the product is not reset, contact the dealer.	No change

1. External noise is probable as a cause of "---" and "ED*" errors.
2. Operation out of the derating curve area, ventilation error, and incorrect mounting direction are probable as a cause of "h, l" error.
3. If the "HLF" error state continues for about three hours, the maintenance forecast monitor function (S8VS-□□□24A□□□□ only) becomes invalid. The indication for maintenance forecast monitor remains as "HLF" even after the overheat condition is removed, and the Yrs output (※2) remains OFF (with no continuity across ※2 and ※3). REPLACE THE POWER SUPPLY IF THIS CONDITION OCCURS EVEN IF THE DC OUTPUT IS CORRECT, AS INTERNAL PARTS MAY BE DETERIORATED.
4. The "HLF" error detection function is only for the S8VS-□□□24A□□□□.