dametric

AC/DC 24V 240W

GMS Power Supply Unit

DESCRIPTION

Valmet

Content **page**

1. General

The switch mode power supply feeds the GMS system with the 24VDC supply voltage. The unit is powered from the mains supply voltage, 115 or 230 VAC.

2. Technical specification

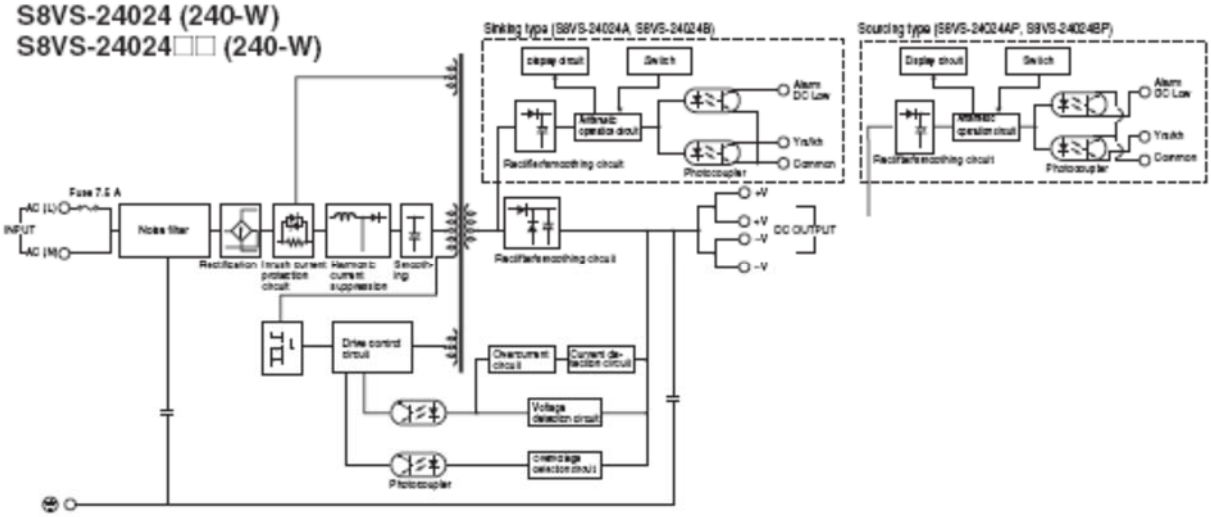
Supply voltage: 100 – 240 VAC (85-264 VAC)
Frequency: 50/60 Hz (47 – 62Hz)
Power consumption: Max. 300W
Output voltage: 24 VDC, ± 10 %
Output current: 10A
Safety standard: UL508/60950, CSA C22.2 No. 14/60950, EN50178 (=VDE0160), EN60950 (=VDE0805)
Mounting: DIN rail
Size: Height=115 mm, Width=100 mm, Depth=125 mm
Temperature protection: Yes
Overload protection: Yes
Metso article number: VAL0253894

Power rating	240 W
Efficiency	80% Min.
Rated input voltage	100 to 240 VAC (85 to 264 VAC)
Frequency	50/60Hz (47 to 63 Hz Single-phase)
Rated input current	3.8 A Max. (At 100 VAC input) 2.0 A Max. (At 200 VAC input)
Power factor	0.95 Min. (-)
Harmonic current emissions	Conforms to EN61000-3-2
Leakage current	0.5 mA Max. (At 100 VAC input) 1.0 mA Max. (At 200 VAC input)
Inrush current	25 A Max. (At 100 VAC input (For cold start at 25 CEL)) 50 A Max. (At 200 VAC input (For cold start at 25 CEL))
Rated output voltage	24 VDC
Output voltage variable range	-10% to +10% (With V. ADJ) (The output voltage may increase beyond the allowable voltage range (up to +15% of the rated voltage) depending on the operation of the output voltage adjuster (V.ADJ). When adjusting the output voltage, check the output voltage of the Power Supply and be sure that the load is not damaged.)
Ripple	2.0%(p-p) Max. (Under the rated I/O conditions.)
Static input variation influence	0.5% Max. (At 85 to 264 VAC input, 100% load)
Static load variation influence	1.5 % Max. (At rated input, 0 to 100% load)
Ambient temperature variation influence	0.05%/ CEL Max.(At rated input/output voltage)
Rated output current	10 A
Start up time	1000 ms Max. (At rated input/output voltage)

Hold time	20 ms Min. (At rated input/output voltage)
Overload protection	Inverted L voltage drop, automatic reset
Overvoltage protection	Operated at 120% Min. of the rated output voltage, Shut-off/ Reset the power by turning it back (OFF time: at least 3 min)
Output voltage indication	Yes (Resolution: 0.1V/ Accuracy: +- 2% (percentage of output voltage value, +- 1 digit Max.)
Output current indication	Yes (Resolution: 0.1A/ Accuracy: +- 5% F.S. (percentage of rated output current value, +- 1 digit Max.))
Peak-hold current indication	Yes (Resolution: 0.1A/ Accuracy: +- 5% F.S. (percentage of rated output current value, +- 1 digit Max.)/ Minimum detectable signal width: 10ms (20ms Max.))
Maintenance forecast monitor output	No
Total run time monitor indication	Yes (Resolution: 1kh/ Setting range: 1 to 150kh)
Total run time monitor output	Yes (open collector output), 30 VDC Max., 50 mA Max., Sinking (NPN)
Undervoltage alarm indication	Yes (Resolution: 0.1V/ Setting range: 18.5 to 26.3 V)
Undervoltage alarm output	Yes (open collector output), 30 VDC Max., 50 mA Max., Sinking (NPN)
N+1 redundant system	-
Series operation	Yes (Up to 2 Power Supplies with external diode)
Remote sensing function	No
Applicable standard (UL)	Standard No.: UL508(Listing), UL60950-1
Applicable standard (CSA)	Standard No.: CSA C22.2 No.14, CSA No.60950-1
Applicable standard (EN)	Standard No.: EN50178, EN60950-1
Applicable standard (EC Directive (EMC Directive))	Emission Enclosure: Conforms to EN61204-3 ClassA Emission AC mains: Conforms to EN61204-3 Class A, Based on FCC Class A
Applicable standard (VDE)	Standard No.: VDE0160, VDE0805 Teil 1
Ambient temperature	Operating: -10 to 60 CEL (Refer to the Derating curve) Storage: -25 to +65 CEL (with no icing or condensation)
Ambient humidity	Operating: 25 to 85 % RH Storage: 25 to 90 % RH (With no icing or condensation)
Dielectric strength	Between all inputs and all outputs/alarm outputs: 3 kVAC for 1 min (Detection current: 20 mA) Between all inputs and PE terminals: 2 kVAC for 1 min (Detection current: 20 mA) Between all outputs/alarm outputs and all PE terminals: 1 kVAC for 1 min (Detection current: 20 mA) Between all outputs and all alarm outputs: 500 VAC for 1 min (Detection current: 20 mA)
Insulation resistance	Between all outputs/alarm outputs and all inputs/PE terminals: 100 M Ohm Min. (at 500 VDC)
Vibration resistance	10 to 55 Hz, 0.375mm single amplitude for 2 h each in X, Y, Z directions
Shock resistance	150 m/s2, 3 times each in +- X, +- Y, and +- Z directions
Output indicator	Yes (color: green)
Heat radiation	Natural air-cooling
Construction	Covered type
Mounting type	DIN Rail mounting type
Weight	1150 g Max.

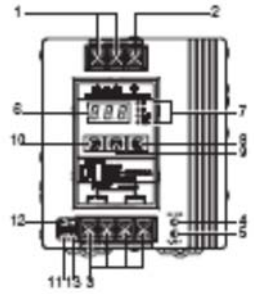
3. Block diagram

S8VS-24024 (240-W)
S8VS-24024□□ (240-W)



4. Connection

Models with Display Monitor
S8VS-24024□□

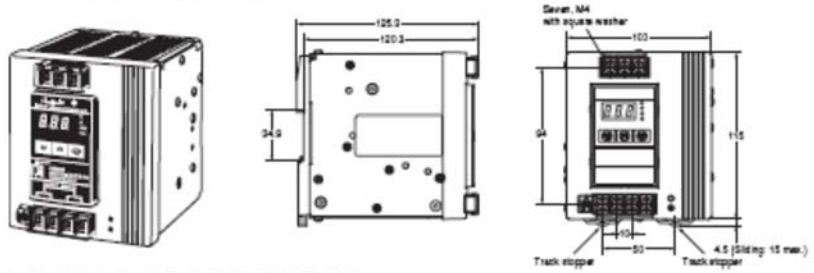


Note: The S8VS-24024A is shown above.

No.	Name		Function
1	AC Input terminals (L), (N)		Connect the input lines to these terminals. (See note 1.)
2	Protective Earth terminal (PE)		Connect the ground line to this terminal. (See note 2.)
3	DC Output terminals (–V), (+V)		Connect the load lines to these terminals.
4	Output indicator (DC ON: Green)		Lights while a direct current (DC) output is ON.
5	Output voltage adjuster (V.ADJ)		Use to adjust the voltage.
6	Main display (Red) (See note 3.)		Indicates the measurement or set value.
7	Operation indicator (Orange) (See note 3.)	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.
		Yrs	Lights up during indication of maintenance forecast monitor. Blinks during setup of maintenance forecast monitor setting. (S8VS-□□□24A□)
		kh	Lights up during indication of total run time monitor. Blinks during setup of total run time monitor. (S8VS-□□□24B□)
8	Mode Key (See note 3.)		Use the Mode Key to change the indicated parameter or reset the peak hold current value.
9	Up Key (See note 4.)		Use the Up Key to change to the setting mode or to increase the set value.
10	Down Key (See note 4.)		Use the Down Key to change to the setting mode or to decrease the set value.
11	Alarm outputs (See notes 4 and 5.)	Undervoltage output terminal (DC Low)	Output when a drop is detected in the output voltage (voltage drop = transistor OFF).
12		Maintenance Forecast output terminal (Yrs) (See note 6.)	Output when the set value for maintenance is reached (transistor OFF).
		Total run time output terminal (kh) (See note 7.)	Output when the set value for total run time is reached (transistor OFF).
13		Common terminal	Common terminal (emitter) for terminals 11 and 12.

5. Dimensions

S8VS-24024 (240-W)
S8VS-24024□□ (240-W)



Note: The illustration is the S8VS-24024A Model.

6. Contact

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