

Siemens 6ES5931-8MD11

Power Supply Module

Siemens 6ES5931-8MD11 is a PS931 power supply that converts a selected 115 V or 230 V AC input to 24 V DC at 2 A. The module supplies SIMATIC S5-95U/-100U and ET100U/ET200U installations.

AC input selections	115 V / 230 V
DC supply rating	24 V / 2 A
Associated installation	S5-95U/-100U, ET100U/ET200U

INCOMING LINE

L1, N and protective earth feed the AC side.

SELECTED CONVERSION

The selector chooses the connected mains voltage.

CONTROL DISTRIBUTION

L+ and M feed the corresponding CPU terminals.

Important Notice: Check the voltage-selector position before energizing. External cable protection and the non-user-replaceable internal fuse serve different purposes; do not use the lack of a fault LED as proof of a healthy output.

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Supply designation	PS931
System family	SIMATIC S5
Supported installations	S5-95U / S5-100U / ET100U / ET200U
Rated AC input selections	115 V / 230 V AC
115 V input operating range	92-132 V AC
230 V input operating range	187-264 V AC
Rated input frequency	50/60 Hz
Input frequency range	47-63 Hz
Rated input current at 115 V	0.9 A
Rated input current at 230 V	0.6 A

Approximate efficiency	85%
Approximate power consumption	60 W
Rated DC output	24 V DC
DC output range	22.8-25.2 V DC
Rated output current	2 A
Horizontal arrangement ambient	0-60 C
Vertical arrangement ambient	0-40 C
Line-dip buffering duration	20 ms at 187 V input / 2 A output
Line-dip repetition interval	1 s
Output short-circuit response	Power limiting; electronic cutoff; non-latching

BUFFERING IS NOT AN EXTENDED OUTAGE RATING

Keep the stated 187 V / 2 A test condition and 1 s repetition interval with the 20 ms line-dip value. It does not establish uninterrupted supply during a long mains failure.

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Fault LED	None
Protection class	Class I
Galvanic isolation	Yes
Stranded conductor capacity	2 x 0.5-1.5 mm ² , with core-end sleeves
Solid conductor capacity	2 x 0.5-2.5 mm ²
Insulation rating	VDE 0160; transformer VDE 0805
Rated insulation voltage, +24 V to L1	250 V AC

Insulation test voltage	2830 V AC
Typical module power loss	8.5 W
AC connection terminals	L1, N and protective earth
DC connection terminals	L+ and M
Mains selection	115 V / 230 V voltage selector
Mounting	Standard DIN mounting rail

NO FAULT LED

An unlit front panel does not establish that the 24 V output is healthy. Verify the input and output electrically through qualified procedures.

The mounting rail and cabinet grounding arrangement belong to the installed system. The PLC ambient limit is lower for vertical mounting than for horizontal mounting.

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Is PS931 automatically universal-input across both mains ranges?

The unit has a voltage selector. Select the connected 115 V or 230 V supply before energizing; their operating ranges are 92-132 V and 187-264 V respectively. The two selections are not one continuous universal-input range.

What do the external line fuse and internal fuse protect?

External protection is coordinated with the incoming cable so a short circuit does not overheat that cable. The internal fuse protects against a fault inside the module. One function does not replace the other.

Why should line protection not be chosen from the 0.9 A or 0.6 A steady input alone?

Starting current is different from rated input current. The PS931 protection note gives 10 A at 115 V and 5 A at 230 V for the starting-current consideration; cable cross-section also limits the allowed protection. Do not treat those values as output-current ratings.

Can maintenance personnel simply exchange the internal PS931 fuse?

The internal fuse is not designated as user-changeable. An internal short-circuit failure needs an appropriate service assessment; fitting a new fuse or bypassing it is not the prescribed user maintenance procedure.

Does the 20 ms buffering value make this an uninterrupted DC source?

No. The stated line-dip buffering is 20 ms at 187 V input and 2 A output, with a 1 s repetition interval. It is a specified short-dip condition, not a promise of continuous output during an extended mains outage.

Can a vertical S5 arrangement use the horizontal ambient rating?

The permitted ambient range is 0-60 C for the horizontal PLC arrangement but 0-40 C for the vertical arrangement. Preserve the installation-specific limit rather than applying the higher horizontal value to a vertical cabinet layout.

Which PS931 terminals belong to the CPU's 24 V supply rather than the AC line?

L+ and M carry the DC output and connect to the corresponding CPU supply terminals. L1, N and protective earth belong to the incoming AC connection. Keep the two terminal groups distinct when restoring wiring.

Is a dark front panel enough to rule out a supply fault?

No dedicated fault LED is fitted. Verify the selected AC input and the DC output through the appropriate qualified electrical checks; absence of a fault light is not an output-voltage indication.

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S5-100U control power Feeds the CPU supply terminals through the matched L+ and M connections.		S5-95U supply service Provides the PS931 AC-to-DC supply role identified for the S5-95U installation.	
ET100U / ET200U power Supports the listed peripheral-system supply installations while retaining their existing wiring design.		Cabinet power distribution Separates mains input and 24 V control distribution with coordinated line protection and grounding.	
AC connection		Set selector; connect L1, N and protective earth.	
DC connection		Retain L+ / M connection to the CPU.	
Installation arrangement		Horizontal 0-60 C; vertical 0-40 C.	

Connect L+ and M to the corresponding S5-100U CPU terminals and retain the CPU grounding connection to the mounting rail. Keep the control, sensor and actuator supply circuits distinct in the installed wiring arrangement.

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- 01 / Isolate the AC supply before opening the protective terminal cover.
- 02 / Set the voltage selector for the connected 115 V or 230 V supply.
- 03 / Connect L1, N and protective earth to the supply-side terminals.
- 04 / Retain L+ and M identities when reconnecting the CPU supply.
- 05 / Select external line protection for the starting current and conductor.
- 06 / Close the protective terminal cover before restoring mains power.
- 07 / Retain the lower ambient limit when the PLC arrangement is vertical.
- 08 / Verify the DC output after restoration; no dedicated fault LED is fitted.

SOURCE LEDGER

S5-100U Programmable Controller System Manual

EWA 4NEB 812 6120-02b, Edition 04, 1992; PS931 section 14.2 and connection section 3.2.2

Protecting the power supply PS931

Siemens support entry 40425, 28 February 1997

6ES5931-8MD11 product description

Siemens SiePortal, checked 12 October 2026

RELATED S5 FAMILY CATALOG

Browsing only: no PS931 pairing, interchangeability or replacement claim.

[View Siemens 6ES5466-3LA11 page](#)

[View Siemens 6ES5304-3UB11 page](#)

[View Siemens 6ES5941-7UB11 page](#)

The manufacturer manual link is an unchanged original-page excerpt covering installation, grounding, supply connection and PS931 specifications, not the complete system manual.

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