6ES5951-7LB21

SIMATIC S5 PS 951 3 A Power Supply Module

Siemens 6ES5951-7LB21 is the SIMATIC S5 PS 951 power supply for 120/230 V AC input, providing a regulated 5 V, 3 A system output plus PG/OP and 24 V auxiliary supplies.

PRODUCT ENQUIRY

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Product overview

Siemens 6ES5951-7LB21 is the PS 951 power supply module documented for the SIMATIC S5-115H system. It accepts 120/230 V AC and produces the regulated 5 V system supply at 3 A, with a permissible output-current range from 0.3 A to 3 A.

Separate outputs provide 5.2 V for PG/OP equipment at up to 1 A and 24 V auxiliary power at up to 0.2 A. The module also includes battery-backed retention support using a 3.6 V, 5 Ah lithium battery and provides a minimum one-year backup time at the stated reference conditions.

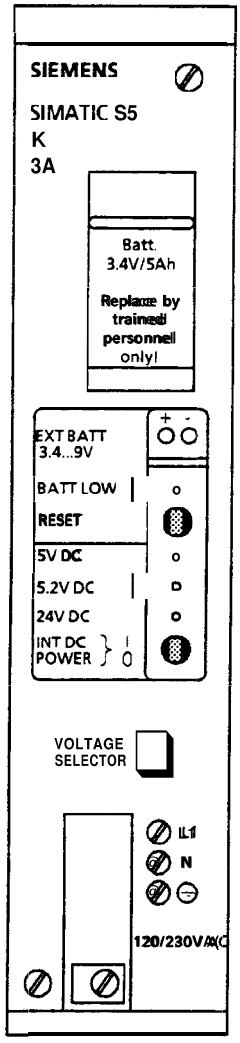
The input voltage selector, battery condition, internal fuse, and connected loads must be checked before commissioning. The official technical page lists 20 ms minimum mains buffering, electronic short-circuit protection, galvanic isolation, and an approximate module weight of 1.6 kg.

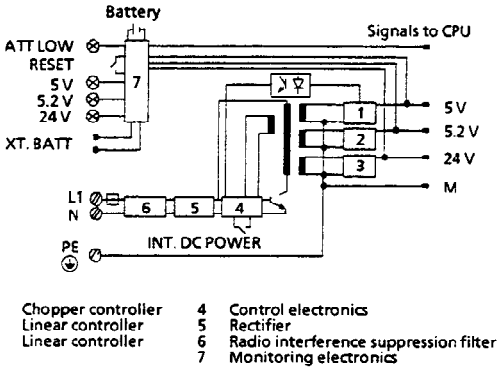
Technical specifications

Parameter	Value
Model Number	6ES5951-7LB21
Product Family	SIMATIC S5-115H
Product Type	PS 951 power supply module
Rated Input Voltage	120 / 230 V AC
Permissible Input Range	94 to 132 V / 187 to 264 V AC
Rated Line Frequency	50 Hz
Permissible Frequency Range	47 to 63 Hz
Input Current at 120 / 230 V	0.55 / 0.33 A
Maximum Inrush Current	15 × rated input current
Power Consumption	44.8 W
Main Output Voltage	5 V
Main Output Tolerance	±1.5%
Main Output Current	3 A
Permissible Main Output Range	0.3 to 3 A
PG/OP Output Voltage	5.2 V
PG/OP Output Current	1 A maximum
Auxiliary Output Voltage	24 V
Auxiliary Output Tolerance	±5%
Auxiliary Output Current	0.2 A maximum
Backup Battery	Lithium, 3.6 V / 5 Ah
Minimum Backup Time	1 year at 0.3 mA and 25 °C
Mains Buffering	20 ms minimum
Short-Circuit Protection	Electronic
Primary Fuse	Integral
Galvanic Isolation	Yes
Isolation Test Voltage	2700 V DC
Typical Power Loss	19.8 W
Approximate Weight	1.6 kg (3.53 lb)

Source: Siemens S5-115H manual page for 6ES5951-7LB21

Power Supply Module PS 951 120/230 V AC; 5 V, 3 A (6ES5951-7LB21)





Chopper controller
Linear controller
Linear controller

4 Control electronics
5 Rectifier
6 Radio interference suppression filter
7 Monitoring electronics

implified schematic

Technical Specifications

Input voltage L1		
- Rated value		120/230 V AC
- Permissible range		94 to 132 V/ 187 to 264 V
Line frequency		
- Rated value		50 Hz
- Permissible range		47 to 63 Hz
Input current at 120/230 V		
- Rated value		0.55/0.33 A
- Inrush current	max.	$15 \times I_N$
- I^2t		0.135 A^2s
Power consumption (active power)		44.8 W
Output voltage		
- Rated value		5 V
- Tolerance		±1.5%
Output current		
- Rated value without fan		3 A
- Rated value with fan		3 A
- Permissible range		0.3 A to 3 A
Output voltage (PG/OP)		
- Rated value		5.2 V
- Tolerance		±1.5%
Output current		max. 1 A
Output voltage (auxiliary voltage)		
- Rated value		24 V
- Tolerance		±5%
Output current		max. 0.2 A
Backup battery		Lithium battery, size C (3.6 V/5 Ah)
- Backup time	min.	1 year (at 0.3 mA, 25°C and uninterrupted backup)
Mains buffering (at $L1_{min}$)	min.	20 ms
Short-circuit protection		Electronic
Fault indicator		No
Fuse (primary circuit)		Integral
Galvanic isolation		Yes
Isolation rating		Safe electrical isolation according to VDE 0160
- Tested with		2700 V DC
Initial discharge current to VDE 0160 at 230 V AC		2.6 mA
RI specifications		A according to VDE 0871
Power losses of the module	typ.	19.8 W
Weight		approx. 1.6 kg (3.53 lb.)

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