Product overview

2

2.1 Properties

Order number

6ES7507-0RA00-0AB0

View of the module

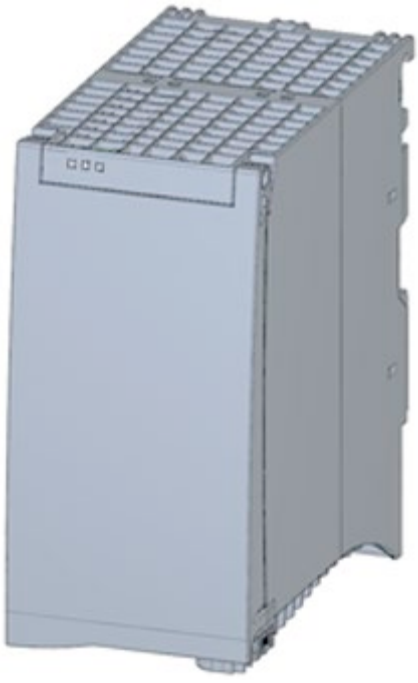


Figure 2-1 View of the PS 60W 120/230V AC/DC module

Properties

The PS 60W 120/230V AC/DC power supply module supports the use of additional modules.

The power supply module has the following properties:

- Technical properties
  - Rated input voltages 120 V AC/DC and 230 V AC/DC
  - Output power 60 W
  - Power failure backup
  - Electrical isolation to the bus, safe electrical separation to EN 61131-2
- Supported functions
  - Firmware update
  - Identification data I&M0 to I&M4
  - Configuration in RUN
  - Diagnostic alarms
  - Diagnostic interrupts

Accessories

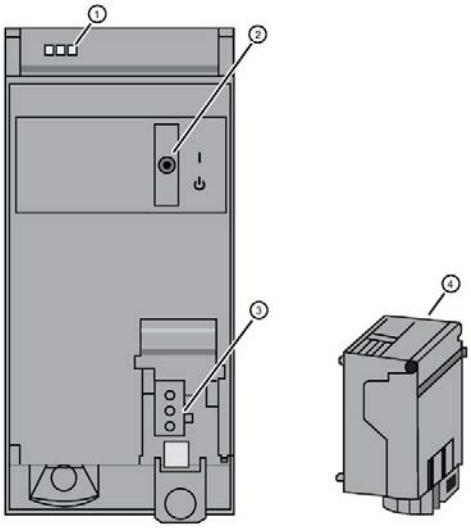
The following components are supplied with the power supply module:

- Power connector
- U connector

These components are also available as spare parts.

2.2 Operating and display elements

The following figure shows the control and connection elements of the PS 60W 120/230 V UC behind the front panel as well as the power connector.



① LED displays indicating the current operating state and diagnostic status of the PS
② On/off switch
③ Power inlet for the power connector
④ Power connector; inserted in delivery state

Figure 2-2 View of the PS 60W 120/230V AC/DC (without front panel) and of the power connector

Wiring

3

3.1 Connecting the supply voltage (PS 60W 230VAC)

This section contains information on connecting the power supply module to the mains voltage.

Mains connection

⚠ WARNING

Installation instructions

Risk of death or serious injury.

Observe the general installation instructions applicable in your country when wiring the power supply module.

Fuse the power cables according to their conductor cross-section.

The following applies to mains connection of the power supply module using the power connector:

- The power connector enables connection of the input voltage to the power supply module with touch protection.
- The power connector enables permanent wiring.
- The power connector features internal strain relief.
- The power connector ensures reverse polarity protection. A coding element assigns each power connector to a specific type of power supply module on delivery. A connector coded for 230 V AC does not fit in the connection to a 24 V DC power supply module.

⚠ DANGER

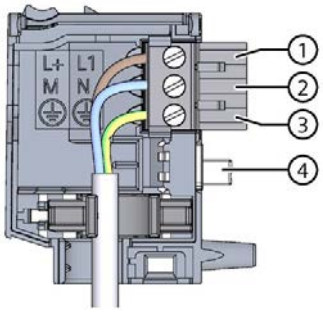
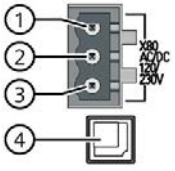
Do not manipulate or omit the coding element

Changes to the coding element can result in dangerous states in your plant and/or damage to the outputs of the I/O modules. In order to avoid damage, do not manipulate the coding. The coding element may not be omitted.

Connection plug

The connection plug for the power supply is plugged in when the power supply module ships from the factory.

The following figure shows the assignment of the connection plug:

Connector	PS connection	Name
		① L ② N ③ Protective conductor ④ Coding element

Cables

You need flexible cables to wire power to the power supply module. The conductor cross-section must be 1.5 mm^2 (AWG: 16). You must fuse conductors with a cross-section of 1.5 mm^2 externally with a 16 A circuit breaker (B or C characteristic). The diameter of a 3 x 1.5 mm^2 sheathed cable can be no more than 8.5 mm. The ground conductor of flexible cables must be longer than the two other conductors. The fusing must meet the requirements of the corresponding control cabinet.

Reference

You can find additional information about wiring the mains connector in the system manual S7-1500 automation system.

Siemens recommends the use of devices from the SITOP family of products for applications with load power supplies. Wiring information is available in the documentation for the load power supply.

Technical specifications

6

Technical specifications of the PS 60W 120/230V AC/DC

	6ES7507-0RA00-0AB0
Product type designation	PS 60W 120/230V AC/DC
General information	
Hardware version	FS02
Firmware version	V1.0.1
Engineering with	
STEP 7 TIA Portal can be configured/integrated as of version	V12 / V12
STEP 7 can be configured/integrated as of version	V5.5 SP3 or higher
FH technology	
Redundancy	
Redundancy capability	yes
• For increasing performance	yes
Power supply	
Rated value (DC)	120 V / 230 V
Valid range low limit (DC)	88 V
Valid range high limit (DC)	300 V
Rated value (AC)	120 V / 230 V
Valid range low limit (AC)	85 V
Valid range high limit (AC)	264 V
Short-circuit protection	Yes
Mains frequency	
Rated value 50 Hz	yes
Lower limit of permissible frequency range	47 Hz
Upper limit of permissible frequency range	63 Hz
Power failure backup	
Power failure backup time	20 ms
Input current	
Rated value at 120 V DC	0.6 A
Rated value at 230 V DC	0.3 A
Rated value at 120 V AC	0.6 A
Rated value at 230 V AC	0.34 A
Output current	
Short-circuit protection	yes
Power	
Power feed to the backplane bus	60 W
Power loss	
Power loss at rated conditions	12 W

	6ES7507-0RA00-0AB0
Interrupts/diagnostics/status information	
Status display	yes
Electrical isolation	
Primary/secondary	Yes
Insulation	
Insulation tested with	2500 V DC 2s (routine test)
EMC	
Immunity to surge voltages	
on the supply lines in accordance with IEC 61000-4-5	Yes; +/- 1 kV (according to IEC 61000-4-5; 1995; symm. surge), +/- 2 kV (according to IEC 61000-4-5; 1995; unsymm. surge), no external protective circuit required
Degree of protection and protection class	
Degree of protection according to EN 60529	IP20
Protection class	1; with ground conductor
Dimensions	
Width	70 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	600 g

Dimensional drawing

A

A.1 Dimensional drawing

Dimensional drawing of the PS 60W 120/230V AC/DC

This appendix includes the dimensional drawing of the power supply module that is installed on a mounting rail with shielding bracket. Take the dimensions into account for installation in cabinets, control rooms, etc.

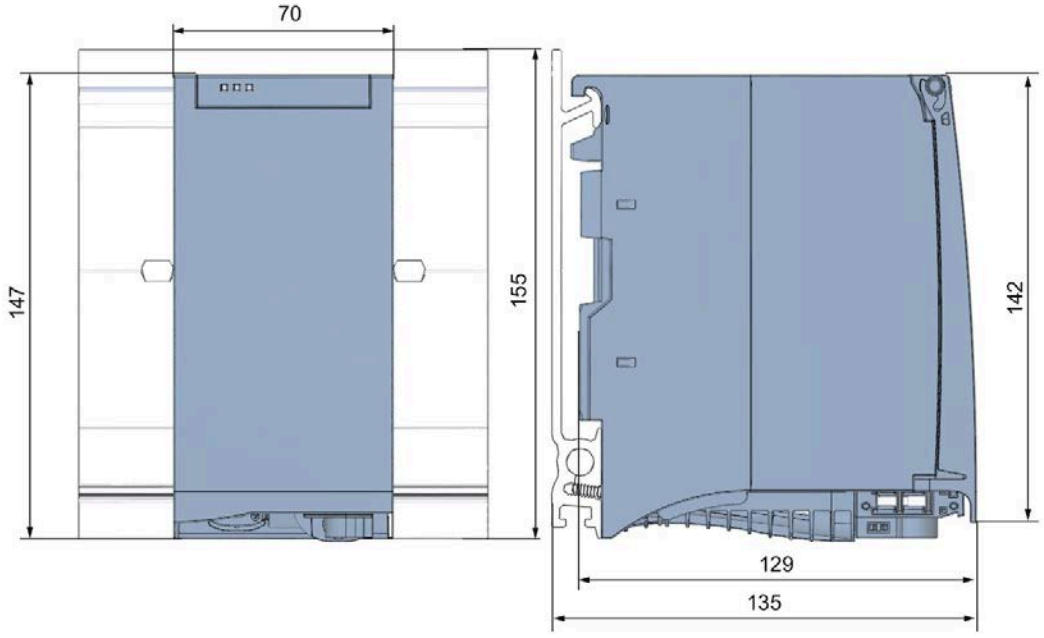


Figure A-1 Dimensional drawing of the PS 60W 120/230V AC/DC module

This figure shows the dimensions of the module with open front panel.

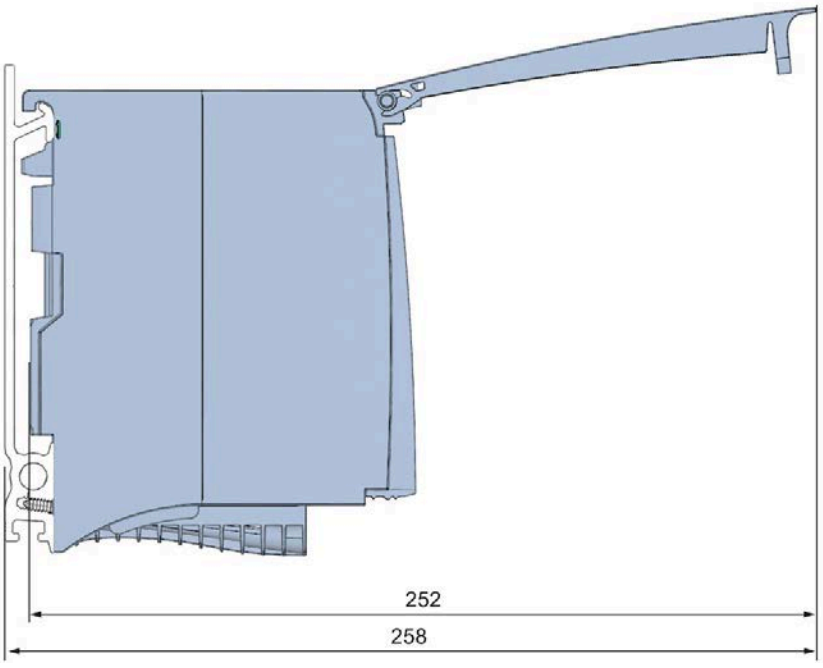


Figure A-2 Dimensional drawing of the PS 60W 120/230V AC/DC module, side view with open front panel