SITOP compact power supply

Extremely efficient in saving space and energy

Brochure · April 2011

Space savings of up to 33%

Energy savings of up to 35%

SITOP compact

Answers for industry.

SIEMENS

Slimline power supply unit for control boxes

The SITOP PSU100C stabilized power supplies of the SITOP compact product line for the low-end performance range have an extremely slimline design that marks them out for distributed applications, e.g. installation in control boxes or small control cabinets.

With a width of just 22.5 to 52.5 mm, the power supply units require up to 1/3 less space on the mounting rail than comparable devices. Another convincing feature of these 12 V and 24 V power supplies is their high efficiency across the entire load range. And because the power losses are also extremely low, even in no-load operation, users save up to 35% of energy.

The wide-range input enables problem-free connection to single-phase AC networks as well as to DC networks. The plug-in terminals also ensure user-friendly connection.

The benefits at a glance

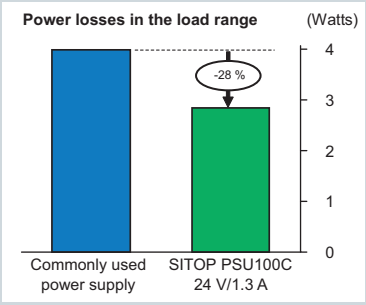
- Power supplies 24 V/0.6 A, 1.3 A, 2.5 A and 4 A 12 V/2.0 A and 6.5 A
- Small mounting surface thanks to slimline design
- Low energy consumption thanks to high efficiency across the entire load range
- Minimum energy losses in no-load operation
- Connection via plug-in terminals
- Wide-range input 85... 264 V AC for 120 V and 230 V AC single-phase networks without changeover
- Operation on 110 to 300 V DC networks
- Adjustable output voltage
- Operating temperature –20 to +70 °C
- International package of standards

Selection table SITOP compact			
Output voltage/current	**12 V/2 A**	**12 V/6.5 A**	**24 V/0.6 A**
Order No. [1]	**6EP1321-5BA00**	**6EP1322-5BA10**	**6EP1331-5BA00**
Rated input voltage	100 ... 230 V AC	100 ... 230 V AC	100 ... 230 V AC
• Range	85 ... 264 V AC/110 ... 300 V DC	85 ... 264 V AC/110 ... 300 V DC	85 ... 264 V AC/110 ... 300 V DC
Mains buffering	> 20 ms (at 120/230 V AC)	> 20 ms (at 120/230 V AC)	> 20 ms (at 120/230 V AC)
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current	0.63 ... 0.31 A	1.56 ... 0.75 A	0.28 ... 0.12 A
• Recommended miniature circuit	Char. C: from 10 A ; char. B: from 16 A	Char. C: from 10 A ; char. B: from 16 A	Char. C: from 10 A ; char. B: from 16 A
Rated output voltage	12 V DC	12 V DC	24 V DC
• Tolerance	± 3 %	± 3 %	± 3 %
• Setting range	10.5 ... 12.9 V DC	10.5 ... 12.9 V DC	–
Rated output current	2 A	6.5 A	0.6 A
• Derating range	+55 °C to 70 °C	+50 °C to 70 °C	+55 °C to 70 °C
Efficiency at rated values, approx.	82 %	85 %	82 %
Energy losses in no-load operation	< 0.5 W	< 0.75 W	< 0.5 W
Switching in parallel	yes	yes	yes
Electronic short-circuit protection	yes, restart	yes, restart	yes, restart
Radio interference suppression	Class B	Class B	Class B
Degree of protection (EN 60529)	IP20	IP20	IP20
Ambient temperature	–20 ... +70 °C	–20 ... +70 °C	–20 ... +70 °C
Connections[2]	removable screw terminals	removable screw terminals	removable screw terminals
Certifications	CE, UL, CSA, ATEX	CE, UL, CSA, ATEX	CE, UL, CSA, ATEX
Dimensions (W x H x D) in mm	30 x 80 x 100 mm	52.5 x 80 x 100 mm	22.5 x 80 x 100 mm
Weight approx.	0.17 kg	0.32 kg	0.12 kg

[1] You will find up-to-date ordering data and prices as well as our terms of sale and delivery on the Internet at: www.siemens.com/industrymall

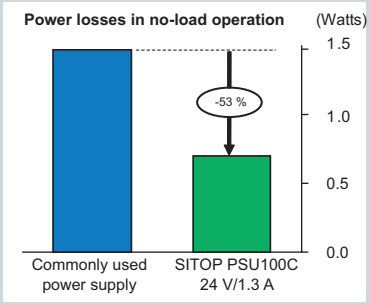
[2] Accessories: removable spring terminals, Order No. 6EP1971-5BA00 (Packing unit 100 pieces, for 50 SITOP PSU100C power supplies)

Save energy during operation under load



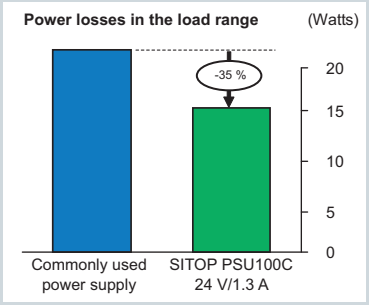
Power supplies in industrial applications are usually dimensioned to their maximum load, such as switching on capacitive loads. In operation, they are mainly run only within a load range of 30% to 70% of rated power – dependent on the process, e.g. switching motors, sensors and actuators. Because of this, the high efficiency of the SITOP PSU100C across the entire load range permits energy savings of up to 28%.

Save energy in standby operation



Industrial power supplies are not usually operated for 24 hours a day over the entire year. During non-productive periods, and at weekends or holidays, individual loads or plant sections are increasingly switched to a type of "standby operation" to save energy. The SITOP PSU100C supports this with especially low no-load losses and thus with energy savings of up to 53%.

Save energy in normal operation



With its high efficiency in operation under load and in standby, SITOP compact enables you to make energy savings of up to 35% in normal use, i.e. with a mix of load and standby operation, in comparison with commonly used power supplies [3].

[3] Average value of comparable devices on the market

Selection table SITOP compact

24 V/1.3 A	24 V/2.5 A	24 V/4 A	Output voltage/current
6EP1331-5BA10	6EP1332-5BA00	6EP1332-5BA10	Order No. [1]
100 ... 230 V AC	100 ... 230 V AC	100 ... 230 V AC	Rated input voltage
85 ... 264 V AC/110 ... 300 V DC	85 ... 264 V AC/110 ... 300 V DC	85 ... 264 V AC/110 ... 300 V DC	• Range
> 20 ms (at 120/230 V AC)	> 20 ms (at 120/230 V AC)	> 20 ms (at 120/230 V AC)	Mains buffering
50/60 Hz	50/60 Hz	50/60 Hz	Rated line frequency
0.63 ... 0.31 A	1.33 ... 0.67 A	1.56 ... 0.75 A	Rated input current
Char. C: from 10 A ; char. B: from 16 A	Char. C: from 10 A ; char. B: from 16 A	Char. C: from 10 A ; char. B: from 16 A	• Recommended miniature circuit
24 V DC	24 V DC	24 V DC	Rated output voltage
± 3 %	± 3 %	± 3 %	• Tolerance
22.2 ... 26.4 V DC	22.2 ... 26.4 V DC	22.2 ... 26.4 V DC	• Setting range
1.3 A	2.5 A	4 A	Rated output current
+55 °C to 70 °C	+50 °C to 70 °C	+50 °C to 70 °C	• Derating range
86 %	89 %	88 %	Efficiency at rated values, approx.
< 0.75 W	< 0.75 W	< 0.75 W	Energy losses in no-load operation
yes	yes	yes	Switching in parallel
yes, restart	yes, restart	yes, restart	Electronic short-circuit protection
Class B	Class B	Class B	Radio interference suppression
IP20	IP20	IP20	Degree of protection (EN 60529)
–20 ... +70 °C	–20 ... +70 °C	–20 ... +70 °C	Ambient temperature
removable screw terminals	removable screw terminals	removable screw terminals	Connections[2]
CE, UL, CSA, ATEX	CE, UL, CSA, ATEX	CE, UL, CSA, ATEX	Certifications
30 x 80 x 100 mm	45 x 80 x 100 mm	52.5 x 80 x 100 mm	Dimensions (W x H x D) in mm
0.17 kg	0.22 kg	0.32 kg	Weight approx.

Note:
Technical data apply with rated input voltage and +25°C ambient temperature (if not specified otherwise).

Further information

More information on SITOP compact:
www.siemens.com/sitop-compact

Using the SITOP Selection Tool to select the appropriate power supply:
www.siemens.com/sitop-selection-tool

Information material for downloading:
www.siemens.com/sitop-infomaterial

Operating instructions for downloading:
www.siemens.com/sitop/manuals

CAx files (2D, 3D, circuit macro) for downloading:
www.siemens.com/sitop-cax

Electronic ordering via the Internet with the Industry Mall:
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