

## SITOP compact

### 1-phase, 24 V DC

#### Overview

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The single-phase SITOP compact are power supplies for the lower performance range. Thanks to the extremely space-saving slim design, they are especially suited to distributed applications in control boxes or in small control cabinets. The series is characterized by low power losses throughout the entire load range. The losses are extremely low even during idling, which means they are perfectly suited for applications that are frequently in stand-by mode. The SITOP PSU100C power supplies have a wide-range input for AC and DC networks; plug-in terminals facilitate the electrical connection.

To further increase the 24 V availability, the SITOP compact power supplies can be combined with **DC UPS**, **redundancy** and **selectivity modules**.

#### Main product highlights

- 24 V DC/ 0.6 A, 1.3 A, 2.5 A and 4 A
- 24 V DC /3.7 A to supply NEC class 2 electric circuits with limited output current (100 VA)
- 1-phase wide-range input from 85 V to 264 V AC or 110 V to 300 V DC
- Small mounting surface thanks to its slim design
- High efficiency across the entire load range
- Low energy consumption during no-load operation or stand-by
- Adjustable output voltage for compensating voltage drops (starting at 1.3 A)
- Green LED for "24 V OK"
- Plug-in connecting terminals for pre-fabricated wiring and fast electrical connection
- Wide temperature range from -20 to +70 °C
- Comprehensive certifications, such as UL, ATEX or DNV GL

#### Technical specifications

Article number	6EP1331-5BA00	6EP1331-5BA10	6EP1332-5BA00
Product	SITOP PSU100C	SITOP PSU100C	SITOP PSU100C
Power supply, type	24 V/0.6 A	24 V/1.3 A	24 V/2.5 A
Input			
Input	1-phase AC or DC	1-phase AC or DC	1-phase AC or DC
Rated voltage value $V_{in \text{ rated}}$	100 ... 230 V	100 ... 230 V	100 ... 230 V
Voltage range AC	85 ... 264 V	85 ... 264 V	85 ... 264 V
Input voltage			
• at DC	110 ... 300 V	110 ... 300 V	110 ... 300 V
Wide-range input	Yes	Yes	Yes
Oversvoltage resistance	$2.3 \times V_{in \text{ rated}}$ , 1.3 ms	$2.3 \times V_{in \text{ rated}}$ , 1.3 ms	$2.3 \times V_{in \text{ rated}}$ , 1.3 ms
Mains buffering at $I_{out \text{ rated}}$ , min.	20 ms; at $V_{in} = 230 \text{ V}$	20 ms; at $V_{in} = 230 \text{ V}$	20 ms; at $V_{in} V_{in} = 230 \text{ V}$
Rated line frequency	50 ... 60 Hz	50 ... 60 Hz	Rated line frequency
Rated line range	47 ... 63 Hz	47 ... 63 Hz	47 ... 63 Hz
Input current			
• at rated input voltage 100 V	0.28 A	0.63 A	1.21 A
• at rated input voltage 230 V	0.18 A	0.31 A	0.67 A
Switch-on current limiting (+25 °C), max.	28 A	34 A	31 A
$I^2t$ , max.	0.7 A <sup>2</sup> ·s	1.2 A <sup>2</sup> ·s	2.4 A <sup>2</sup> ·s
Built-in incoming fuse	internal	internal	internal
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 6 A characteristic B or from 2 A characteristic C	Recommended miniature circuit breaker: from 6 A characteristic B or from 3 A characteristic C	Recommended miniature circuit breaker: from 10 A characteristic B or from 6 A characteristic C

## Technical specifications (continued)

Article number	6EP1332-5BA20	6EP1332-5BA10
Product	SITOP PSU100C	SITOP PSU100C
Power supply, type	24 V/3.7 A NEC Class 2	24 V/4 A
<b>Input</b>		
Input	1-phase AC or DC	1-phase AC or DC
Rated voltage value $V_{in rated}$	100 ... 230 V	100 ... 230 V
Voltage range AC	85 ... 264 V	85 ... 264 V
Input voltage		
• at DC	110 ... 300 V	110 ... 300 V
Wide-range input	Yes	Yes
Overvoltage resistance	$2.3 \times V_{in rated}$ , 1.3 ms	$2.3 \times V_{in rated}$ , 1.3 ms
Mains buffering at $I_{out rated}$ , min.	20 ms; at $V_{in} = 230$ V	20 ms; at $V_{in} = 230$ V
Rated line frequency	50 ... 60 Hz	50 ... 60 Hz
Rated line range	47 ... 63 Hz	47 ... 63 Hz
Input current		
• at rated input voltage 100 V	1.88 A	2.25 A
• at rated input voltage 230 V	0.95 A	1.15 A
Switch-on current limiting (+25 °C), max.	30 A	34 A
$I^2t$ , max.	3 A <sup>2</sup> ·s	3 A <sup>2</sup> ·s
Built-in incoming fuse	internal	internal
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic B or from 6 A characteristic C	Recommended miniature circuit breaker: from 10 A characteristic B or from 6 A characteristic C
<b>Output</b>		
Output	Controlled, isolated DC voltage	Controlled, isolated DC voltage
Rated voltage $V_{out DC}$	24 V	24 V
Total tolerance, static ±	3 %	3 %
Static mains compensation, approx.	0.1 %	0.1 %
Static load balancing, approx.	0.2 %	0.2 %
Residual ripple peak-peak, max.	200 mV	200 mV
Residual ripple peak-peak, typ.	90 mV	80 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	300 mV	300 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	60 mV	80 mV
Adjustment range	-	22.2 ... 26.4 V
Product function Output voltage adjustable	No	Yes
Output voltage setting	-	via potentiometer
Status display	Green LED for output voltage OK	Green LED for output voltage OK
On/off behavior	Overshoot of $V_{out}$ approx. 1 %	Overshoot of $V_{out}$ approx. 1 %
Startup delay, max.	1.5 s	1.5 s
Voltage rise, typ.	500 ms	400 ms
Rated current value $I_{out rated}$	3.7 A	4 A
Current range	0 ... 3.7 A	0 ... 4 A
• Note	+50 ... +70 °C: Derating 3.5%/K; at +70 °C $I_{out rated}$ 1.1 A	+55 ... +70 °C: Derating 3%/K; at +70 °C $I_{out rated}$ 2.2 A
Supplied active power typical	89 W	96 W
Short-term overload current		
• at short-circuit during operation typical	-	-
Parallel switching for enhanced performance	No	Yes; Start-up with single nominal load only
Numbers of parallel switchable units for enhanced performance	-	2

## Technical specifications (continued)

Article number	6EP1332-5BA20	6EP1332-5BA10
Product	SITOP PSU100C	SITOP PSU100C
Power supply, type	24 V/3.7 A NEC Class 2	24 V/4 A
<b>EMC</b>		
Emitted interference	EN 55022 Class B	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2	EN 61000-3-2
Noise immunity	EN 61000-6-2	EN 61000-6-2
<b>Operating data</b>		
Ambient temperature		
• during operation	-20 ... +70 °C	-20 ... +70 °C
- Note	with natural convection	with natural convection
• during transport	-40 ... +85 °C	-40 ... +85 °C
• during storage	-40 ... +85 °C	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation	Climate class 3K3, no condensation
<b>Mechanics</b>		
Connection technology	screw-type terminals	screw-type terminals
Connections		
• Supply input	L, N, PE: Removable screw terminal, each for 1 x 0.5 ... 2.5 mm <sup>2</sup>	L, N, PE: Removable screw terminal, each for 1 x 0.5 ... 2.5 mm <sup>2</sup>
• Output	+: 1 screw terminal for 0.5 ... 2.5 mm <sup>2</sup> ; -: 2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>	+: 1 screw terminal for 0.5 ... 2.5 mm <sup>2</sup> ; -: 2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>
• Auxiliary	-	-
Width of the enclosure	52.5 mm	52.5 mm
Height of the enclosure	80 mm	80 mm
Depth of the enclosure	100 mm	100 mm
Required spacing		
• top	50 mm	50 mm
• bottom	50 mm	50 mm
• left	0 mm	0 mm
• right	0 mm	0 mm
Weight, approx.	0.32 kg	0.32 kg
Product feature of the enclosure housing for side-by-side mounting	Yes	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Removable spring-type terminal 6EP1971-5BA00	Removable spring-type terminal 6EP1971-5BA00
MTBF at 40 °C	2 776 544 h	2 726 727 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

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Ordering data	Article No.	Accessories	Article No.
<b>SITOP PSU100C 1-phase, 24 V DC/0.6 A</b> Stabilized power supply Input: 100 ... 230 V AC (110 ... 300 V DC) Output: 24 V DC/0.6 A	6EP1331-5BA00	<b>SITOP PSE202U redundancy module</b> Input/output: 24 V DC/NEC Class 2 suitable for decoupling two SITOP power supplies output power limited < 100 VA	6EP1962-2BA00
<b>SITOP PSU100C 1-phase, 24 V DC/1.3 A</b> Stabilized power supply Input: 100 ... 230 V AC (110 ... 300 V DC) Output: 24 V DC/1.3 A	6EP1331-5BA10	<b>SITOP PSE202U redundancy module</b> Input/output: 24 V DC/10 A suitable for decoupling two SITOP power supplies with a maximum of 5 A output current	6EP1964-2BA00
<b>SITOP PSU100C 1-phase, 24 V DC/2.5 A</b> Stabilized power supply Input: 100 ... 230 V AC (110 ... 300 V DC) Output: 24 V DC/2.5 A	6EP1332-5BA00	<b>SITOP PSE200U 3 A selectivity module</b> 4-channel selectivity module Input: 24 V DC Output: 24 V DC/3 A per channel Adjustable response threshold 0.5 ... 3 A • With common alarm signal • With single-channel signaling	6EP1961-2BA11 6EP1961-2BA31
<b>SITOP PSU100C 1-phase, 24 V DC/3.7 A</b> Stabilized power supply Input: 100 ... 230 V AC (110 ... 300 V DC) Output: 24 V DC/3.7 A limited output power NEC Class 2	6EP1332-5BA20	<b>SITOP PSE200U 3 A NEC Class 2 selectivity module</b> 4-channel selectivity module Input: 24 V DC Output: 24 V DC/3 A per channel Adjustable response threshold 0.5 ... 3 A • With common alarm signal • With single-channel signaling	6EP1961-2BA51 6EP1961-2BA61
<b>SITOP PSU100C 1-phase, 24 V DC/4 A</b> Stabilized power supply Input: 100 ... 230 V AC (110 ... 300 V DC) Output: 24 V DC/4 A	6EP1332-5BA10	<b>SITOP Power PSU100C accessories</b> Removable spring-loaded terminal, 100 units, for SITOP PSU100C	6EP1971-5BA00