## **SIEMENS**

## **Data sheet**



## SIPLUS PS DC/DC 24 V/2 A

\*\*\* spare part \*\*\* SIPLUS PS DC/DC 24V/2A based on 6EP1732-0AA00 with conformal coating, 0...+70 °C, SITOP Power 2 A, DC/DC stabilized power supply input: 48/60/110 V DC output: 24 V DC/2 A

Figure similar

input		
type of the power supply network	DC voltage	
supply voltage at DC	48 110 V	
input voltage at DC	38 121 V	
wide range input	Yes	
overvoltage overload capability	-	
buffering time for rated value of the output current in the event of power failure minimum	5 ms	
operating condition of the mains buffering	at Vin = 48 V	
input current		
<ul> <li>at rated input voltage 48 V</li> </ul>	1.2 A	
<ul> <li>at rated input voltage 110 V</li> </ul>	0.5 A	
current limitation of inrush current at 25 °C maximum	33 A	
fuse protection type	T 2.5 A (not accessible)	
fuse protection type in the feeder	Recommended miniature circuit breaker: 10 to 25 A characteristic B or 6 to 25 A characteristic C, suitable for DC	
output		
voltage curve at output	Controlled, isolated DC voltage	
output voltage at DC rated value	24 V	
output voltage		
at output 1 at DC rated value	24 V	
output voltage adjustable	Yes; via potentiometer	
adjustable output voltage	23.5 26.5 V	
relative overall tolerance of the voltage	1 %	
relative control precision of the output voltage		
<ul> <li>on slow fluctuation of input voltage</li> </ul>	0.1 %	
<ul> <li>on slow fluctuation of ohm loading</li> </ul>	0.4 %	
residual ripple		
maximum	100 mV	
voltage peak		
maximum	300 mV	
display version for normal operation	Green LED for 24 V OK	
behavior of the output voltage when switching on	Overshoot of Vout on startup max. 25 V	
response delay maximum	3 s	
voltage increase time of the output voltage		
• typical	30 ms	
output current		
• rated value	2 A	
rated range	0 2 A	

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supplied active power typical	48 W
bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
efficiency	
efficiency in percent	84 %
power loss [W]	04 //
at rated output voltage for rated value of the output	9 W
current typical	3 **
closed-loop control	
relative control precision of the output voltage with rapid	0.3 %
fluctuation of the input voltage by +/- 15% typical	
relative control precision of the output voltage load step of	0.8 %
resistive load 50/100/50 % typical	
setting time	0.5
load step 50 to 100% typical	2.5 ms
load step 100 to 50% typical	2.5 ms
protection and monitoring	
design of the overvoltage protection	Yes, suppressor diode at output
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
response value current limitation	2.1 3 A
enduring short circuit current RMS value	
• maximum	2 A
safety	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra low output voltage Vout according to EN 60950-1
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	0.7 mA
protection class IP	IP20
EMC	
standard	
standard • for emitted interference	EN 55022 Class B
<ul><li>for emitted interference</li><li>for mains harmonics limitation</li></ul>	not applicable
<ul><li>for emitted interference</li><li>for mains harmonics limitation</li><li>for interference immunity</li></ul>	
<ul><li>for emitted interference</li><li>for mains harmonics limitation</li></ul>	not applicable
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for emitted interference     for mains harmonics limitation     for interference immunity  standards, specifications, approvals  certificate of suitability     CE marking	not applicable
for emitted interference     for mains harmonics limitation     for interference immunity  standards, specifications, approvals  certificate of suitability     CE marking  MTBF at 40 °C	not applicable EN 61000-6-2
for emitted interference     for mains harmonics limitation     for interference immunity  standards, specifications, approvals  certificate of suitability     CE marking	not applicable EN 61000-6-2 Yes
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for emitted interference     for mains harmonics limitation     for interference immunity     standards, specifications, approvals     certificate of suitability	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection -40 +85 °C
• for emitted interference     • for mains harmonics limitation     • for interference immunity  standards, specifications, approvals  certificate of suitability     • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     • in horizontal mounting position during operation	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection
• for emitted interference     • for mains harmonics limitation     • for interference immunity  standards, specifications, approvals  certificate of suitability     • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     • in horizontal mounting position during operation     • during transport	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection -40 +85 °C
for emitted interference     for mains harmonics limitation     for interference immunity  standards, specifications, approvals  certificate of suitability     CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     in horizontal mounting position during operation     during transport     during storage	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection -40 +85 °C -40 +85 °C 6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5
for emitted interference     for mains harmonics limitation     for interference immunity  standards, specifications, approvals  certificate of suitability     CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     in horizontal mounting position during operation     during transport     during storage installation altitude at height above sea level maximum ambient condition relating to ambient temperature - air pressure	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection -40 +85 °C -40 +85 °C 6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output
• for emitted interference     • for mains harmonics limitation     • for interference immunity  standards, specifications, approvals  certificate of suitability     • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     • in horizontal mounting position during operation     • during transport     • during storage  installation altitude at height above sea level maximum  ambient condition relating to ambient temperature - air pressure     - installation altitude  relative humidity with condensation according to IEC 60068-2-	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection -40 +85 °C -40 +85 °C 6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m  100 %; RH incl. condensation/frost (no commissioning if condensation is
• for emitted interference     • for mains harmonics limitation     • for interference immunity  standards, specifications, approvals  certificate of suitability     • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     • in horizontal mounting position during operation     • during transport     • during storage  installation altitude at height above sea level maximum  ambient condition relating to ambient temperature - air pressure     - installation altitude  relative humidity with condensation according to IEC 60068-2-38 maximum	not applicable EN 61000-6-2  Yes  1 580 078 h  0 70 °C; with natural convection -40 +85 °C -40 +85 °C  6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m  100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation
• for emitted interference     • for mains harmonics limitation     • for interference immunity  standards, specifications, approvals  certificate of suitability     • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     • in horizontal mounting position during operation     • during transport     • during storage  installation altitude at height above sea level maximum  ambient condition relating to ambient temperature - air pressure     - installation altitude  relative humidity with condensation according to IEC 60068-2-38 maximum  chemical resistance to commercially available cooling lubricants resistance to biologically active substances conformity	not applicable EN 61000-6-2  Yes 1 580 078 h  0 70 °C; with natural convection -40 +85 °C -40 +85 °C 6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m  100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation Yes; incl. diesel and oil droplets in the air Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon
for emitted interference     for mains harmonics limitation     for interference immunity  standards, specifications, approvals  certificate of suitability     CE marking  MTBF at 40 °C  ambient conditions  ambient temperature     in horizontal mounting position during operation     during transport     during storage  installation altitude at height above sea level maximum  ambient condition relating to ambient temperature - air pressure     installation altitude  relative humidity with condensation according to IEC 60068-2-38 maximum  chemical resistance to commercially available cooling lubricants resistance to biologically active substances conformity according to EN 60721-3-3  resistance to mechanically active substances conformity according to EN 60721-3-3  resistance to mechanically active substances conformity according to EN 60721-3-3	Yes  1 580 078 h  0 70 °C; with natural convection  -40 +85 °C  -40 +85 °C  6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m  100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation  Yes; incl. diesel and oil droplets in the air  Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request  Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3)  Yes; Class 3S4 incl. sand, dust
• for emitted interference • for mains harmonics limitation • for interference immunity  standards, specifications, approvals  certificate of suitability • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature • in horizontal mounting position during operation • during transport • during storage  installation altitude at height above sea level maximum  ambient condition relating to ambient temperature - air pressure - installation altitude  relative humidity with condensation according to IEC 60068-2-38 maximum  chemical resistance to commercially available cooling lubricants resistance to biologically active substances conformity according to EN 60721-3-3  resistance to chemically active substances conformity according to EN 60721-3-3  resistance to mechanically active substances conformity according to EN 60721-3-3  resistance to biologically active substances conformity according to EN 60721-3-3  resistance to biologically active substances conformity according to EN 60721-3-3	Yes  1 580 078 h  0 70 °C; with natural convection  -40 +85 °C  -40 +85 °C  6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m  100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation  Yes; incl. diesel and oil droplets in the air  Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request  Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3)  Yes; Class 6B2 mold, fungal, sponge spores (except fauna)
• for emitted interference • for mains harmonics limitation • for interference immunity  standards, specifications, approvals  certificate of suitability • CE marking  MTBF at 40 °C  ambient conditions  ambient temperature • in horizontal mounting position during operation • during transport • during storage  installation altitude at height above sea level maximum  ambient condition relating to ambient temperature - air pressure - installation altitude  relative humidity with condensation according to IEC 60068-2-38 maximum  chemical resistance to commercially available cooling lubricants resistance to biologically active substances conformity according to EN 60721-3-3  resistance to mechanically active substances conformity according to EN 60721-3-3  resistance to biologically active substances conformity according to EN 60721-3-3  resistance to biologically active substances conformity	Yes  1 580 078 h  0 70 °C; with natural convection  -40 +85 °C  -40 +85 °C  6 000 m  In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m  100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation  Yes; incl. diesel and oil droplets in the air  Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request  Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3)  Yes; Class 3S4 incl. sand, dust

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according to EN 60721-3-6	V 01 05 111 11111
coating for equipped printed circuit board according to EN 61086	Yes; Class 2 for high availability
type of coating protection against pollution according to EN 60664-3	Yes; Type 1 protection
type of test of the coating according to MIL-I-46058C	Yes; Discoloration of the coating during service life possible
product conformity of the coating Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal Coating, Class A
connection method	
type of electrical connection	screw terminal
• at input	L+, M1, PE: 1 screw terminal each for 2 x 0.5 2.5/1.5 $\mbox{mm}^{2}$ single-core/finely stranded
• at output	L+, M: 1 screw terminal each for 2 x 0.5 2.5 mm <sup>2</sup>
<ul> <li>for auxiliary contacts</li> </ul>	-
mechanical data	
width × height × depth of the enclosure	80 × 135 × 120 mm
installation width × mounting height	80 mm × 235 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15
standard rail mounting	Yes
S7 rail mounting	No
wall mounting	No
housing can be lined up	Yes
net weight	0.5 kg
further information internet links	
internet link	
• to website: Industry Online Support	https://support.industry.siemens.com
additional information	
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)
Classifications	

	Version	Classification
eClass	14	27-04-07-01
eClass	12	27-04-07-01
eClass	9.1	27-04-07-01
eClass	9	27-04-07-01
eClass	8	27-04-90-02
eClass	7.1	27-04-90-02
eClass	6	27-04-90-02

ETIM	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

## Approvals Certificates

**General Product Approval** 

<u>Miscellaneous</u> <u>Manufacturer Declaration</u>

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