## SIEMENS

## Data sheet

## 6EP1931-2FC42



## SITOP DC UPS MODULE/24VDC/40A/USB

SITOP DC UPS module 24 V/40 A uninterruptible power supply with USB interface input: 24 V DC/42.6 A output: 24 V DC/40 A \*Ex approval no longer available\*

Input	
supply voltage at DC rated value	24 V
voltage curve at input	DC
input voltage range	22 29 V DC
adjustable response value voltage for buffer connection preset	22.5 V
adjustable response value voltage for buffer connection	22 25.5 V; Adjustable in 0.5 V increments
input current at rated input voltage 24 V rated value	40 A; + approx. 2.6 A with empty battery
Mains buffering	
type of energy storage	with batteries
design of the mains power cut bridging-connection	Dependent on connected battery and load current, see selection table battery module and mains buffering times as well as the relevant important information notes!
charging current	1 A, 2 A
adjustable charging current maximum note	factory setting approx. 2 A
Output	
output voltage	
<ul> <li>in normal operation at DC rated value</li> </ul>	24 V
<ul> <li>in buffering mode at DC rated value</li> </ul>	24 V
formula for output voltage	Vin - approx. 0.5 V
startup delay time typical	1 s
voltage increase time of the output voltage typical	360 ms
output voltage in buffering mode at DC	19 28.5 V
output current	
<ul> <li>rated value</li> </ul>	40 A
<ul> <li>in normal operation</li> </ul>	0 40 A
<ul> <li>in buffering mode</li> </ul>	0 40 A
peak current	42 A
supplied active power typical	960 W
Efficiency	
efficiency in percent	
<ul> <li>at rated output voltage for rated value of the output current typical</li> </ul>	97.2 %
<ul> <li>in case of operation on rechargeable battery typical</li> </ul>	96.9 %
power loss [W]	
<ul> <li>at rated output voltage for rated value of the output current typical</li> </ul>	28.6 W
<ul> <li>in case of operation on rechargeable battery typical</li> </ul>	33.6 W
Protection and monitoring	
product function	

<ul> <li>reverse polarity protection against energy storage unit polarity reversal</li> </ul>	Yes
<ul> <li>reverse polarity protection against input voltage polarity reversal</li> </ul>	Yes
Signaling	
display version ● for normal operation	Normal operation: LED green (OK), floating changeover contact "Bat/OK" to setting "OK" ("OK" means: Voltage of the supplying power supply unit is greater than cut-in threshold set at the DC UPS module); Lack of buffer standby: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; Battery replacement required: LED red (alarm) flashing with approx. 0.25 Hz; floating changeover contact "Alarm/Bat" switching with approx. 0.25 Hz; Energy storage > 85%: LED
● in buffering mode	green (Bat > 85%), floating NO contact "Bat > 85" closed; Permissible contact current capacity: DC 60 V/1 A or AC 30 V /1 A Buffered mode: LED yellow (Bat), floating changeover contact "OK/Bat" to setting "Bat"; Prewarning battery voltage < 20.4 VDC: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; Energy storage > 85%: LED green (Bat > 85%), floating NO contact "Bat > 85" closed
Interface	
product component PC interface	Yes
design of the interface	USB
Safety	
galvanic isolation between input and output	No
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
• CE marking	Yes
as approval for USA	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• C-Tick	No
shipbuilding approval	ABS, DNV GL
EMC	
standard	
for emitted interference	EN 55022 Class B
for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
during operation	-25 +60 °C; with natural convection
	-40 +85 °C
during transport	-40 +85 °C
during storage	-40 +65 C
	Climate class 2K2 E 05% po condensation
environmental category acc. to IEC 60721	Climate class 3K3, 5 95% no condensation
Mechanics	
Mechanics type of electrical connection	screw-type terminals
Mechanics type of electrical connection • at input	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG
Mechanics type of electrical connection • at input • at output	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG
Mechanics type of electrical connection • at input • at output • for rechargeable battery module	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG
Mechanics type of electrical connection • at input • at output • for rechargeable battery module • for control circuit and status message	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 10 screw terminals for 0.5 2.5 mm²/20 13 AWG
Mechanics type of electrical connection • at input • at output • for rechargeable battery module • for control circuit and status message width of the enclosure	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 10 screw terminals for 0.5 2.5 mm²/20 13 AWG 102 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 10 screw terminals for 0.5 2.5 mm²/20 13 AWG 102 mm 125 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 10 screw terminals for 0.5 2.5 mm²/20 13 AWG 102 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing	screw-type terminals 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG 10 screw terminals for 0.5 2.5 mm²/20 13 AWG 102 mm 125 mm 125 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom         • left	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm         0 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom         • left         • right	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm         0 mm
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom         • left         • right         net weight	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm         0 mm         1.1 kg
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom         • left         • right         net weight         product feature of the enclosure housing can be lined up	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm         0 mm         1.1 kg         Yes
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom         • left         • right         net weight         product feature of the enclosure housing can be lined up	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm         0 mm         1.1 kg         Yes         Snaps onto DIN rail EN 60715 35x7.5/15
Mechanics         type of electrical connection         • at input         • at output         • for rechargeable battery module         • for control circuit and status message         width of the enclosure         height of the enclosure         depth of the enclosure         required spacing         • top         • bottom         • left         • right         net weight         product feature of the enclosure housing can be lined up	screw-type terminals         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         24 V DC: 2 screw terminals for 0.33 10 mm²/22 7 AWG         10 screw terminals for 0.5 2.5 mm²/20 13 AWG         102 mm         125 mm         50 mm         50 mm         0 mm         1.1 kg         Yes

reference code acc. to IEC 81346-2	Т
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)