SIEMENS

Data sheet

6EP1931-2DC42

SITOP DC UPS MODULE 6A WITH USB INTERF. SITOP DC UPS MODULE 24 V/6 A UNINTERRUPTIBLE POWER SUPPLY WITH USB INTERFACE INPUT: 24 V DC/6.85 A OUTPUT: 24 V DC/6 A



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	6 A; + approx. 0.6 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	0.2 A	
• 2	0.4 A	
adjustable charging current maximum Note	factory setting approx. 0.4 A	

Output

Input

Output voltage	
 in normal operation at DC Rated value 	24 V
 in buffering mode at DC Rated value 	24 V
Formula for output voltage	Vin - approx. 0.5 V
ON-delay time typical	1 s
Voltage increase time of the output voltage typical	60 ms
Output voltage in buffering mode at DC	19 28.5 V
Output current	
Rated value	6 A
 in normal operation 	0 6 A
 in buffering mode 	0 6 A
Peak current	6.3 A
Property of the output Short-circuit proof	Yes
Supplied active power typical	144 W
Efficiency	
Efficiency in percent	
 at rated output current at rated output current typical 	95 %
 in case of accumulator operation typical 	94.5 %
Power loss [W]	
 at rated output current at rated output current typical 	7 W
 in case of accumulator operation typical 	8 W
Protection and monitoring	
Product function	
 reverse polarity protection against energy storage unit polarity reversal 	Yes
 reverse polarity protection against input voltage polarity reversal 	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 green (Bat > 85%), floating NO contact "Bat > 85" closed; Permissible contact current capacity: DC 60 V/1 A or AC 30 V /1 A

• in buffering mode

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

Product component PC interface Yes Design of the interface USB Safety Calvanic isolation between entrance and outlet No Operating resource protection class Class III Certificate of suitability CE marking Yes • ca sapproval for USA cUlus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 • relating to ATEX - • C-Tick No Shipbuilding approval CL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data - Ambient temperature - • during operation -25 +60 °C; with natural convection • during transport -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Screw-type terminals Type of electrical connection screw-type terminals for 1 4 mm²/17 11 AWG • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG • for battery modu	Interface	
Safety Galvanic isolation between entrance and outlet No Operating resource protection class Class III Cetrificate of suitability • • CE marking Ves • as approval for USA • • relating to ATEX - • C-Tick No Shipbuilding approval GL, ABS Protection class IP IP20 EMC Standard • • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data Ambient temperature - • during operation -25 +60 °C; with natural convection • during storage -0 etning transport -40 +85 °C • during storage -0 Type of electrical connection screw-type terminals • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG • for control circui	Product component PC interface	Yes
Galvanic isolation between entrance and outlet No Operating resource protection class Class III Certificate of suitability Yes • CE marking Ves • as approval for USA cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 • relating to ATEX - • C-Tick No Shipbuilding approval CL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data -25 +60 °C; with natural convection • during operation -25 +60 °C; with natural convection • during transport -40 +85 °C • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Meternics 24 V DC: 2 screw terminals • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 0.5 2.5 mm²/20 13 AWG Width of the enclosure 125 mm Depth of the enclosure 125 mm Depth of the enclosure 125 mm Protection ci	Design of the interface	USB
Galvanic isolation between entrance and outlet No Operating resource protection class Class III Certificate of suitability Yes • CE marking Ves • as approval for USA cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 • relating to ATEX - • C-Tick No Shipbuilding approval CL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data -25 +60 °C; with natural convection • during operation -25 +60 °C; with natural convection • during transport -40 +85 °C • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Meternics 24 V DC: 2 screw terminals • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 0.5 2.5 mm²/20 13 AWG Width of the enclosure 125 mm Depth of the enclosure 125 mm Depth of the enclosure 125 mm Protection ci	Safety	
Certificate of suitability Yes • CE marking Yes • as approval for USA cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 • relating to ATEX - • C-Tick No Shipbuilding approval GL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data -40 +85 °C • during operation -25 +60 °C; with natural convection • during storage -40 +85 °C • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Screw-type terminals Type of electrical connection screw-type terminals for 1 4 mm²/17 11 AWG • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 0.5 2.5 mm²/20 13 AWG With of the enclosure 125 mm Depth of the enclosure 125 mm Depth of the enclosure 125 mm Depth of the enclosure		No
• CE markingYes• as approval for USAcULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259• relating to ATEXNo• C-TickNoShipbuilding approvalGL, ABS• Protection class IPIP20EMCStandard• for emitted interferenceEN 55022 Class B• for interference immunityEN 61000-6-2Operating data• during operation-25 +60 °C; with natural convection• during transport-40 +85 °C• during storage-40 +85 °CEnvironmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsType of electrical connection• at input24 V DC: 2 screw terminals for 1 4 mm?/17 11 AWG• for control circuit and status message10 screw terminals for 0 4 mm?/17 11 AWG• for control circuit and status message10 screw terminals for 0 4 mm?/17 11 AWG• for control circuit and status message10 screw terminals for 0 4 mm?/17 11 AWG• for control circuit and status message10 screw terminals for 0 2.5 mm?/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmRequired spacing125 mm• top50 mm• bottom50 mm	Operating resource protection class	Class III
• as approval for USA cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 • elating to ATEX - • C-Tick No Shipbuilding approval GL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data - Ambient temperature -25 +60 °C; with natural convection • during operation -25 +60 °C; with natural convection • during storage -40 +85 °C environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Screw-type terminals • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG • for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm²/17 11 AWG •	Certificate of suitability	
• relating to ATEX - • C-Tick No Shipbuilding approval GL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data - Ambient temperature • 60 °C; with natural convection • during operation -25 +60 °C; with natural convection • during storage -40 +85 °C • during storage -40	• CE marking	Yes
• C-TickNoShipbuilding approvalGL, ABSProtection class IPIP20EMCStandardIP20• for emitted interferenceEN 55022 Class B• for interference immunityEN 61000-6-2Operating dataAmbient temperature-25 +60 °C; with natural convection• during operation-25 +60 °C; with natural convection• during storage-40 +85 °C• during storage-40 +85 °CEnvironmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsScrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm717 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm717 11 AWG• for control circuit and status message10 screw terminals for 1 4 mm717 11 AWG• for control circuit and status message10 screw terminals for 1 4 mm717 11 AWG• for control circuit and status message10 screw terminals for 1 4 mm717 11 AWG• for control circuit and status message10 screw terminals for 1 4 mm717 11 AWG• for control circuit and status message10 screw terminals for 1 4 mm717 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm717 11 AWG• for control circuit and status message10 screw terminals for 0 2.5 mm720 13 AWGWidth of the enclosure50 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm	 as approval for USA 	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Shipbuilding approval GL, ABS Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data Ambient temperature • during operation -25 +60 °C; with natural convection • during transport -40 +85 °C • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Screw-type terminals Type of electrical connection screw-type terminals • at input 24 V DC: 2 screw terminals for 1 4 mm?/17 11 AWG • for battery module 24 V DC: 2 screw terminals for 1 4 mm?/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm?/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm?/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm?/17 11 AWG • for control circuit and status message 10 screw terminals for 1 4 mm?/17 11 AWG • for control circuit and status message 125 mm Depth of the enclosure 125 mm	 relating to ATEX 	-
Protection class IP IP20 EMC Standard • for emitted interference EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data Ambient temperature • during operation -25 +60 °C; with natural convection • during transport -40 +85 °C • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Type of electrical connection • at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for control circuit and status message 10 screw terminals for 0.5 2.5 mm²/20 13 AWG Width of the enclosure 50 mm Height of the enclosure 125 mm Depth of the enclosure 50 mm • top 50 mm	• C-Tick	No
EMC Standard • for emitted interference • for interference immunity EN 55022 Class B • for interference immunity EN 61000-6-2 Operating data Ambient temperature • during operation • during transport • during storage • during storage • during storage • during transport • during storage • during torage	Shipbuilding approval	GL, ABS
Standard for emitted interference EN 55022 Class B for interference immunity EN 61000-6-2 Operating data Ambient temperature during operation -25 +60 °C; with natural convection during transport -40 +85 °C during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Type of electrical connection at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG for control circuit and status message 10 screw terminals for 0.5 2.5 mm²/20 13 AWG Width of the enclosure 50 mm Height of the enclosure 125 mm Depth of the enclosure 125 mm Required spacing 50 mm • top 50 mm • bottom 50 mm	Protection class IP	IP20
Standard for emitted interference EN 55022 Class B for interference immunity EN 61000-6-2 Operating data Ambient temperature during operation -25 +60 °C; with natural convection during transport -40 +85 °C during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics Type of electrical connection at input 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG for battery module 24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG for control circuit and status message 10 screw terminals for 0.5 2.5 mm²/20 13 AWG Width of the enclosure 50 mm Height of the enclosure 125 mm Depth of the enclosure 125 mm Required spacing 50 mm • top 50 mm • bottom 50 mm		
• for emitted interferenceEN 55022 Class B• for interference immunityEN 61000-6-2Operating dataAmbient temperature• during operation• during operation• during transport• during storage• during storage• during storage• during storage• during transport• during storage• during transport• during transport• during storage• during storage• during transport• during storage• during storage• during transport• at input• at output• at output• for control circuit and status message• to control circuit and status message		
• for interference immunityEN 61000-6-2Operating dataAmbient temperature • during operation • during transport • during storage-25 +60 °C; with natural convection -40 +85 °C • during storage• during storage • during storage-40 +85 °C • C • C • during storage• Environmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsType of electrical connection • at input • at outputscrew-type terminals 24 ∨ DC: 2 screw terminals for 1 4 mm²/17 11 AWG 24 ∨ DC: 2 screw terminals for 1 4 mm²/17 11 AWG • for battery module • for control circuit and status messageVidth of the enclosure Height of the enclosure50 mm 125 mmDepth of the enclosure • top • bottom50 mm 50 mm		EN 55022 Class B
Operating data Ambient temperature • during operation • during transport • during storage • at output • at output • for battery module • for control circuit and status message • 10 screw terminals for 0.5 2.5 mm²/20 13 AWG Width of the enclosure • 125 mm Depth of the enclo		
Ambient temperature -25 +60 °C; with natural convection • during operation -40 +85 °C • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics -25 +60 °C; with natural convection • during storage -40 +85 °C Environmental category acc. to IEC 60721 Climate class 3K3, no condensation Mechanics		
• during operation-25 +60 °C; with natural convection• during transport-40 +85 °C• during storage-40 +85 °CEnvironmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsType of electrical connectionscrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm		
• during transport-40 +85 °C• during storage-40 +85 °C• during storage-40 +85 °CEnvironmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsType of electrical connectionscrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	Ambient temperature	
• during storage-40 +85 °CEnvironmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsType of electrical connectionscrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	 during operation 	
Environmental category acc. to IEC 60721Climate class 3K3, no condensationMechanicsType of electrical connectionscrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	 during transport 	-40 +85 °C
MechanicsType of electrical connectionscrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm	 during storage 	-40 +85 °C
Type of electrical connectionscrew-type terminals• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	Environmental category acc. to IEC 60721	Climate class 3K3, no condensation
• at input24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure50 mmRequired spacing50 mm• top50 mm• bottom50 mm	Mechanics	
• at output24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	Type of electrical connection	screw-type terminals
• for battery module24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	• at input	24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG
• for control circuit and status message10 screw terminals for 0.5 2.5 mm²/20 13 AWGWidth of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	• at output	24 V DC: 4 screw terminals for 1 4 mm²/17 11 AWG
Width of the enclosure50 mmHeight of the enclosure125 mmDepth of the enclosure125 mmRequired spacing125 mm• top50 mm• bottom50 mm	 for battery module 	24 V DC: 2 screw terminals for 1 4 mm²/17 11 AWG
Height of the enclosure125 mmDepth of the enclosure125 mmRequired spacing50 mm• top50 mm• bottom50 mm	 for control circuit and status message 	10 screw terminals for 0.5 2.5 mm²/20 13 AWG
Depth of the enclosure 125 mm Required spacing 50 mm • top 50 mm • bottom 50 mm	Width of the enclosure	50 mm
Required spacing • top • bottom 50 mm 50 mm	Height of the enclosure	125 mm
 top bottom 50 mm 50 mm 	Depth of the enclosure	125 mm
• bottom 50 mm	Required spacing	
	• top	50 mm
• left 0 mm	• bottom	50 mm
	● left	0 mm

● right	0 mm
Net weight	0.45 kg
Product feature of the enclosure housing for side-by- side mounting	Yes
Mounting type	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Battery module
MTBF at 40 °C	904 159 h
Equipment marking acc. to DIN EN 81346-2	т
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)