© Siemens 2021

Advanced power supplies



Introduction

nolog

netive

2/3	SITOP PSU8600 power supply system
2/3	Introduction
2/7	Basic units 24 V DC (PSU8600)
2/13	Modular system, expansion of outputs
	(CNX8600)
2/17	Modular system, buffer modules for brief
	power failure (BUF8600)
2/20	Modular system, UPS module for longer
	nower failure (LIRSOGOD RATOGOD)
	power failure (OF 36000, BA16000)
2/24	SITOP PSU8200
2/24 2/24	SITOP PSU8200 Introduction
2/24 2/24 2/25	SITOP PSU8200 Introduction 1-phase, 24 V DC
2/24 2/24 2/25 2/29	SITOP PSU8200 Introduction 1-phase, 24 V DC 1- and 2-phase, 24 V DC
2/24 2/24 2/25 2/29 2/33	SITOP PSU8200 Introduction 1-phase, 24 V DC 1- and 2-phase, 24 V DC 3-phase, 24 V DC
2/24 2/24 2/25 2/29 2/33 2/37	SITOP PSU8200 Introduction 1-phase, 24 V DC 1- and 2-phase, 24 V DC 3-phase, 24 V DC 3-phase, 36 V DC

Technology Co. Hd.

00

Advanced power supplies

Introduction

Overview

The switched-mode power supply units in the Advanced performance class are the ideal choice for maximum reliability and functionality, qualities required in the process and automotive industries, in special-purpose machine manufacturing, or in harsh environments.

The SITOP PSU8200 product line meets the stringent requirements in these areas, e.g. thanks to its overload characteristics, efficiency, and compactness. Additionally, SITOP PSU8600 offers a power supply system with open communication for optimum integration in the world of digitalization.

SITOP PSU8600 power supply system

Introduction

- Easy configuration and monitoring in PC-based automation systems via SITOP Manager
- Preventive maintenance reduces downtimes
- Energy savings during breaks through targeted operation of outputs
- Easy integration in energy management systems (PROFlenergy protocol)

Application

SITOP PSU8600 power supply system is used as a central DC power supply in larger plants, or machines with networked automation systems. The PSU8600 can be directly integrated into the LAN infrastructure by means of the two integrated PROFINET ports.



An extremely high level of reliability is achieved for the DC voltage supply by monitoring the individual DC branches for overload and bridging short-term power failures (brownouts). Complete transparency and fast fault localization are achieved by providing comprehensive diagnostic and maintenance information (e.g. load states of the outputs, phase/network failure, overtemperature) via PROFINET.

Energy-optimized operation is supported by measuring the current power and voltage values of each output as well as the individual activation and deactivation of the DC outputs via PROFlenergy during idle times.

Overview



As a unique power supply system with network integration, SITOP PSU8600 sets new standards in industrial power supplies. It can be fully integrated into Totally Integrated Automation (TIA) and networked via OPC UA and SITOP Manager with automation systems from different manufacturers.

Voltage and current response thresholds can be set individually for each output of the power supply system, and selective monitoring of each output for overload allows fast fault location. Depending on requirements, more modules from the modular system can be added without any wiring effort, for example to buffer against power failures ranging from seconds, minutes or hours, or for increasing the number of outputs.

SITOP PSU8600 can be easily configured in the TIA Portal: From the product selection through the network integration to the parameter assignment.

Comprehensive diagnostic and maintenance information is available via PROFINET. It can be evaluated directly in SIMATIC S7 and visualized in SIMATIC WinCC.

Benefits

- Space and cost savings through up to 36 integrated outputs with selective monitoring (no need for one or more additional selectivity modules)
- Individually parameterizable outputs (elimination of an additional power supply unit, e.g. for 5 V, 12 V or 15 V)
- Compensation for power losses can be set separately for each output
- Narrow width without lateral installation clearances
- Low temperature rise in the control cabinet due to very high efficiency
- Depending on requirements, modular expansion without any wiring effort (additional outputs, buffer module, UPS module)
- Reliable operation by bridging power failures in the second, minute or hour range
- Two integrated Ethernet/PROFINET ports (no external switch required)
- Integrated web server enables remote monitoring
- Convenient configuration in the TIA Portal
- SIMATIC S7 function blocks for easy integration in STEP 7 user programs
- Fast integration in operator control and monitoring with WinCC faceplates
- Direct integration in SIMATIC PCS 7 via SITOP library

SITOP PSU8600 power supply system

Introduction

Design

- SITOP PSU8600, 1-phase power supply, 24 V DC/20 A/4 x 5 A with four outputs (max. 5 A per output) and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/20 A/4 x 5 A with four outputs (max. 5 A per output) and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/20 A with one output and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/40 A/4 x 10 A with four outputs (max. 10 A per output) and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/40 A with one output and two Ethernet/PROFINET ports

Modular system, consisting of:

- SITOP CNX8600 4 x 5 A (expansion module with 4 outputs, each 5 A)
- SITOP CNX8600 4 x 10 A (expansion module with 4 outputs, each 10 A)
- SITOP CNX8600 8 x 2.5 A (expansion module with 8 outputs, each 2.5 A)
 SITOP BUF8600 100 ms/40 A
- SITOP BUF8600 100 ms/40 A
 (buffer module for 100 ms at 40 A)
 SITOP BUF8600 300 ms/40 A
- (buffer module for 300 ms at 40 A)
- SITOP BUF8600 4 s/40 A (buffer module for 4 s at 40 A)
- SITOP BUF8600 10 s/40 A (buffer module for 10 s at 40 A)
- SITOP UPS8600 (UPS module) including external energy storage unit
- SITOP BAT8600 Pb (battery module with lead-acid batteries for buffering in the event of a power failure for up to 10 min/960 W)
- SITOP BAT8600 LiFePO4 (battery module with lithium iron phosphate batteries for buffering in the event of a power failure for up to 14 min/960 W)

Up to 4 CNX8600 expansion modules and up to 2 buffer components (BUF8600 or UPS8600) can be connected to a PSU8600 basic unit. The connection is made on top of the modules without any wiring effort using the System Clip Link, a connecting plug for system data and power supplies. Up to six additional modules can be added in random order; this means that existing configurations do not have to be altered if a module is added at a later stage. Up to 5 BAT8600 battery modules of the same type can be connected to a UPS8600 module. The connection between UPS8600 and BAT8600 via the energy storage link enables intelligent battery management for optimum battery life.

Function

Supply of connected loads

An individual supply voltage can be set at each output of the power supply system. This means you can supply loads with different rated voltages simultaneously with only one device. Plus the voltage drop caused by the different cable lengths can be compensated individually, which means each load can be supplied with the optimum voltage.

Monitoring of the outputs for overload

Each output of the power supply system is individually monitored for overload. If the load current exceeds the set response threshold, the output is shut down according to specified time-current characteristics. All other outputs continue to be supplied reaction-free.

Enabling and disabling the outputs

Each output can be manually enabled or disabled directly on the device (e.g. for commissioning or service) and an overload tripping can be reset. Outputs disabled due to overload can also be reset remotely using a remote reset signal (24 V input).

In addition, program-controlled enabling and disabling of the outputs is possible using the integrated Ethernet/PROFINET interface. This also means you can disable individual outputs by means of PROFlenergy during breaks to save energy.

Communication

Comprehensive diagnostic information can be queried and processed via the integrated Ethernet/PROFINET interface during operation for both the device status as well as the status of the individual outputs. This results in complete transparency, minimal downtimes and quick fault location. The integrated web server also permits remote monitoring of the power supply system.

Buffering

If brief voltage dips occur on the mains side, the buffer module provides the load current for supplying the outputs via its energy storage devices. Maintenance-free electrolytic capacitors or double-layer capacitors are used as energy-storage units.

UPS module UPS8600 can be used with the corresponding BAT8600 battery modules to protect against longer power failures. This allows power failures in the minutes to hours range to be bridged. These supplementary modules also make it possible to shut down the system in a specific and safe manner in the event of a power failure. For most power interruptions, however, the bridging time is sufficient so that the system can continue to run without malfunction.

SITOP PSU8600 power supply system

Introduction

Integration

Software for TIA-based automation systems

Different software components are available to facilitate easy integration of SITOP PSU8600 in the TIA environment.

Engineering is simple via the TIA Portal. Special function blocks for SIMATIC S7-300, S7-400, S7-1200 and S7-1500 also support integration in the STEP 7 user program.

The comprehensive operating and diagnostic data of the power supply system can be visualized using ready-to-use PSU8600 faceplates for WinCC.

TIA Portal

- User-friendly, fail-safe integration of SITOP PSU8600 into the PROFINET network by means of drag-and-drop
- Convenient configuration of the PSU8600 basic units and CNX8600, BUF8600, UPS8600 and BAT8600 add-on modules though simple selection from the hardware catalog
- Free HSPs (hardware support packages) available for the TIA Portal:
- http://support.automation.siemens.com/WW/view/en/102254062
- Free GSD file (Generic Station Description) for STEP 7 V 5 http://support.automation.siemens.com/WW/view/en/102254061



Establishing the PROFINET connection between the SITOP PSU8600 and the controller is easy and fail-safe in the TIA Portal

STEP 7 function blocks

Function blocks are available for STEP 7 user programs on SIMATIC S7-300/400/1200/1500. They allow further processing of the PSU8600 operating data.

- Function blocks for STEP 7 V5.6
- Function blocks for STEP 7 in the TIA Portal as of version 15.1

Free download at:

http://support.automation.siemens.com/WW/view/en/102379345

Faceplates for WinCC

Ready-to-use faceplates save programming time during visualization of the SITOP PSU8600. The faceplates show all relevant statuses and values of the power supply system and the individual outputs and are available for the following systems:

- Faceplates for WinCC from Version V7.4
- Faceplates for WinCC flexible 2008 SP5
- Faceplates for WinCC Comfort/Advanced/Professional in the TIA Portal

Free download at:

http://support.automation.siemens.com/WW/view/en/102379345



The pre-compiled WinCC faceplates show all the relevant data of the power supply system in an easy-to-understand display.

Software for SIMATIC PCS 7 process control system

The SITOP library is available with blocks and faceplates for direct integration into SIMATIC PCS 7. The SW blocks in the SIMATIC S7 supply the faceplate on the user interface of the process control system with operating and diagnostics data, generate messages and ensure connection to the maintenance system of PCS 7. This ensures constant transparency of the 24 V supply in the control system. The SITOP library is supported in SIMATIC PCS 7 as of version V8.2 with SP1.

Free download at:

https://support.industry.siemens.com/cs/ww/en/view/109476154

SITOP Manager - the tool for commissioning, engineering and monitoring of communication-capable SITOP power supplies

SITOP Manager is the medium for all users who do not work with SIMATIC STEP 7 in the TIA Portal or with SIMATIC PCS 7. It manages all communication-capable power supplies in a communication network and enables their commissioning, online and offline engineering, diagnostics as well as operator control and monitoring. With the help of the SITOP Shutdown Service (autonomous function of the SITOP Manager), for example, it also supports continuous monitoring and specific shutdown of one or more PCs in case of a power failure. SITOP Manager is available as a free download in SIOS. It supports the following SITOP devices:

- Requirement for the use of the SITOP Manager with
- SITOP PSU8600:
- SITOP PSU8600 3 AC 40 A / 4 x 10 A
- as of product state (PS) "2" as of firmware V1.4.0 - SITOP PSU8600 3 AC 20 A / 4 x 5 A, 20 A, 40 A
- as of product state (PS) "1" as of firmware V1.4.0 - SITOP PSU8600 1 AC 20 A / 4 x 5 A
- as of product state (PS) "1" as of firmware V1.5.0

2/5

SITOP PSU8600 power supply system

Introduction

Integration (continued)

SITOP Manager functions

- Integrated engineering, monitoring, diagnostics and service functions save time and operating costs
- Usability via the web interface simplifies automation projects
- Stability and quality prevent plant failures
- Shutting down specific PCs prevents data loss in the event of a power failure
- Possibility to configure multiple SITOP PSU8600 PN/USBs via a single SITOP Manager project file reduces overhead and time, thus saving costs
- The option to make configuration changes during operation (CiR) reduces plant downtimes
- Firmware update option ensures that the SITOP PSU8600 is always up-to-date
- Since SITOP Manager supports Microsoft Windows and SIMATIC Industrial OS, it can be used on all common PCs
- Secure, encrypted communication according to the Siemens security concepts ('Security-in-depth' model)



Diagnostics via SITOP Manager

OFFLINE Project	0.5.5	. 010	anastina • Chiest surfaception	· Commission					PSUBSOD 4 + 10A (
 my-public) my-shalabaan sanika 	8× 8×	Disgrad	Superior Atom Name						
• myseps1600		Alarma	Alex history						
0 AM		Aar	n hiybiry						
CINE.INE Common Huma	-	See	Severily Dive: MAINTIPARIES REQUIRED (1) 👻 and higher						
* pro		10	Event	Incoming/sudgeing	Severity	Beet	Subsist	Date and time	Details on event
8078600 100mg/404 (V1.4.0) [1]		13	Shutdown due to impermissible tudpfly voltage	incoming	20	0	0	50 10 2018 06 02 23 107	Supply votage is outside the pormositie limits Outputs of the power supply system have been switched aff
shuldown service			Buffer mode	according .	22.5	1	0	55.05 2018 06.02.23.075	The power supply system is supplied via the Buffer components
Shutdown Service (V1.0.0)		14	Nout votage secon permitted range	ncommp	78 1	0	ė	30 08 20%8 06 02 23 06 f	input voltage torbox permitted range
pu		40	40 Buffer mode Incarning 12 1 0 0 0000 231 07 The power supply system is supplied via the buffer					The power supply system is supplied via the buffer components.	

Alarm history in SITOP Manager

SIEMENS						SITOP Manager
A Loppedin ac admin Lapout	-					Fingle 🔳
OFFLINE Project • my problem	058 54	Object configuration Object configuration	Objects Available objects	11.0.0		PS08000.4 x 104.0/1.4.0
PSUBBOD 4 x 104 01 A 81 BUT 8600 100-weeks (01 A 80 [1] © Add module • my shutteen service		Base Unit PSUB600	510P-Makager_Services_V14-6.epeas 510P-P349660_V146.epeas = P505800 + 20A C P505800 + 20A			
Brundessen Sanska (N1.0.0) • myrupe/1400 uPS/1400 +OA Per (N2.2.2) • Add Sansery	0 ×	General	PEUROD 1 x 40A PEUROD 4 x 10A BTOP-UP \$1400 x 10A UP \$1400 x 12A UP \$1400 x 12A UP \$1500 \$16 NH UP \$1500 \$16 UBB UP \$1500 \$16 UBB UP \$1500 \$16 UBB		-	
ORENE Connections • pix • distributes service		System start Personning Treatmin Connect pressures Individual scripet core	Units too da inte Units too da inte Units too da vite Sifean extent	v		
€ Ann		Dead time for system Dead time for assess weiting mutuals pr	Open same psu4600	Centri		
		a.turing				

SITOP Manager PSU8600 offline, including saving of offline project to a project file

Free download at:

https://support.industry.siemens.com/cs/ww/en/view/109760607

Web server

A web server is integrated in the PSU8600 basic unit for remote monitoring of the power supply system.

Remote monitoring of

- Hardware configuration data
- Operating data of the basic unit, all connected additional modules and the individual outputs
- Alarm messages

Remote access via:

- Internet Explorer 10, 11, Firefox as of V45, Google Chrome as of V50, Microsoft Edge as of V25
- IP address
- User name and password

SIEMENS			SITOP PSU8
▼ Diagnostics	► Hardware configuration		Logout
Diagnostics->Operatin	g data->PSU8600		No.
Alarms Coperating data Coperating data Collection Collection Collection		SU8600 PROFINET device name: Article no.: Senial number: Hardware: Broware:	psu BEP3437-6M800-2CY0 GGE08UT4FWJ 1 V1004
Output 2 Output 3 Output 4		General	1.000
CNX8500 [1] BUF8600 [1] Colline functions	, ret	Operating state: Current input voltage: System load current: Maximum system output current:	The power supply system is in normal operation. 393.1 V 2.49 A

The password-protected web server offers a view of the configuration and operating data.

Technology Co. Itd.

More information

101094 Co. 140.

TIA Selection Tool for quick and easy configuration of the PSU8600 power supply system:

http://www.siemens.com/tst

SITOP PSU8600 power supply system

Basic units 24 V DC (PSU8600)



Despite their compact overall width, the 1-phase and 3-phase basic units of the SITOP PSU8600 power supply system include one Ethernet/PROFINET interface, as well as one or four configurable outputs (voltage and current threshold) with selective monitoring. If needed, additional modules from the modular system can be added to the basic unit without any wiring effort in order to increase the number of outputs (CNX8600) or to extend the power buffering time (BUF8600, UPS8600). Comprehensive diagnostic and maintenance information is available via PROFINET. It can be evaluated directly in SIMATIC S7 and visualized in SIMATIC WinCC. Energy management is also optimally supported through the acquisition of energy data for each output as well as individual activation and deactivation of the outputs via PROFIenergy.

Multi-vendor transfer of parameters and diagnostic data is also possible via the open communications interface OPC UA.

Product highlights

- Extremely slim design with very high efficiency of up to 94%
- Voltage and current threshold can be set separately and are infinitely adjustable for each output
- Extra power with 1.5 times the rated current (5 s/min) for brief, operational overload
- Integrated Ethernet/PROFINET interface (2 ports)
- Easy configuration in the TIA Portal
- Integrated web server for remote diagnostics
- Outputs can be deactivated and activated in a targeted manner with PROFlenergy

	Ordering data	Article No.
	SITOP PSU8600 1- and 2-phase, 24 V DC/20 A/4 x 5 A with PN/IE connection	6EP3336-8MB00-2CY0
e.	Stabilized power supply Input: 100 240 V AC Output: 24 V DC/20 A/4 x 5 A	
	SITOP PSU8600 3-phase, 24 V DC/20 A with PN/IE connection	6EP3436-8SB00-2AY0
	Stabilized power supply Input: 400 500 V 3 AC Output: 24 V DC/20 A	
molo"	SITOP PSU8600 3-phase, 24 V DC/40 A with PN/IE connection	6EP3437-8SB00-2AY0
	Stabilized power supply Input: 400 500 V 3 AC Output: 24 V DC/40 A	
se and 3-phase	SITOP PSU8600 3-phase, 24 V DC/20 A/4 x 5 A with PN/IE connection	6EP3436-8MB00-2CY0
ly system include one or four config- with selective	Stabilized power supply Input: 400 500 V 3 AC Output: 24 V DC/20 A/4 x 5 A	
the modular any wiring effort	SITOP PSU8600 3-phase, 24 V DC/40 A/4 x 10 A with PN/IE connection	6EP3437-8MB00-2CY0
S8600). Compre- on is available via ATIC S7 and visu-	Stabilized power supply Input: 400 500 V 3 AC Output: 24 V DC/40 A/4 x 10 A	
t is also optimally	Accessories	
n of the output	SITOP CNX8600 4 x 5 A expansion module	6EP4436-8XB00-0CY0
ostic data is also	Output: 24 V DC/4 x 5 A	
ce OPC UA.	SITOP CNX8600 4 x 10 A expansion module	6EP4437-8XB00-0CY0
ncy of up to 94% •	For SITOP PSU8600 Output: 24 V DC/4 x 10 A	
parately and are	SITOP CNX8600 8 x 2.5 A expansion module	6EP4436-8XB00-0DY0
(5 s/min) for brief,	For SITOP PSU8600 Output: 24 V DC/8 x 2.5 A	
ports)	SITOP BUF8600 100 ms buffer module	6EP4297-8HB00-0XY0
,	For SITOP PSU8600	
s n a targeted	SITOP BUF8600 300 ms buffer module	6EP4297-8HB10-0XY0
-	For SITOP PSU8600 Buffer capacity 300 ms/40 A	not.
	SITOP BUF8600 4 s buffer module	6EP4293-8HB00-0XY0
	For SITOP PSU8600 Buffer capacity 4 s/40 A	
	SITOP BUF8600 10 s buffer module	6EP4295-8HB00-0XY0
	For SITOP PSU8600 Buffer capacity 10 s/40 A	
	SITOP UPS8600 UPS module	6EP4197-8AB00-0XY0
	For SITOP PSU8600 Rated buffer power 960 W	
	SITOP BAT8600 battery module 380 Wh	6EP4145-8GB00-0XY0
	For SITOP UPS8600 With lead-acid batteries (Pb technology)	
	SITOP BAT8600 battery module 264 Wh	6EP4143-8JB00-0XY0
	For SITOP UPS8600	
	With LiFePO4 batteries	<u> </u>
	Unit labeling plates	3RT2900-1SB20

SITOP PSU8600 power supply system

Basic units 24 V DC (PSU8600)

Technical specifications

	Article number	6EP3336-8MB00-	6EP3436-8MB00-	6EP3436-8SB00-	6EP3437-8MB00-	6EP3437-8SB00-
	Product					
2		24 V/20 A/4y 5 A	24 V/20 Δ/4y 5 Δ	24 V/20 Δ	24 V/40 Δ/4y 10 Δ	24 V/ΔΩ Δ
2	Input	24 V/20 A/4X J A	24 1/20 8/4% 3 8	24 V/20 A	24 V/40 A/4X 10 A	24 V/40 A
	Input	1-phase and 2-phase AC or DC	3-phase AC	3-phase AC	3-phase AC	3-phase AC
	Rated voltage value Vin rated	100 240 V	400 500 V	400 500 V	400 500 V	400 500 V
	Voltage range AC	85 275 V	320 575 V	320 575 V	320 575 V	320 575 V
	• Note	-	Derating 320 360 and 530 575 V	Derating 320 360 and 530 575 V	Derating 320 360 and 530 575 V	Derating 320 360 and 530 575 V
	supply voltage					
	• at DC	110 220 V	- 10	-	-	-
	input voltage					
	• at DC	93 275 V	-	-	-	-
	Wide-range input	Yes	Yes	Yes	Yes	Yes
	Mains buffering	at <i>V_{in}</i> = 100 V; Prioritized supply Output 1 at power failure can be selected via DIP switch	at <i>V</i> _{in} = 400 V; Prioritized supply Output 1 at power failure can be selected via DIP switch	at $V_{in} = 400$ V; Prioritized supply to the output on power failure via DIP switch can be selected (only with expansion module CNX8600)	at V _{in} = 400 V; Prioritized supply Output 1 at power failure can be selected via DIP switch	at $V_{in} = 400$ V; Prioritized supply to the output on power failure via DIP switch can be selected (only with expansion module CNX8600)
	Mains buffering at I _{out rated} , min.	20 ms; at <i>V</i> _{in} = 100 V; Prioritized supply Output 1 at power failure can be selected via DIP switch	15 ms; at $V_{in} = 400$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch	15 ms; at $V_{in} = 400$ V; Prioritized supply to the output on power failure via DIP switch can be selected (only with expansion module CNX8600)	15 ms; at V _{in} = 400 V; Prioritized supply Output 1 at power failure can be selected via DIP switch	15 ms; at $V_{in} = 400$ V; Prioritized supply to the output on power failure via DIP switch can be selected (only with expansion module CNX8600)
	Rated line frequency 1	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
	Rated line frequency 2	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
	Rated line range	47 63 Hz	47 63 Hz	47 63 Hz	47 63 Hz	47 63 Hz
	input current					
	 at rated input voltage 100 V 	5.4 A		-	-	-
	 at rated input voltage 120 V 	4.5 A	-	-	-	-
	 at rated input voltage 230 V 	2.5 A	-	-	-	-
	 at rated input voltage 240 V 	2.4 A	- 6 ⁰	-	-	-
	 at rated input voltage 110 V 	4.8 A		-	-	- 69
	 at rated input voltage 220 V 	2.4 A	-01	-	-	-
	 at rated input voltage 400 V 	-	1.4 A	1.4 A	2.75 A	2.75 A
	 at rated input voltage 500 V 		1.1 A	1.1 A	2.2 A	2.2 A
	Switch-on current limiting (+25 °C), max.	15 A	14 A	14 A	14 A	14 A
	l²t, max.	4.33 A ² ·s	1.2 A ² ·s	1.2 A²⋅s	2.24 A².s	2.24 A ² ·s
	Built-in incoming fuse	internal	none	none	none	none
	Protection in the mains power input (IEC 898)	required: circuit breaker (for UL: UL489-listed/DIVQ) characteristic C, 10-32 A, alternatively slow-response fuses (for UL: UL248-listed)	Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)	Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)	Required: 3-pole connected miniature circuit breaker 10 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)	Required: 3-pole connected miniature circuit breaker 10 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)

verechnology co. Hd.

Advanced power supplies SITOP PSU8600 power supply system

Basic units 24 V DC (PSU8600)

Technical specifications (continued)

0°.'

Article number	SED2226 PMP00	6ED2/26-9MD00	6ED3/36-96D00	6ED2427-8MD00	6ED3/37.06D00
Article number	2CY0	2CY0	2AY0	2CY0	2AY0
Product	SITOP PSU8600	SITOP PSU8600	SITOP PSU8600	SITOP PSU8600	SITOP PSU8600
Power supply, type	24 V/20 A/4X 5 A	24 V/20 A/4x 5 A	24 V/20 A	24 V/40 A/4x 10 A	24 V/40 A
Output	Controlled, isolated	Controlled, isolated	Controlled, isolated	Controlled, isolated	Controlled, isolated
number of outputs	4	4	1	4	1
Rated voltage V_{out} DC	24 V	24 V	24 V	24 V	24 V
output voltage at output 1 at DC rated value	24 V	24 V	24 V	24 V	24 V
 output voltage at output 2 at DC rated value 	24 V	24 V	-	24 V	-
 output voltage at output 3 at DC rated value 	24 V	24 V	-	24 V	-
 output voltage at output 4 at DC rated value 	24 V	24 V	-	24 V	
Total tolerance, static ±	3 %	3 %	3 %	3 %	3 %
Static mains compensation, approx.	0.2 %	0.2 %	0.2 %	0.2 %	0.2 %
Static load balancing, approx.	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %
Residual ripple peak-peak, max.	100 mV	100 mV	100 mV	100 mV	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV	200 mV	200 mV	200 mV	200 mV
Adjustment range	4 28 V	4 28 V	4 28 V	4 28 V	4 28 V
product function output voltage	Yes	Yes	Yes	Yes	Yes
adjustable					
Output voltage setting	via potentiometer or	via potentiometer or	via potentiometer or	via potentiometer or	via potentiometer or
	Derating > 24 V:	Derating > 24 V:	Derating > 24 V:	Derating > 24 V:	Derating > 24 V:
	4%/V; max. 120 W per	4%/V; max. 120 W per	4%/V; max. 480 W	4%/V; max. 240 W per	4%/V; max. 960 W
	output, max. 480 W	output, max. 480 W	overall system	output, max. 960 W	overall system
Status display	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communi- cation PROFINET; 3-color LED per output for operating state output; LED green for parallel operation Output 1 and 2 / 3 and 4	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communi- cation PROFINET; 3-color LED per output for operating state output; LED green for parallel operation Output 1 and 2 / 3 and 4	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communi- cation PROFINET; 3-color LED for operating state output	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communi- cation PROFINET; 3-color LED per output for operating state output; LED green for parallel operation Output 1 and 2/3 and 4	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communi- cation PROFINET; 3-color LED for operating state output
Signaling	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"
On/off behavior	No overshoot of V _{out} (soft start)	No overshoot of V _{out} (soft start)	No overshoot of V _{out} (soft start)	No overshoot of V _{out} (soft start)	No overshoot of V _{out} (soft start)
Startup delay, max.	1 s; Without on-delay of the outputs	1 s; Without on-delay of the outputs	1s	1 s; Without on-delay of the outputs	1 s
connection of outputs operating	Simultaneous	Simultaneous	Simultaneous	Simultaneous	Simultaneous
	outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches can be set	outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches can be set	outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches can be set (only with expansion module CNX8600)	outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches can be set	outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches can be set (only with expansion module CNX8600)
voltage increase time of the output	500 ms	500 ms	500 ms	500 ms	500 ms
Rated current value lout rotod	20 A	20 A	20 A	40 A	40 A
outrateu					

Advanced power supplies SITOP PSU8600 power supply system

Basic units 24 V DC (PSU8600)

Technical specifications (continued)

Article number	6EP3336-8MB00- 2CY0	6EP3436-8MB00- 2CY0	6EP3436-8SB00- 2AY0 SITOP PSU8600	6EP3437-8MB00- 2CY0	6EP3437-8SB00- 2AY0 SITOP PSU8600
Power supply type	24 V/20 Δ/4y 5 Δ	24 V/20 Δ/4y 5 Δ	24 V/20 A	24 V/40 Δ/4v 10 Δ	24 V/40 Δ
outout current			24 1/20 A	24 1/40 A/4X 10 A	24 1140 A
per output	5 4	5 4	20 4	10 Δ	40 A
at output 1 rated value	5 4	5 4	20 4	10 A	40 A
• at output 2 rated value	5 4	5 4	20 A	10 A	-
• at output 2 rated value	5 A		-	10 A	-
at output 3 rated value	5 A	5 A	-	10 A	-
at output 4 rated value	5 A	5 A	-	10 A	-
Current range	0 20 A	0 20 A	0 20 A	0 40 A	0 40 A
• Note	Retive	+50 +60 °C: Derating 2.5%/K; no derating in connection with expansion module CNX8600 and total load of the outputs at the basic device max. 240 W	+50 +60 °C: Derating 2.5%/K; no derating in connection with expansion module CNX8600 and total load of the outputs at the basic device max. 240 W	+50 +60 °C: Derating 2.5%/K; no derating in connection with expansion module CNX8600 and total load of the outputs at the basic device max. 480 W	+50 +60 °C: Derating 2.5%/K; no derating in connection with expansion module CNX8600 and total load of the outputs at the basic device max. 480 W
supplied active power typical	480 W	480 W	480 W	960 W	960 W
short-term overload current					
 at short-circuit during operation 	-	-	60 A		120 A
typical					
• note		-	only in operation without CNX8600 extension module	chne	only in operation without CNX8600 extension module
duration of overloading capability for excess current					
 at short-circuit during operation 	-	-	25 ms	-	25 ms
product feature parallel switching of outputs	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch	- 90	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch	-
Parallel switching for enhanced	No	No	Yes: suitable output	No	Yes: suitable output
performance			characteristics via DIP switch can be selected		characteristics via DIP switch can be selected
Numbers of parallel switchable units		. 0	2		2
for enhanced performance			-		- O'
Efficiency		0-7			
Efficiency at V _{out rated} , I _{out rated} , approx.	92 %	93 %	93 %	93 %	93 %
Power loss at V _{out rated} , I _{out rated} , approx.	39 W	34 W	34 W	72 W	72 W
power loss [W] during no-load	14 W	12 W	12 W	20 W	20 W
Closed-loop control	0				
Dynamic mains compensation $(V_{in} rated \pm 15 \%)$, max.	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %
Dynamic load smoothing (<i>I_{out}: 50/100/50 %), U_{out} ± typ.</i>	0.4 %	0.4 %	0.4 %	0.4 %	0.4 %
setting time maximum	10 ms	10 ms	10 ms	10 ms	10 ms
Protection and monitoring					
Output overvoltage protection	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)
property of the output short-circuit proof	Yes	Yes	Yes	Yes	Yes
Short-circuit protection	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches	Electronic overload shutdown; optional constant-current operation can be selected via DIP switch	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches	Electronic overload shutdown; optional constant-current operation can be selected via DIP switch
adjustable response value current of current-dependent overload trip	0.5 5 A	0.5 5 A	2 20 A	0.5 10 A	4 40 A
type of threshold value setting	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface
				red	01.
	A •				

SITOP PSU8600 power supply system

Basic units 24 V DC (PSU8600)

Technical specifications (continued)

Article number	6EP3336-8MB00- 2CY0	6EP3436-8MB00- 2CY0	6EP3436-8SB00- 2AY0	6EP3437-8MB00- 2CY0	6EP3437-8SB00- 2AY0
Product	SITOP PSU8600				
Power supply, type	24 V/20 A/4x 5 A	24 V/20 A/4x 5 A	24 V/20 A	24 V/40 A/4x 10 A	24 V/40 A
characteristics of electronic overload switch-off	$l_a > 1.0 < 1.5 \times l_a$ threshold permissible for 5 s; l_a limit (= 1.5 × l_a threshold) permissible for 200 ms	$l_a > 1.0 < 1.5 \times l_a$ threshold permissible for 5 s; l_a limit (= 1.5 x l_a threshold) permissible for 200 ms	$I_a > 1.0 < 1.5 \times I_a$ threshold permissible for 5 s; I_a limit (= 1.5 × I_a threshold) permissible for 200 ms	$I_a > 1.0 < 1.5 \times I_a$ threshold permissible for 5 s; I_a limit (= 1.5 x I_a threshold) permissible for 200 ms	$I_a > 1.0 < 1.5 \times I_a$ threshold permissible for 5 s; I_a limit (= 1.5 x I_a threshold) permissible for 200 ms
characteristics of constant current operation	$I_{a \text{ limit}}$ (= 1.5 x I_{a} threshold) permissible for 5 s, afterwards I_{a} threshold continuous	$I_{a \text{ limit}}$ (= 1.5 x I_{a} threshold) permissible for 5 s, afterwards I_{a} threshold continuous	$I_{a \text{ limit}}$ (= 1.5 x I_{a} threshold) permissible for 5 s, afterwards I_{a} threshold continuous	$I_{a \text{ limit}}$ (= 1.5 x I_{a} threshold) permissible for 5 s, afterwards I_{a} threshold continuous	$I_{a \text{ limit}}$ (= 1.5 x I_{a} threshold) permissible for 5 s, afterwards I_{a} threshold continuous
Reset	via sensor per output or IE/PN interface	via sensor per output or IE/PN interface	via sensor or IE/PN interface	via sensor per output or IE/PN interface	via sensor or IE/PN interface
Remote reset	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)
overcurrent overload capability in normal operation	Total system overloadable 150% <i>l</i> a rated to 5 s/min	Total system overloadable 150% <i>l</i> _a rated to 5 s/min	Total system overloadable 150% <i>I</i> a rated to 5 s/min	Total system overloadable 150% <i>l</i> _a rated to 5 s/min	Total system overloadable 150% <i>l</i> _a rated to 5 s/min
Overload/short-circuit indicator	3-color LED for operating state device; 3-color LED per output for operating state output	3-color LED for operating state device; 3-color LED per output for operating state output	3-color LED for operating state device; 3-color LED for operating state output	3-color LED for operating state device; 3-color LED per output for operating state output	3-color LED for operating state device; 3-color LED for operating state output
Interface					
Specification interface	Ethernet/PROFINET	Ethernet/PROFINET	Ethernet/PROFINET	Ethernet/PROFINET	Ethernet/PROFINET
design of the interface PROFINET protocol	Yes	Yes	Yes	Yes	Yes
protocol is supported OPC UA	Yes	Yes	Yes	Yes	Yes
Safety					
Primary/secondary isolation	Yes	Yes	Yes	Yes	Yes
galvanic isolation	Safety extra-low output voltage $U_{\rm out}$ acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage $U_{\rm out}$ acc. to EN 60950-1 and EN 50178
Protection class	Class I				
leakage current					
• maximum	3.5 mA				
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20
Approvals					
CE mark	Yes	Yes	Yes	Yes	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
certificate of suitability NEC Class 2	No	No	No	No	No
CB approval	Yes	Yes	Yes	Yes	Yes
certificate of suitability EAC approval	Yes	Yes	Yes	Yes	Yes
Marine approval	-	ABS, DNV GL	ABS, DNV GL	ABS, DNV GL	ABS, DNV GL
EMC					
Emitted interference	EN 55022 Class B				
Supply harmonics limitation	EN 61000-3-2				
Noise immunity	EN 61000-6-2				
environmental conditions					
ambient temperature					
during operation	-25 +60 °C				
- Note	with natural convection				
 during transport 	-40 +85 °C				

-40 ... +85 °C

Advanced power supplies SITOP PSU8600 power supply system

Basic units 24 V DC (PSU8600)

Technical specifications (continued)

	<u> </u>				
Article number	6EP3336-8MB00- 2CY0	6EP3436-8MB00- 2CY0	6EP3436-8SB00- 2AY0	6EP3437-8MB00- 2CY0	6EP3437-8SB00- 2AY0
Product	SITOP PSU8600	SITOP PSU8600	SITOP PSU8600	SITOP PSU8600	SITOP PSU8600
Power supply, type	24 V/20 A/4x 5 A	24 V/20 A/4x 5 A	24 V/20 A	24 V/40 A/4x 10 A	24 V/40 A
Humidity class according to EN 60721	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%
Machanias	no condensation	no condensation	no condensation	no condensation	no condensation
Connection technology	Blug in torminals with	Dlug in terminale with	Dlug in terminale with	Plug in terminals with	Plug in terminals with
Connection technology	screwed connection	screwed connection	screwed connection	screwed connection	screwed connection
Connections					
Supply input	L1/+, N/L2/-, PE: Plug-in terminal with 1 screwed connection each for 0.2 4 mm ² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 4 mm ² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 4 mm ² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 4 mm ² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 4 mm ² single-wire / fine stranded
• Output	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 2.5 mm ² ; 0 V: Plug-in terminal with 3 screwed connections for 0.2 4 mm ²	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 2.5 mm ² ; 0 V: Plug-in terminal with 3 screwed connections for 0.2 4 mm ²	Output: plug-in terminals with 2 screw connectors for 0.2 4 mm ² ; 0 V: screw terminal with 3 screw connectors for 0.2 4 mm ²	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 2.5 mm ² ; 0 V: Plug-in terminal with 3 screwed connections for 0.2 10 mm ²	Output: plug-in terminals with 2 screw connectors for 0.2 4 mm ² ; 0 V: screw terminal with 3 screw connectors for 0.2 4 mm ²
• Auxiliary	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 1.5 mm ²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 1.5 mm ²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 1.5 mm ²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 1.5 mm ²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 1.5 mm ²
signaling contact	11, 12, 14 (alarm signal): Plug-in torminal (together with	11, 12, 14 (alarm signal): Plug-in terminal (tegether with	11, 12, 14 (alarm signal): Plug-in terminal (tegether with	11, 12, 14 (alarm signal): Plug-in terminal (tegether with	11, 12, 14 (alarm signal): Plug-in terminal (tegether with
	Reset) with 1 screwed connection each for 0.2 1.5 mm ²	Reset) with 1 screwed connection each for 0.2 1.5 mm ²	Reset) with 1 screwed connection each for 0.2 1.5 mm ²	Reset) with 1 screwed connection each for 0.2 1.5 mm ²	Reset) with 1 screwed connection each for 0.2 1.5 mm ²
product function					
 removable terminal at input 	Yes	Yes	Yes	Yes	Yes
 removable terminal at output 	Yes	Yes	Yes	Yes	Yes
design of the interface for communication	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)
suitability for interaction modular system	Yes	Yes	Yes	Yes	Yes
width of the enclosure	125 mm	100 mm	80 mm	125 mm	125 mm
height of the enclosure	125 mm	125 mm	125 mm	125 mm	125 mm
depth of the enclosure required spacing	150 mm	150 mm	150 mm	150 mm	150 mm
• top	50 mm	50 mm	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm	50 mm	50 mm
• left	0 mm	0 mm	0 mm	0 mm	0 mm
• right	0 mm	0 mm	0 mm	0 mm	0 mm
Weight, approx. 🔦 🖕	2.6 kg	2 kg	1.8 kg	2.6 kg	2.6 kg
product feature of the enclosure housing can be lined up	Yes	Yes	Yes	Yes	Yes
Installation	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
electrical accessories	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
MTBF at 40 °C	186 700 h	243 178 h	298 979 h	207 612 h	235 118 h
other information	Specifications at rated	input voltage and ambie	ent temperature +25 °C (unless otherwise specifi	(bai

Le Techni

00

2/12

Advanced power supplies

SITOP PSU8600 power supply system

Modular system, expansion of outputs (CNX8600)



The CNX8600 expansion modules are part of the SITOP PSU8600 modular system and expand the basic unit by increasing the number of selectively monitored outputs.

Up to four CNX8600 expansion modules can be connected to the PSU8600 basic device. The connection is made on top of the modules without any wiring effort using the System Clip Link, a connecting plug for system data and power supplies.

Product highlights

Overview

- Available modules:
 - Four integrated outputs with up to 5 A each and selective monitoring
 - Four integrated outputs with up to 10 A each and selective monitoring
 - Eight integrated outputs with up to 2.5 A each and selective monitoring
- Voltage and current threshold can be set separately and are infinitely adjustable for each output
- NEC Class 2 approval for 2.5 A outputs
- Comprehensive diagnostic information during operation via the PSU8600 basic unit
- Outputs can be activated and deactivated in a targeted manner with PROFlenergy via the PSU8600 basic unit

User-friendly connection system without any wiring effort thanks to System Clip Link.

Ordering data	Article No.
SITOP CNX8600 4 x 5 A expansion module	6EP4436-8XB00-0CY0
For SITOP PSU8600 Output: 24 V DC/4 x 5 A	
SITOP CNX8600 4 x 10 A expansion module	6EP4437-8XB00-0CY0
For SITOP PSU8600 Output: 24 V DC/4 x 10 A	
SITOP CNX8600 8 x 2.5 A expansion module	6EP4436-8XB00-0DY0
For SITOP PSU8600 Output: 24 V DC/8 x 2.5 A	
Accessories	
Unit labeling plates	3RT2900-1SB20

Advanced power supplies SITOP PSU8600 power supply system

Modular system, expansion of outputs (CNX8600)

Technical specifications

Article number	6EP4436-8XB00-0CY0	6EP4437-8XB00-0CY0	6EP4436-8XB00-0DY0
Power oupply type			
Power supply, type	4X 5 A	4x 10 A	8X 2.5 A
Output	Osistasllad, isslatad DO valtaria		Operators lie di la selata el DO vesita sus
Output	Controlled, Isolated DC voltage	Controlled, Isolated DC voltage	Controlled, Isolated DC voltage
number of outputs	4	4	8
Rated voltage Vout DC	24 V	24 V	24 V
 output voltage at output 1 at DC rated value 	24 V	24 V	24 V
 output voltage at output 2 at DC rated value 	24 V	24 V	24 V
 output voltage at output 3 at DC rated value 	24 V	24 V	24 V
 output voltage at output 4 at DC rated value 	24 V	24 V	24 V
 output voltage at output 5 at DC rated value 	- activ		24 V
 output voltage at output 6 at DC rated value 			24 V
 output voltage at output 7 at DC rated value 		-	24 V
output voltage at output 8 at DC rated value		-	24 V
Total tolerance, static ±	3 %	3 %	3 %
Static mains compensation, approx.	0.2 %	0.2 %	0.2 %
Static load balancing, approx.	0.1 %	0.1 %	0.1 %
Residual ripple peak-peak, max.	100 mV	100 mV	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV	200 mV	200 mV
Adjustment range	4 28 V	4 28 V	4 28 V
product function output voltage adjustable	Yes	Yes	Yes
Output voltage setting	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 120 W per output	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 240 W per output	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 60 W per output
Status display	3-color LED for operating state module: 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output
Signaling	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600
On/off behavior	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)
Startup delay, max.	1.5 s: Without on-delay of the outputs	1.5 s: Without on-delay of the outputs	1.5 s: Without on-delay of the outputs
connection of outputs operating	Simultaneous connecting-in of all outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches at power supply unit PSU8600 can be set	Simultaneous connecting-in of all outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches at power supply unit PSU8600 can be set	Simultaneous connecting-in of all outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches at power supply unit PSU8600 can be set
voltage increase time of the output voltage maximum	500 ms	500 ms	500 ms
Rated current value I _{out rated}	20 A	40 A	20 A
• per output	5 A	10 A	2.5 A
at output 1 rated value	5 4	10 4	254
at output 2 rated value	5 4	10 4	254
at output 3 rated value	5 A	10 A	2.5 A
at output 4 rated value	5 4	10 A	254
at output 5 rated value		-	25 4
at output 6 rated value		_	25 4
at output 7 rated value			254
			25.4
 αι σύμμαι ο τάιθα νάιθθ 	Uer.	-	2.0 A

Advanced power supplies SITOP PSU8600 power supply system

Modular system, expansion of outputs (CNX8600)

recnnical specifications (continued)	Technical s	specifications	(continued)	
--------------------------------------	-------------	----------------	-------------	--

0°.'

•	A.			
Article number	6EP4436-8XB00-0CY0	6EP4437-8XB00-0CY0	6EP4436-8XB00-0DY0	
Product	SITOP CNX8600	SITOP CNX8600	SITOP CNX8600	
Power supply, type	4x 5 A	4x 10 A	8x 2.5 A	2
Note	0 20 A No increase in the maximum output power of the overall system SITOP PSU8600 via the expansion module SITOP CNX8600 possible	0 40 A No increase in the maximum output power of the overall system SITOP PSU8600 via the expansion module SITOP CNX8600 possible	0 20 A Outputs meet requirements to NEC Class 2; an increase of the maximum output power of the SITOP PSU8600 overall system is not possible over the SITOP CNX8600 expansion module	
supplied active power typical	480 W	960 W	480 W	
product feature parallel switching of outputs	No	No	No	
Parallel switching for enhanced performance	No	No	No	
Efficiency				
Efficiency at V _{out rated} , I _{out rated} , approx.	97 %	97 %	97 %	
Power loss at V _{out rated} , I _{out rated} , approx.	15 W	30 W	15 W	
Closed-loop control				
Dynamic mains compensation (V_{in} rated ±15 %), max.	0.1 %	0.1 %	0.1 %	
Dynamic load smoothing (I_{out} : 50/100/50 %), $U_{out} \pm typ$.	0.4 %	0.4 %	0.4 %	
setting time maximum	10 ms	10 ms	10 ms	
Protection and monitoring				
Output overvoltage protection property of the output short-circuit proof	max. 35 V (max. 500 ms) Yes	max. 35 V (max. 500 ms) Yes	max. 35 V (max. 500 ms) Yes	
Short-circuit protection	electronic overload cut-off	electronic overload cut-off	electronic overload cut-off	
adjustable response value current of current-dependent overload trip	0.5 5 A	0.5 10 A	0.5 2.5 A	
type of threshold value setting	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	
characteristics of electronic overload switch-off	$l_a > 1.0 < 1.5 \times l_a \text{ threshold permissible}$ for 5 s; $l_a \text{ limit} (= 1.5 \times l_a \text{ threshold})$ permissible for 200 ms	$I_a > 1.0< 1.5 \times I_a$ threshold permissible for 5 s; I_a limit (= 1.5 x I_a threshold) permissible for 200 ms	$l_a > 1.0 < 1.5 \times l_a$ threshold permissible for 5 s; l_a limit (= 1.5 x l_a threshold) permissible for 200 ms	
Reset	via sensor per output or IE/PN interface	via sensor per output or IE/PN interface	via sensor per output or IE/PN interface	
Remote reset	Non-electrically isolated 24 V input (signal level "high" at > 15 V) at power supply unit PSU8600	Non-electrically isolated 24 V input (signal level "high" at > 15 V) at power supply unit PSU8600	Non-electrically isolated 24 V input (signal level "high" at > 15 V) at power supply unit PSU8600	
Overload/short-circuit indicator	3-color LED for operating state module; 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output	
Interface				
Specification interface	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600	
Safety			a del	
Primary/secondary isolation	Yes	Yes	Yes	
galvanic isolation	Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	
Protection class				
Approvale	IP20	1F20	IP20	
CE mark	Vec	Vec	Vec	
	cIII us-l isted (III 508	clill us-l isted (III 508	cIII us-Listed (III 508	
s s s s s s s s s s s s s s s s s s s	CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1), NEC class 2	
certificate of suitability NEC Class 2	No	No	Yes	
CB approval	Yes	Yes	Yes	
certificate of suitability EAC approval	Yes	Yes	Yes	
Regulatory Compliance Mark (RCM)	- <	-	Yes	
Marine approval	ABS, DNV GL	ABS, DNV GL	ABS, DNV GL	

SITOP PSU8600 power supply system

Modular system, expansion of outputs (CNX8600)

Technical specifications (continued)

	Article number Product	6EP4436-8XB00-0CY0 SITOP CNX8600	6EP4437-8XB00-0CY0	6EP4436-8XB00-0DY0 SITOP CNX8600
	Power supply, type	4x 5 A	4x 10 A	8x 2.5 A
2	EMC			
	Emitted interference	EN 55022 Class B	EN 55022 Class B	EN 55022 Class B
	Noise immunity	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
	environmental conditions			
	ambient temperature			
	 during operation 	-25 +60 °C	-25 +60 °C	-25 +60 °C
	- Note	with natural convection	with natural convection	with natural convection
	 during transport 	-40 +85 °C	-40 +85 °C	-40 +85 °C
	 during storage 	-40 +85 °C	-40 +85 °C	-40 +85 °C
	Humidity class according to EN 60721	Climate class 3K3, 5 95% no condensation	Climate class 3K3, 5 95% no condensation	Climate class 3K3, 5 95% no condensation
	Mechanics	le l		
	Connection technology	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection
	Connections			
	• Output	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 2.5 mm ² ; Ground: Plug-in terminal with 3 screwed connections	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 2.5 mm ² ; Ground: Plug-in terminal with 3 screwed connections	1, 2, 3, 4, 5, 6, 7, 8: Two plug-in terminals (14 and 58) with 1 screwed connection each for 0.2 2.5 mm ² ; Ground: Plug-in terminal with 3 screwed
		for 0.2 2.5 mm ²	for 0.2 2.5 mm ²	connections for 0.2 2.5 mm ²
	product function			
	 removable terminal at output 	Yes	Yes	Yes
	suitability for interaction modular system	Yes	Yes	Yes
	type of connection to system components	Via integrated connector	Via integrated connector	Via integrated connector
	width of the enclosure	60 mm	60 mm	100 mm
	height of the enclosure	125 mm	125 mm	125 mm
	depth of the enclosure	150 mm	150 mm	150 mm
	required spacing			
	• top	50 mm	50 mm	50 mm
	• bottom	50 mm	50 mm	50 mm
	• left	0 mm	0 mm	0 mm
	• right	0 mm	0 mm	0 mm
	Weight, approx.	1.15 kg	1.15 kg	1.29 kg
	product feature of the enclosure housing can be lined up	Yes	Yes	Yes
	Installation	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
	mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
	MTBF at 40 °C	358 372 h	358 372 h	327 369 h
	other information	Specifications at rated input voltage at	nd ambient temperature +25 °C (unless	otherwise specified)

ye Technology Co. Hd.

SITOP PSU8600 power supply system

Modular system, buffer modules for brief power failure (BUF8600)

Overview



SITOP BUF8600 for buffering brief power interruptions

The BUF8600 buffer modules with maintenance free energy storage units are part of the SITOP PSU8600 modular system and are designed to bridge short-term power failures. They automatically take over the DC power supply in case of a line voltage failure. You can connect up to two BUF8600 buffer modules to the PSU8600 basic unit. The connection is made on top of the modules without any wiring effort using the System Clip Link, a connecting plug for system data and power supplies.

Product highlights

- Reliable bridging of short-term power failures up to max. 20 s for an output power of 960 W
- Buffer modules with maintenance-free electrolytic capacitors for bridging short-term power failures (brownouts) between 100 ms and max. 600 ms (at 24 V DC/40 A)
- Buffer modules with maintenance-free double-layer capacitors for bridging longer power failures between 4 s and max. 20 s (at 24 V DC/40 A)
- The two buffer modules can be combined as required
- Easy connection without any wiring effort

Ordering data		Article No.
SITOP BUF8600 100 ms buffer module	00	6EP4297-8HB00-0XY0
For SITOP PSU8600 Buffer capacity 100 ms/40 A		
SITOP BUF8600 300 ms buffer module		6EP4297-8HB10-0XY0
For SITOP PSU8600 Buffer capacity 300 ms/40 A		
SITOP BUF8600 4 s buffer module		6EP4293-8HB00-0XY0
For SITOP PSU8600 Buffer capacity 4 s/40 A		
SITOP BUF8600 10 s buffer module		6EP4295-8HB00-0XY0
For SITOP PSU8600 Buffer capacity 10 s/40 A		
Accessories		

Unit labeling plates

3RT2900-1SB20

SITOP PSU8600 power supply system

Modular system, buffer modules for brief power failure (BUF8600)

Technical specifications

product brand name	6EP4297-8HB00-0XY0 SITOP BUF8600	6EP4297-8HB10-0XY0 SITOP BUF8600	6EP4293-8HB00-0XY0 SITOP BUF8600	6EP4295-8HB00-0XY0 SITOP BUF8600
type of current supply	100 ms/40 A	300 ms/40 A	4 s/40 A	10 s/40 A
Mains buffering	alaatuu katin aanaa itaana	- 4 - 4 ¹ ¹ 4	Dauble laure conseiters	Dauble leven como item
lype of energy storage	electrolytic capacitors	electrolytic capacitors	Double-layer capacitors	Double-layer capacitors
bridging-connection	load current: 100 ms	load current: 300 ms	load current: 4 s	load current: 10 s
output current in the event of power failure	100 ms	Soo ms	4 000 ms	10 000 ms
Output				
output current				
 rated value 	40 A	40 A	40 A	40 A
Signaling				
display version	3-color LED for operating state module			
 for normal operation 	LED green for "buffer standby exist"			
in buffering mode	LED yellow for "buffered mode"			
Interface				
design of the interface	Ethernet/PROFINET via power supply unit PSU8600			
Safety			- A	
operating resource protection class	Class III	Class III	Class III	Class III
protection class IP	IP20	IP20	IP20	IP20
Approvals				
certificate of suitability				
CE marking	Yes	Yes	Yes	Yes
• as approval for USA	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
• C-Tick	No	No	No	No
type of certification CB-certificate	Yes	Yes	Yes	Yes
shipbuilding approval	ABS, DNV GL	ABS, DNV GL	ABS, DNV GL	ABS, DNV GL
EMC				6
standard				
 for emitted interference 	EN 55022 Class B			
 for interference immunity 	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
environmental conditions	4 C			
ambient temperature				
during operation	-25 +60 °C; with natural convection			
during transport	-40 +70 °C	-40 +70 °C	-40 +70 °C	-40 +70 °C
 during storage 	-40 +70 °C	-40 +70 °C	-40 +70 °C	-40 +70 °C
environmental category acc. to IEC 60721	Climate class 3K3, 5 95% no condensation			

re Technology Co. Hd.

00

SITOP PSU8600 power supply system

Modular system, buffer modules for brief power failure (BUF8600)

Article number	6EP4297-8HB00-0XY0	6EP4297-8HB10-0XY0	6EP4293-8HB00-0XY0	6EP4295-8HB00-0XY0
product brand name	SITOP BUF8600	SITOP BUF8600	SITOP BUF8600	SITOP BUF8600
type of current supply	100 ms/40 A	300 ms/40 A	4 s/40 A	10 s/40 A
Mechanics				
type of electrical connection		- الم	Plug-in terminal with screw connectors	Plug-in terminal with screw connectors
• at input	-	-	-	-
• at output	-	0 *	-	-
for control circuit and status message	-	- 109 ¹	X1, X2 (control contact) and 13,14, 23, 24 (message signals): 1 screw terminal each for 0.2 1.5 mm ²	X1, X2 (control contact) and 13,14, 23, 24 (message signals): 1 screw terminal each for 0.2 1.5 mm ²
type of connection to system components	Via integrated connector	Via integrated connector	Via integrated connector	Via integrated connector
width of the enclosure	60 mm 🛛 🔏 🌑	125 mm	60 mm	125 mm
height of the enclosure	125 mm	125 mm	125 mm	125 mm
depth of the enclosure	150 mm	150 mm	150 mm	150 mm 💦 💧
required spacing				
• top	50 mm	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm	50 mm
• left	0 mm	0 mm	0 mm	0 mm
• right	0 mm	0 mm	0 mm	0 mm
net weight	1.33 kg	2.26 kg	1.25 kg	1.95 kg
product feature of the enclosure housing can be lined up	Yes	Yes	Yes	Yes
fastening method	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps on <mark>to</mark> DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
MTBF at 40 °C	4 505 531 h	4 505 531 h	1 374 707 h	1 190 747 h
reference code acc. to IEC 81346-2	Т	Т	Т	Т
other information	Specifications at rated inpu (unless otherwise specified	t voltage and ambient tempera)	ature +25 °C	

Technical specifications (continued)

Co...

SITOP PSU8600 power supply system

Modular system, UPS module for longer power failure (UPS8600, BAT8600)

Overview



SITOP UPS8600 for buffering longer power failures

UPS module UPS8600 is part of the SITOP PSU8600 modular system and is used to bridge power failures in the range of minutes to hours. It can be supplemented with a maximum of five SITOP BAT8600 battery modules of the same type as the external energy storage. The lithium iron phosphate (LiFePO4) battery modules have a typical buffer time of 14 minutes at full load (960 W) and ensure an especially long service life. The lead-acid batteries (Pb) offer a typical buffer time of 10 minutes at full load (960 W).

Product highlights

- Power failure bridging in the hours range facilitates continuous system operation
- Prioritized output buffering of the PSU8600 power supply system possible
- Automatic recognition of BAT8600 "Pb" and BAT8600 "LiFePO4" battery modules
- Intelligent battery managementfor optimum charging and monitoring via the energy storage link
- Complete system integration into the TIA or OPC UA environment for engineering and diagnostic functions
- Selective shutdown of IPCs via Ethernet interface (PROFINET/OPC UA protocol)
- User-friendly connection system without any wiring effort thanks to System Clip Link (UPS8600)

Ordering data	Article No.
SITOP UPS8600 UPS module	6EP4197-8AB00-0XY0
For SITOP PSU8600 Rated buffer power 960 W	
SITOP BAT8600 battery module 380 Wh	6EP4145-8GB00-0XY0
For SITOP UPS8600 With lead batteries (Pb technology)	
SITOP BAT8600 battery module 264 Wh	6EP4143-8JB00-0XY0
For SITOP UPS8600 With LiFePO4 batteries	
Accessories	
Unit labeling plates	3RT2900-1SB20

SITOP PSU8600 power supply system

Modular system, UPS module for longer power failure (UPS8600, BAT8600)

Technical specifications

The following table shows the maximum possible buffer times of the SITOP BAT8600 battery modules at different loads as well as the required charging times until full charge is achieved.

Buffering	and	charging	times
-----------	-----	----------	-------

	6EP4143-8JB00-0XY0 (LiFePO4, 264 Wh)	6EP4145-8GB00-0XY0 (Pb, 380 Wh)
Buffer time with 1x BAT8600		•
Load 120 W	typ. 1 h 56 min	typ. 2 h 04 min
Load 240 W	typ. 60 min	typ. 57 min
Load 480 W	typ. 29 min	typ. 25 min
Load 720 W	typ. 19 min	typ. 14 min
Load 960 W	typ. 14 min	typ. 10 min
Buffer time with 5x BAT8600 (maximum	configuration)	
Load 120 W	typ. 9 h 30 min	typ. 12 h 37 min
Load 240 W	typ. 5 h 03 min	typ. 6 h 19 min
Load 480 W	typ. 2 h 33 min	typ. 2 h 56 min
Load 720 W	typ. 1 h 41 min	typ. 1 h 50 min 600
Load 960 W	typ. 1 h 15 min	typ. 1 h 17 min
Charging time until the 85% charging th	nreshold is reached.	N0.
Charging capacity 60 W	typ. 5 h 15 min	typ. 3 h 10 min
Charging capacity 120 W	typ. 2 h 15 min	typ. 1 h 35 min
Charging time until full charge is reach	ed	
Charging capacity 60 W	typ. 6 h 10 min	typ. 4 h 20 min
Charging capacity 120 W	typ. 2 h 40 min	typ. 2 h 45 min

Note:

Buffer and charging times were determined on the basis of unaged and fully charged or discharged battery modules with a battery temperature of +25 °C. Due to aging of the rechargeable batteries, the remaining battery capacity is reduced to 80% of the original capacity value when new by the end of the service life (definition of service life according to EUROBAT). To achieve the desired buffer time even at the end of service life, a higher battery capacity may therefore have to be selected during project planning.

SITOP PSU8600 power supply system

Modular system, UPS module for longer power failure (UPS8600, BAT8600)

Technical specifications (continued)

	Article number	6EP4197-8AB00-0XY0
	product brand name	SITOP UPS8600
	type of current supply	960 W
2	Mains buffering	
	type of energy storage	External battery module
	design of the mains power cut bridging-connection	Buffer time limit 1 88 min. can be set with DIP switches or until the connected battery modules are discharged
	charging current	1.25 A - 2.5 A
	adjustable charging current maximum note	Charging capacity 60 W/120 W, can be set with DIP switches
	Output	
	output voltage	
	 in normal operation at DC rated value 	48 V
	property of the output short-circuit proof	Yes
	supplied active power typical	960 W
	Efficiency	
	efficiency in percent	
	in case of operation on rechargeable battery typical	99 %
	power loss [W]	
	in case of operation on rechargeable battery typical	10 W
	Protection and monitoring	
	product function	
	reverse polarity protection against energy storage unit polarity reversal	Yes
	Signaling	
	display version	Three-color LED for operating state of module, three-color LED for status of battery circuit
	 for normal operation 	LED green for "buffer standby exist"
	• in buffering mode	LED yellow for "buffered mode"
	Interface	
	design of the interface	Ethernet/PROFINET via power supply unit PSU8600
	Safety	
	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; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
	type of certification CB-certificate	Yes
	shipbuilding approval	ABS, DNV GL

Article number	6EP4197-8AB00-0XY0	
product brand name	SITOP UPS8600	
type of current supply	960 W	
EMC		-
standard		
 for emitted interference 	EN 55022 Class B	
 for interference immunity 	EN 61000-6-2	
environmental conditions		
ambient temperature		
• during operation	-25 +70 °C; with natural convection	
 during transport 	-40 +85 °C	
 during storage 	-40 +85 °C	
environmental category acc. to IEC 60721	Climate class 3K3, 5 95% no condensation	
Mechanics		
type of electrical connection	Plug-in terminals with screwed connection	
 for rechargeable battery module 	+, -: Plug-in terminal with 1 screwed connection each for 0.2 10 $\rm mm^2$	
type of connection to system components	Via integrated connector	
width of the enclosure	60 mm	
height of the enclosure	125 mm	
depth of the enclosure 🛛 🖉 🕑	150 mm	
required spacing		
• top	50 mm	
• bottom	50 mm	
• left	0 mm	
• right	0 mm	
net weight	0.9 kg	
product feature of the enclosure hous- ing can be lined up	Yes	
fastening method	Snaps onto DIN rail EN 60715 35x15	
electrical accessories	Battery module BAT8600	
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	
MTBF at 40 °C	405 763 h	
reference code acc. to IEC 81346-2	Т	
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	

verechnology co. Hd.

Advanced power supplies SITOP PSU8600 power supply system

Modular system, UPS module for longer power failure (UPS8600, BAT8600)

Article number	6EP4145-8GB00-0XY0	6EP4143-8JB00-0XY0		
Product	SITOP BAT8600 Pb	SITOP BAT8600 LiFePO4		
Product type	Battery module 380 Wh	Battery module 264 Wh		
Output				
energy content of energy storage	380 W·h	264 W·h		
Rated current value Iout rated	20 A	20 A		
Rated voltage Vout DC	48 V	48 V		
Numbers of parallel switchable units for enhanced performance	5	5		
Safety				
Short-circuit protection	Blade-type fuse 40 A, 58 V DC	Blade-type fuse 40 A, 58 V DC		
design of the overload protection	Valve control	Valve control		
Safety				
Protection class	Class III	Class III		
Degree of protection (EN 60529)	IP20	IP20		
Approvals				
CE mark	Yes	-		
UL/cUL (CSA) approval	cURus-Recognized (UL 1778, CSA C22.2 No. 107.1), File E219627; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)		
Marine approval	ABS, DNV GL	ABS, DNV GL		
environmental conditions		100 M		
Operating data note	For storage, mounting and operation of batteries,	For storage, mounting and operation of batteries,		
	the relevant DIN/VDE regulations or country-specific	the relevant DIN/VDE regulations or country-specific		
	observed.	observed.		
ambient temperature				
during operation	-10 +50 °C	-10 +50 °C		
during transport	-40 +60 °C	-40 +80 °C		
during storage	-15 +40 °C	-40 +35 °C		
Service life				
service life of energy storage				
typical note	capacity falls to 80 % of original capacity	capacity falls to 80 % of original capacity		
() prodition	(according to EUROBAT)	(according to EUROBAT)		
 at 20 °C typical 	4 y	15 y		
 at 30 °C typical 	2 y	10 y		
 at 40 °C typical 	1 y	9 y		
 at 50 °C typical 	0.5 y	2 y		
ambient temperature during storage note	In addition to the storage temperature, additional factors, such as storage duration and charging status during storage, have a major impact on the potential service life. This means batteries should preferably be stored fully charged for short periods of time in a dry, cool and frost-proof (temperature range 0 to ± 20 °C) location.			
Mechanics	A CO	100		
Connection technology	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection		
Connection for power supply unit	+, -; 2 plug-in terminals with 1 screwed connection each for 0.2 10 mm^2	+, -: 2 plug-in terminals with 1 screwed connection each for 0.2 10 \mbox{mm}^2		
product component included	2x blade-type fuse 40 A, 58 V DC	2x blade-type fuse 40 A, 58 V DC		
width of the enclosure	322 mm	322 mm		
height of the enclosure	187 mm	187 mm		
depth of the enclosure	110 mm	110 mm		
installation width 🚴 💿	322 mm	322 mm		
Installation height	207 mm	207 mm		
required spacing				
• top	20 mm	20 mm		
• bottom	0 mm	0 mm		
• left	0 mm	0 mm		
• right	0 mm	0 mm		
fastening method				
wall mounting	Yes	Yes		
standard rail mounting	No	No		
Standard rain mounting S7 rail mounting	No	No		
	Keyholo mounting for booking in to M4 correspond	Kowhole mounting for booking is to M4 aprove		
Moight approx	12 kg	Certain Contracting for Hooking In to M4 screws		
weight, approx.	IS KY	0.5 Kg		
number of batteries	1	1		

Co..

2/23

SITOP PSU8200

Introduction

Overview



The technology power supply for demanding solutions

The single-phase, two-phase and three-phase SITOP PSU8200/PSU200M are the technology power supplies for challenging solutions. They offer maximum functionality for use in complex plants and machines. The wide-range input allows a connection to almost any electricity supply network worldwide and ensures a high degree of safety even if there are large voltage fluctuations. They offer outstanding overload characteristics: Power boost delivers up to three-times the rated current for short periods of time, and with extra power of 150%, loads with high power consumption can be connected without any problems. And in the event of an overload, you can choose between constant current or automatic restart. The extremely high efficiency keeps energy consumption and heat buildup in the control cabinet low, and the compact metal enclosure also saves space.

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

Product highlights of the product line

- Extremely slim design no lateral installation clearances required
- Power boost with 3 times rated current (for 25 ms) for tripping protective devices
- Extra power with 1.5 times rated current (5 s/min) for brief functional overload
- Choice of constant current characteristic or latching shutdown
- Symmetrical load distribution can be selected for parallel operation
- Operating state on 3 LEDs
- Extremely high efficiency up to 94%
- Wide temperature range from -25 to +70 °C

More information

Select the appropriate power supply quickly and easily with the SITOP Selection Tool:

http://www.siemens.com/tst

1-phase, 24 V DC



The single-phase SITOP PSU8200 are technology power supplies for challenging solutions. The version with wide-range input allows a connection to almost any electricity supply network worldwide and ensures a high degree of safety even if there are large voltage fluctuations.

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

50 Hz

60 Hz

47 ... 63 Hz

Product highlights

Overview

- Single-phase, 24 V DC/ 5 A, 10 A, 20 A and 40 A
- Wide-range input, input voltage 85 ... 132 V AC,
- 170 ... 264 V AC or 88 ... 350 V DC
- Up to 94% efficiency
- cULus, cCSAus, ABS and DNV GL certifications

Ordering data	Article No.
SITOP PSU8200 1-phase, STOP PSU8200 1-phase, STOP 24 V DC/5 A	6EP3333-8SB00-0AY0
Stabilized power supply Input: 120/230 V AC Output: 24 V DC/5 A	
SITOP PSU8200 1-phase, 24 V DC/10 A	6EP3334-8SB00-0AY0
Stabilized power supply Input: 120/230 V AC Output: 24 V DC/10 A	
SITOP PSU8200 1-phase, 24 V DC/20 A	6EP1336-3BA10
Stabilized power supply Input: 120 230 V AC/ 110–220 V DC Output: 24 V DC/20 A	
SITOP PSU8200 1-phase, 24 V DC/40 A	6EP3337-8SB00-0AY0
Stabilized power supply Input: 120/230 V AC Output: 24 V DC/40 A	
Add-on modules	4
SITOP redundancy modules ¹⁾	See page 9/3
SITOP selectivity modules ²⁾	See page 9/6
SITOP buffer modules ³⁾	See page 9/17
Accessories	
Unit labeling plate	3RT2900-1SB20

For more information, visit: https://www.siemens.com/sitop-redundancy/mall
 For more information, visit: https://www.siemens.com/sitop-selectivity/mall
 For more information, visit: https://www.siemens.com/sitop-buffering/mall

6EP3334-8SB00-0AY0 6EP3333-8SB00-0AY0 6EP1336-3BA10 6EP3337-8SB00-0AY0 Article number Product SITOP PSU8200 SITOP PSU8200 SITOP PSU8200 SITOP PSU8200 Power supply, type 24 V/5 A 24 V/10 A 24 V/20 A 24 V/40 A Input 1-phase and 2-phase AC or 1-phase and 2-phase AC DC Input 1-phase AC 1-phase AC Rated voltage value V_{in rated} 120 ... 230 V 85 ... 275 V Voltage range AC Derating of temperature Note Automatic range selection Automatic range selection Automatic selection; necessary down to 50 °C at $V_{\rm in}$ < 100 V AC or DC startup starting from $U_{\rm e} \ge 90/180 \ {\rm V}$ supply voltage 120 V 120 V 120 V 1 at AC rated value • 2 at AC rated value 230 V 230 V 230 V • at DC 110 ... 220 V input voltage 85 ... 132 V 85 ... 132 V 85 ... 132 V 1 at AC • 2 at AC 170 ... 264 V 170 ... 264 V 170 ... 264 V • at DC 88 ... 350 V Wide-range input No No Yes No at $V_{in} = 120/230 \text{ V}$ at $V_{\rm in} = 230$ V Mains buffering at *V*_{in} = 120/230 V at *V*_{in} = 230 V Mains buffering at Iout rated, min. 35 ms; at *V*_{in} = 120/230 V 35 ms; at V_{in} = 120/230 V 20 ms; at V_{in} = 230 V 25 ms; at V_{in} = 230 V

50 Hz

60 Hz

47 ... 63 Hz

50 Hz

60 Hz

45 ... 65 Hz

Technical specifications

Rated line frequency 1

Rated line frequency 2

Rated line range

Siemens KT 10.1 · 2021 2/25

50 Hz

60 Hz

45 ... 65 Hz

1-phase, 24 V DC

Technical specifications (continued)

Article number	6ED3333.98B00.04V0	6ED3334_98B00_0AV0	6ED1336-2BA10	6ED3337-98B00-04V0
Article number	SITOR DELISSON	0EP3334-05000-0AT0	SITOR PELISON	0EP3337-05000-0ATU
Power supply type	24 V/5 A	24 V/10 A	24 V/20 A	3110P P306200
input ourropt	24 V/3 A	24 V/10 A	24 V/20 A	24 V/40 A
• at rated input voltage 120 V	214	1.0	16.0	15 A
at rated input voltage 230 V	124	194	25 A	9 Δ
Switch-on current limiting $(+25 ^{\circ}\text{C})$	10 Δ	10 4	20 A	50 A
max.			2014	00 A
l²t, max.	0.2 A ² ·s	0.3 A ² ·s	5 A ² ·s	8 A²·s
Built-in incoming fuse	T 3.15 A (not accessible)	T 6.3 A (not accessible)	Yes	Yes
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V	Recommended miniature circuit breaker at 1-phase operation: 10 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2711-1HD10 (UL 489) at 120 V or 3RV2711-1ED10 (UL 489) at 230 V	Recommended miniature circuit breaker at 1-phase operation: 16 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2421-4BA10 (120 V) or 3RV2411-1JA10 (230 V)
Output				
Output	Controlled,	Controlled,	Controlled,	Controlled,
Rated voltage V _{out} DC	isolated DC voltage 24 V	isolated bDC voltage 24 V	isolated DC voltage 24 V	isolated DC voltage 24 V
output voltage at output 1 at DC rated value	24 V	24 V	24 V	24 V
Total tolerance, static \pm	3 %	3 %	3%	3 %
Static mains compensation, approx.	0.1 %	0.1 %	0.1 %	0.1 %
Static load balancing, approx.	0.2 %	0.3 %	0.3 %	0.1 %
Residual ripple peak-peak, max.	50 mV	50 mV	100 mV	100 mV
Residual ripple peak-peak, typ.			80 mV	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV	200 mV	200 mV	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	-	-	100 mV	220 mV
Adjustment range	24 28.8 V	24 28.8 V	24 28.8 V	24 28 V
product function output voltage adjustable	Yes	Yes	Yes	Yes
Output voltage setting	via potentiometer; max. 120 W	via potentiometer; max. 240 W	via potentiometer	via potentiometer; max. 960 W
Status display	Green LED for 24 V OK	Green LED for 24 V OK	Green LED for 24 V OK	Green LED for 24 V OK; LED yellow for overload; LED red for short-circuit or latching shutdown
Signaling	Relay contact (NO contact, r	ating 60 V DC/ 0.3 A) for "24 V	OK"	-
On/off behavior	Overshoot of V _{out} approx. 3 %	Overshoot of V _{out} approx. 3 %	No overshoot of V _{out} (soft start)	Overshoot of <i>V</i> _{out} approx. 3 %
Startup delay, max.	1.5 s	1.5 s	1.5 s	1.5 s
Voltage rise, typ.	30 ms	70 ms	50 ms	30 ms
Rated current value Iout rated	5 A	10 A	20 A	40 A
Current range	0 5 A	0 10 A	0 20 A	0 40 A
• Note	As of <i>U</i> _a >24 V: 4% [<i>I</i> _a]/V [<i>U</i> _a]; at <i>U</i> _e <100 V/ <200 V: 80% <i>I</i> _a rated	+60 +70 °C: Derating 2%/K; as of U _a >24 V: 4% [I _a]/V [U _a]; at U _e <100 V/ <200 V: 80% I _a rated	+60 +70 °C: Derating 3%/K	+60 +70 °C: Derating 3%/K
supplied active power typical	120 W	240 W	480 W	960 W
 on short-circuiting during the start-up typical 		COL	-	120 A
 at short-circuit during operation typical 	15 A	30 A	60 A	120 A
duration of overloading capability for excess current				
 on short-circuiting during the start-up 		-	-	25 ms
 at short-circuit during operation 	25 ms	25 ms	25 ms	25 ms

1-phase, 24 V DC

Technical specifications (continued)				witt ^e	
Article number	6EP3333-8SB00-0AY0	6EP3334-8SB00-0AY0	6EP1336-3BA10	6EP3337-8SB00-0AY0	
Product	SITOP PSU8200	SITOP PSU8200	SITOP PSU8200	SITOP PSU8200	
Power supply, type	24 V/5 A	24 V/10 A	24 V/20 A	24 V/40 A	
constant overload currenton short-circuiting during the	6 A	12 A	30 A	60 A	
start-up typical Parallel switching for enhanced	Yes; switchable	Yes; switchable	Yes; switchable	Yes; switchable	
performance Numbers of parallel switchable units	characteristic 2	characteristic	characteristic 2	characteristic 2	
for enhanced performance					
Efficiency					
Efficiency at V _{out rated} , I _{out rated} , approx.	93 %	94 %	93 %	92 %	
Power loss at V _{out rated} , I _{out rated} , approx.	9 W	18 W	42 W	82 W	
power loss [W] during no-load operation maximum	1.5 W	1.5 W	-	6.8 W	
Closed-loop control					
Dynamic mains compensation $(V_{in} rated \pm 15 \%)$, max.	0.1 %	0.1 %	0.5 %	1 %	
Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± typ.	2 %	4 %	1 %	1.9 %	
Load step setting time 50 to 100%, typ.	0.25 ms	0.25 ms	1 ms	2 ms	
Load step setting time 100 to 50%, typ.	0.5 ms	0.5 ms	1 ms	2 ms	
Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± typ.	2 %	4 %	-	3.8 %	
Load step setting time 10 to 90%, typ.	0.25 ms	0.25 ms	-	1 ms	
Load step setting time 90 to 10%, typ.	0.5 ms	0.5 ms		1 ms	
setting time maximum	1 ms	1 ms	5 ms	1 ms	
Protection and monitoring					
Output overvoltage protection	< 33 V	< 33 V	< 33 V	< 32 V	
Current limitation, typ.	6 A	12 A	21.5 A	41 A	
property of the output short-circuit proof	Yes	Yes	Yes	Yes	
Short-circuit protection	Alternatively, constant current characteristic approx. 6 A or latching shutdown	Alternatively, constant current characteristic approx. 12 A or latching shutdown	Alternatively, constant current characteristic approx. 23 A or latching shutdown	Alternatively, constant current characteristic approx. 41 A or latching shutdown	
enduring short circuit current RMS value					
 typical 	6 A	12 A	23 A	41 A	
overcurrent overload capability	overload capability 150 %	overload capability 150 %	overload capability 150 %	250% lout rated up to 25 ms,	
in normal operation Overload/short-circuit indicator	<i>I</i> _{out rated} up to 5 s/min LED yellow for "overload", LED red for "latching shutdown"	/ _{out rated} up to 5 s/min LED yellow for "overload", LED red for "latching shutdown"	/ _{out rated} up to 5 s/min LED yellow for "overload", LED red for "latching shutdown"	150% <i>I</i> _{out rated} up to 5 s/mir LED yellow for "overload", LED red for "latching shutdown" or "short-circuit"	
Safety					
Primary/secondary isolation galvanic isolation	Yes Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Yes Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Yes Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Yes Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	
Protection class	Class I	Class I	Class I	Class I	
leakage current					
• maximum	3.5 mA	3.5 mA	3.5 mA	0.1 mA	
• typical	1 mA	1 mA	1 mA	0.1 mA	
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	

1-phase, 24 V DC

Technical specifications (continued)

Product STOP PSU200 STOP PSU200 STOP PSU200 STOP PSU200 STOP PSU200 STOP PSU200 Approval Approval Yes Yes Yes Yes Ves ULVLA_Land (UL 50), ULS CS, CS2 JN, E0950-1, ULS CS6, CS2 JN, E0950-1, ULS CS6, CS2 JN, E0950-1, ULS CG5, CS2 JN,		6EP3333-8SB00-0AY0	6EP3334-8SB00-0AY0	6EP1336-3BA10	6EP3337-8SB00-0AY0
Nome: Payroxis Payroxis <t< th=""><th>roduct</th><th>SITOP PSU8200</th><th>SITOP PSU8200</th><th>SITOP PSU8200</th><th>SITOP PSU8200</th></t<>	roduct	SITOP PSU8200	SITOP PSU8200	SITOP PSU8200	SITOP PSU8200
provide Ver	ower supply, type	24 V/5 A	24 V/10 A	24 V/20 A	24 V/40 A
Final Yes Yes </td <td>provals</td> <td></td> <td></td> <td></td> <td></td>	provals				
Leful_(CSA) approvalclus_Listed (UL, 05), is 100 200, 100,100,100,100,100,100,100,100,100,	E mark	Yes	Yes	Yes	Yes
File F19798a cCSANA UL 00050-1) File	JL/cUL (CSA) approval	CSA C22 2 No. 107 1)	CSA C22 2 No. 107 1)	CLUS-Listed (UL 508,	CULus-Listed (UL 508,
(CSA C22 No. 00900-1, U.E. 6062-1) etilicate of suitability EC paperal interne approval papely harmonics limitation No No No No MC MC MSS, DNV CL ASS, DNV CL ASS, DNV CL ASS, DNV CL MC MC No No No No MC MC No No ASS, DNV CL ASS, DNV CL MC No No No No No ASS, DNV CL MC No No No ASS, DNV CL ASS, DNV CL ASS, DNV CL MC No No Status (CSA C22 No. 0090-2) EN 50022 Class B EN 5002 Class B EN 5000 Class Class B EN 5000 Class Class Class Class B EN 5002 Class B EN 5000 Class Class B EN 5002 Class		File E197259; cCSAus	File E197259; cCSAus	File E197259; cCSAus	File E197259; cCSAus
artificatie of suitability NEC Class 2 No No No No No B approval Yes Yes Yes Yes Yes Yes Indicate of suitability EAC class 2 Yes Yes Yes Yes Yes Indicate of suitability EAC class 2 EN 50022 Class 8 EN 50024 Class 7 EN 50024 Clas		(CSA C22.2 No. 60950-1,	(CSA C22.2 No. 60950-1,	(CSA C22.2 No. 60950-1,	(CSA C22.2 No. 60950-1,
Handbox No No <t< td=""><td></td><td>UL 60950-1)</td><td>UL 60950-1)</td><td>UL 60950-1)</td><td>UL 60950-1)</td></t<>		UL 60950-1)	UL 60950-1)	UL 60950-1)	UL 60950-1)
sh poponal Yes	ertificate of suitability NEC Class 2	No	NO	NO	NO
Interima provide Hes	Bapproval	Yes	Yes	Yes	Yes
MC Abs. UNV GL Abs. UNV GL Abs. UNV GL Abs. UNV GL MC mited interformed EN 5002 Class B EN 500 Class Class B <td>ertificate of suitability EAC approval</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td>	ertificate of suitability EAC approval	Yes	Yes	Yes	Yes
mm mm<		ABS, DINV GL	ABS, DINV GL	ABS, DINV GL	ABS, DINV GL
Initiated initiation EN 30022 Junas D EN 30022 Junas D EN 30022 Junas D EN 30023 Junas D Junc Dept Introduct Control EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 Junc Dept Introduct Control EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 Introduct Control EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 EN 1000-3-2 Introduct Control Status Lest Status Dept Introduct Control Status Dept Introduct		EN EE022 Class P	EN FEOOD Class B	EN EE022 Class D	EN EE000 Class R
Opport En En Filosophic En Filosophic witrionantal conditions minimisent engenature -25+70 °C -40+85 °C <td></td> <td>EN 61000 2 2</td> <td>EN 61000 2 2</td> <td>EN 55022 Class B</td> <td>EN 55022 Class B</td>		EN 61000 2 2	EN 61000 2 2	EN 55022 Class B	EN 55022 Class B
Output -25 +70 °C -26 +85 °C -40 +85 °C -25 +70 °C -25 +70 °C -25		EN 61000-3-2	EN 61000-3-2	EN 61000-3-2	-
Automate Control Control Second Status Second		EIN 01000-0-2	EIN 0 1000-0-2	EIN 61000-6-2	EIN 61000-0-2
Automic member and point					
- Note Yes Yes <t< td=""><td></td><td>-25 +70 °C</td><td>-25 +70 °C</td><td>-25 +70 °C</td><td>25 +70 °C</td></t<>		-25 +70 °C	-25 +70 °C	-25 +70 °C	25 +70 °C
Action Hit instant connection, from 40 °C nominal voltage Hit instant connection, voltage		With natural convection:	With natural convection:	With natural convection	with natural convection
during transport 40+85 °C 40+85 °C<	- 11016	startup tested starting from -40 °C nominal voltage	startup tested starting from -40 °C nominal voltage	startup tested starting from -40 °C nominal voltage	
• during storage -40+85 °C -40+85 °C -40+85 °C -40+85 °C -40+85 °C Climate class 3(3, 5	• during transport	-40 +85 °C	-40 +85 °C	-40 +85 °C	-40 +85 °C
uminity class according to No 20ndensation Climate class 3K3, 5 95% no condensation Screw-type terminals Screw-type terminal sceh for 0.1.1.1.5 mm ² Screw ter	during storage	-40 +85 °C	-40 +85 °C	-40 +85 °C	-40 +85 °C
All 60/21 no condensation no condensation no condensation no condensation no condensation Somaction technology screw-type terminals screw terminal	lumidity class according to	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%	Climate class 3K3, 5 95%
Jackhanics Screw-type terminals screw terminal screw terminal screw term	N 60721	no condensation	no condensation	no condensation	no condensation
connection screw-type terminals screw-type terminals screw-type terminals screw-type terminals Supply input L, N, PE: 1 screw terminal each for 0.2 25 mm ² L, N, PE: 1 screw terminal each for 0.2 4 mm ² L, N, PE: 1 screw terminal each for 0.2 4 mm ² Output +, -2 screw terminal each for 0.2 25 mm ² L, N, PE: 1 screw terminal each for 0.2 25 mm ² L, N, PE: 1 screw terminal each for 0.2 4 mm ² Auxiliary 13, 14 (alarm signal): 1 screw terminal each for 0.14 15 mm ² ; 15, 16 13, 14 (alarm signal): 1 screw terminal each for 0.14 15 mm ² ; 15, 16 13, 14 (alarm signal): 1 screw terminal each for 0.14 15 mm ² ; 15 Vidth of the enclosure 125 mm 125 mm 90 mm 145 mm teph of the enclosure 125 mm 125 mm 125 mm 100 mm ² top 50 mm 50 mm 50 mm 00 mm 00 mm bottom 50 mm 50 mm 00 mm 00 mm 00 mm top 50 mm 0.8 kg 1 kg 1.2 kg 3.1 kg velocit package Yes Yes Yes Yes Snaps onto DIN rail EN 60715 35xr.5/15	Aechanics				
Ordencions L, N, PE: 1 screw terminal each for 0.225 mm ³ single-core/finely strander single-core sinder single-core sin	connection technology	screw-type terminals	screw-type terminals	screw-type terminals	screw-type terminals
Supply inputL, W, PE: I sortew terminal single-core/finely stranded single-core/finely strand			L N DE: 1 correct terminal		
Output+, -: 2 screw terminals each+, -: 2 screw terminals each-: 2 screw terminal each-: 2 screw terminal each-: 2 screw terminals each-: 2 screw terminal each-	Supply input	each for 0.2 2.5 mm ² single-core/finely stranded	each for 0.2 2.5 mm ² single-core/finely stranded	each for 0.2 4 mm ² single-core/finely stranded	each for 0.2 4 mm ² single-core/finely stranded
Auxiliary13, 14 (alarm signal): 1 screw terminal each for 0.1415 mm²13, 14 (alarm signal): 1 screw terminal each for 0.1415 mm²14, 14, 15 mm²14, 14, 15 mm²14, 14, 14, 14, 14, 14, 14, 14, 14, 15, 14, 14, 14, 14, 14, 14, 14, 14, 14, 14	Output	+, -: 2 screw terminals each	+, -: 2 screw terminals each	+, -: 2 screw terminals each	+, -: 2 screw terminals each
width of the enclosure45 mm55 mm90 mm145 mmleight of the enclosure125 mm125 mm125 mm150 mmleight of the enclosure125 mm125 mm125 mm150 mmequired spacing50 mm50 mm50 mm40 mmtop50 mm50 mm50 mm60 mm40 mmbottom50 mm50 mm0 mm0 mm0 mmleft0 mm0 mm0 mm0 mm0 mmleft0 mm0 mm0 mm0 mm0 mmvelpht paprox.0 skg1 kg1.2 kg31 kgoroduct feature of the enclosure tousing can be lined upNago onto DIN rail EN 60715 35x7.5/15Smago on	Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ² ; 15, 16 (Remote): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ² ; 15, 16 (Remote): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ²
height of the enclosure 125 mm 125 mm 125 mm 125 mm 150 mm 150 mm 100 mm	vidth of the enclosure	45 mm 🖉 📀	55 mm	90 mm	145 mm
Hert equired spacing125 mm125 mm125 mm150 mmequired spacing50 mm50 mm50 mm50 mm40 mmb bottom50 mm50 mm50 mm60 mm40 mmb bottom60 mm0 mm0 mm0 mm0 mml eft0 mm0 mm0 mm0 mm0 mml eft0 mm0 mm0 mm0 mm0 mmveight, approx.0.8 kg1 kg1.2 kg3.1 kgvroduct feature of the enclosure roduct feature of the enclosure roduct feature of the enclosure busing can be lined upSnaps onto DIN rail EN 60715 35x7.5/15Snaps	neight of the enclosure	125 mm	125 mm	125 mm	145 mm
equired spacing botom 50 mm 50 mm 50 mm 50 mm 60 mm 60 mm 60 mm 60 mm 60 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm bottom 0 mm	depth of the enclosure	125 mm	125 mm	125 mm	150 mm
top50 mm50 mm50 mm50 mm40 mmbottom50 mm50 mm50 mm0 mm40 mmbeft0 mm0 mm0 mm0 mm0 mmbright0 mm0 mm0 mm0 mm0 mmbright, approx.0 mm0 kg1 kg1.2 kg3.1 kgorduet feature of the enclosure brousing can be lined upYesYesYesYesbectrical accessoriesBuffer moduleBuffer moduleBuffer moduleBuffer moduleBuffer modulebevice identification label 20 mm × 7 mm, Ti-grey 3RT2900-1SB20Device identification label 20 mm × 7 mm, Ti-grey 3RT2900-1SB20Device identification label 3RT2900-1SB20Device identification label 3RT2900-1SB20 <td< td=""><td>equired spacing</td><td></td><td></td><td></td><td></td></td<>	equired spacing				
bottom50 mm50 mm50 mm60 mm60 mm0 mm <td>• top</td> <td>50 mm</td> <td>50 mm</td> <td>50 mm</td> <td>40 mm</td>	• top	50 mm	50 mm	50 mm	40 mm
left0 mm0 mm0 mm0 mm0 mm0 mm0 mmright0 mm0 mm0 mm0 mm0 mm0 mm0 mm0 mmVeight, approx.0.8 kg1 kg1.2 kg3.1 kgvoodue feature of the enclosure tousing can be lined upYesYesYesYesstatalationSnaps onto DIN rail EN 60715 35x7.5/15Snaps onto DIN rail 	bottom	50 mm	50 mm	50 mm	40 mm
right0 mm0 mm0 mm0 mm0 mm0 mmWeight, approx.0.8 kg1 kg1.2 kg3.1 kgproduct feature of the enclosure ousing can be lined upYesYesYesYesinstallationSnaps onto DIN rail EN 60715 35x7.5/15Snaps ont	• left	0 mm	0 mm	0 mm	0 mm
Weight, approx.0.8 kg1 kg1.2 kg3.1 kgbordduct feature of the enclosure nousing can be lined upYesYesYesYesYesinstallationSnaps onto DIN rail EN 60715 35x7.5/15Snaps onto DIN rail EN 60715 35x7.5/15electrical accessoriesDevice identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20MTEF at 40 °C1 421 519 h1 292 102 h667 048 h838 156 hHer moduleSpecifications at rated input vitage and ambient temperature +25 °C (unless otherwi	right	0 mm	0 mm	0 mm	0 mm
YesYesYesYesYesYesnstallationSnaps onto DIN rail EN 60715 35x7.5/15Snaps onto DIN rail EN 60715 35x7.5/15	Veight, approx. 👌 🔍	0.8 kg	1 kg	1.2 kg	3.1 kg
nousing can be lined up installationSnaps onto DIN rail EN 60715 35x7.5/15Snaps onto DIN rail EN 60715 35x7.5/15<	product feature of the enclosure	Yes	Yes	Yes	Yes
InstallationSnaps onto DIN rail EN 60715 35x7.5/15Snaps onto DIN rail<	ousing can be lined up				
electrical accessories Buffer module Device identification label 20 mm × 7 mm, Tl-grey 3RT2900-1SB20 3RT2900-1SB2	nstallation	Snaps onto DIN rail EN 60715 35x7 5/15	Snaps onto DIN rail EN 60715 35x7 5/15	Snaps onto DIN rail EN 60715 35x7 5/15	Snaps onto DIN rail EN 60715 35x15
Device identification label 20 mm × 7 mm, Tl-grey 3RT2900-1SB20Device identification label 	lectrical accessories	Buffer module	Buffer module	Buffer module	Buffer module, redundancy module
Internation 1 421 519 h 1 292 102 h 667 048 h 838 156 h 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)	nechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	MTBF at 40 °C	1 421 519 h	1 292 102 h	667 048 h	838 156 h
	other information	Specifications at rated input	voltage and ambient temperat	ure +25 °C (unless otherwise	specified)
		345			<u>(4)</u>

1- and 2-phase, 24 V DC



The 1- and 2-phase SITOP PSU200M are technology power supplies for challenging solutions. The ultra-wide-range input allows connection to almost any single-phase power supply system or directly between the line conductors of three-phase networks (2-phase) and ensures a high degree of safety even if there are large voltage fluctuations.

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

Product highlights

Overview

- 1- and 2-phase, 24 V DC/5 A and 10 A
- Ultra-wide input range, input voltage 85 ... 264 V AC, 176 ... 550 V 2AC
- Optionally with PCB with protective coating
- Up to 91% efficiency
- cULus, cCSAus, ABS and DNV GL certifications

Те

Technical specifications	~			o
Article number	6EP1333-3BA10	6EP1333-3BA10-8AC0	6EP1334-3BA10	6EP1334-3BA10-8AB0
Product	SITOP PSU200M	SITOP PSU200M	SITOP PSU200M	SITOP PSU200M
Power supply, type	24 V/5 A	24 V/5 A	24 V/10 A	24 V/10 A
Input				
Input	1-phase and 2-phase AC	1-phase and 2-phase AC	1-phase and 2-phase AC	1-phase and 2-phase AC
Note	Set by means of selector switch on the device; starting from $V_{in} > 90/180$ V	Set by means of selector switch on the device; starting from V _{in} > 90/180 V	Set by means of selector switch on the device	Set by means of selector switch on the device
supply voltage				
• 1 at AC	120 230 V	120 230 V	120 230 V	120 230 V
• 2 at AC	230 500 V	230 500 V	230 500 V	230 500 V
input voltage				
• 1 at AC	85 264 V	85 264 V	85 264 V	85 264 V
• 2 at AC	176 550 V	176 550 V	176 550 V	176 550 V
Wide-range input	Yes	Yes	Yes	Yes
Overvoltage resistance	1300 V _{peak} , 1.3 ms	1300 V _{peak} , 1.3 ms	1300 V _{peak} , 1.3 ms	1300 V _{peak} , 1.3 ms
Mains buffering	at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V	at V _{in} = 120/230 V, typ. 150 ms at V _{in} = 400 V	at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V	at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V
Mains buffering at Iout rated, min.	25 ms; at V_{in} = 120/230 V, typ. 150 ms at V_{in} = 400 V	25 ms; at V _{in} = 120/230 V, typ. 150 ms at V _{in} = 400 V	25 ms; at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V	25 ms; at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V
Rated line frequency 1	50 Hz	50 Hz	50 Hz	50 Hz
Rated line frequency 2	60 Hz	60 Hz	60 Hz	60 Hz
Rated line range	47 63 Hz	47 63 Hz	47 63 Hz	47 63 Hz

Ordering data	Article No.
SITOP PSU200M 1- and 2-phase, 24 V DC/5 A	6EP1333-3BA10
Stabilized power supply Input:	
120 230/230 500 V AC Output: 24 V DC/5 A	
SITOP PSU200M 1- and 2-phase, 24 V DC/5 A	6EP1333-3BA10-8AC0
Stabilized power supply	
120 230/230 500 V AC	
Version with protective coating	
SITOP PSU200M 1- and 2-phase, 24 V DC/10 A	6EP1334-3BA10
Stabilized power supply	
120 230 V/230 500 V AC Output: 24 V DC/10 A	
SITOP PSU200M 1- and 2-phase, 24 V DC/10 A	6EP1334-3BA10-8AB0
Stabilized power supply	
120 230/230 500 V AC	
version with protective coating	0
Add-on modules	
SITOP redundancy modules ¹⁾	See page 9/3
SITOP selectivity modules ²⁾	See page 9/6
SITOP buffer modules ³⁾	See page 9/17
Accessories	

Device identification label

1) For more information, visit: https://www.siemens.com/sitop-redundancy/mall

²⁾ For more information, visit: https://www.siemens.com/sitop-selectivity/mall

³⁾ For more information, visit: https://www.siemens.com/sitop-buffering/mall

3RT2900-1SB20

Article No

Siemens KT 10.1 · 2021 2/29

1- and 2-phase, 24 V DC

Technical specifications (continued)

Article number	6EP1333-3BA10	6EP1333-3BA10-8AC0	6EP1334-3BA10	6EP1334-3BA10-8AB0
Product	SITOP PSU200M	SITOP PSU200M	SITOP PSU200M	SITOP PSU200M
Power supply, type	24 V/5 A	24 V/5 A	24 V/10 A	24 V/10 A
input current				
 at rated input voltage 120 V 	2.2 A	2.2 A	4.4 A	4.4 A
 at rated input voltage 230 V 	1.2 A	1.2 A	2.4 A	2.4 A
 at rated input voltage 500 V 	0.61 A	0.61 A	1.1 A	1.1 A
Switch-on current limiting (+25 °C), max.	35 A	35 A	35 A	35 A
l²t, max.	1.7 A²·s	1.7 A ² ·s	4 A ² ·s	4 A ² ·s
Built-in incoming fuse	T 3.15 A (not accessible)	T 3.15 A (not accessible)	T 6.3 A (not accessible)	T 6.3 A (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3.A) or 3RV2711-1DD10 (UL 489) at 400/500 V	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3.A) or 3RV2711-1DD10 (UL 489) at 400/500 V	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V
Output				
Output	Controlled, isolated DC voltage	Controlled, isolated DC voltage	Controlled, isolated DC voltage	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V	24 V	24 V	24 V
 output voltage at output 1 at DC rated value 	24 V	24 V	24 V	24 V
Total tolerance, static \pm	3 %	3 %	3 %	3 %
Static mains compensation, approx.	0.1 %	0.1 %	0.1 %	0.1 %
Static load balancing, approx.	0.1 %	0.1 %	0.1 %	0.1 %
Residual ripple peak-peak, max.	50 mV	50 mV	50 mV	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV	200 mV	200 mV	200 mV
Adjustment range	24 28.8 V	24 28.8 V	24 28.8 V	24 28.8 V
product function output voltage adjustable	Yes	Yes	Yes	Yes
Output voltage setting	via potentiometer	via potentiometer	via potentiometer	via potentiometer
Status display	Green LED for 24 V OK			
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	Overshoot of V _{out} approx. 3 %			
Startup delay, max.	1 s	1 s	1s	1 s
Voltage rise, typ.	50 ms	50 ms	50 ms	50 ms
Rated current value Iout rated	5 A	5 A	10 A	10 A
Current range	0 5 A	0 5 A	0 10 A	0 10 A
• Note	-	-	+60 +70 °C: Derating 2%/K (at 120 V, 230 V) or 3.5%/K (at 400 V)	+60 +70 °C: Derating 2%/K (at 120 V, 230 V) or 3.5%/K (at 400 V)
supplied active power typical	120 W	120 W	240 W	240 W
at short-circuit during operation typical	15 A	15 A	30 A	30 A
duration of overloading capability for excess current				
 at short-circuit during operation constant overload current 	25 ms	25 ms	25 ms	25 ms
 on short-circuiting during the start-up typical 	6 A	6 A	12 A	12 A
Parallel switching for enhanced performance	Yes; switchable characteristic	Yes; switchable characteristic	Yes; switchable characteristic	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2	2	2	2

1- and 2-phase, 24 V DC

Technical specifications (continued)			aire .		
Article number Product	6EP1333-3BA10 SITOP PSU200M	6EP1333-3BA10-8AC0 SITOP PSU200M	6EP1334-3BA10 SITOP PSU200M	6EP1334-3BA10-8AB0 SITOP PSU200M	
Power supply, type	24 V/5 A	24 V/5 A	24 V/10 A	24 V/10 A	
Efficiency					
Efficiency at V _{out rated} , I _{out rated} ,	88 %	88 %	91 %	91 %	
Power loss at V _{out rated} , I _{out rated} , approx.	17 W	17 W	24 W	24 W	
power loss [W] during no-load operation maximum	4 W	4 W 0	6 W	6 W	
Closed-loop control		67			
Dynamic mains compensation $(V_{in} \text{ rated } \pm 15 \%)$, max.	0.1 %	0.1 %	0.1 %	0.1 %	
Dynamic load smoothing $(I_{out}: 50/100/50 \%), U_{out} \pm typ.$	3 %	3 %	3 %	3 %	
Load step setting time 50 to 100%, typ.	2 ms	2 ms	2 ms	2 ms	
Load step setting time 100 to 50%, typ.	2 ms	2 ms	2 ms	2 ms	
setting time maximum	5 ms	5 ms	5 ms	5 ms	
Protection and monitoring					
Output overvoltage protection	< 35 V	< 35 V	< 35 V	< 35 V	
Current limitation, typ.	6 A	6 A	12 A	12 A	
property of the output short-circuit proof	Yes	Yes	Yes	Yes	
Short-circuit protection	Alternatively, constant	Alternatively, constant	Alternatively, constant	Alternatively, constant	
~	current characteristic approx. 5.5 A or latching	current characteristic approx. 5.5 A or latching	current characteristic approx. 12 A or latching	current characteristic approx. 12 A or latching	
enduring short circuit current RMS value	snutdown	shutdown	shutdown	snutdown	
• typical	6 A	6 A	12 A	12 A	
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"	LED yellow for "overload", LED red for "latching shutdown"	LED yellow for "overload", LED red for "latching shutdown"	LED yellow for "overload", LED red for "latching shutdown"	
Safety				······································	
Primary/secondary isolation	Yes	Ves	Yes	Yes	
galvanic isolation	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178	Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178	
Protection class	Class I	Class I	Class I	Class I	
leakage current				(O ⁽⁾)	
• maximum	3.5 mA	3.5 mA	3.5 mA	3.5 mA	
• typical	0.25 m	0.25 mA	0.32 mA	0.32 mA	
Degree of protection (EN COE20)		10.23		10.02	
	IF 20	IF20	IF20	IF20	
	Vaa	Vee	Vac	Vac	
		ites	res		
UL/CUL (USA) approval	CULUS-LISTED (UL 508, CSA C22.2 No. 107.1), File E197259, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	CSA C22.2 No. 107.1), File E197259	COLUS-LISTED (UL 508, CSA C22.2 No. 107.1), File E197259, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	CSA C22.2 No. 107.1), File E197259	
certificate of suitability NEC Class 2	No	No	No	No	
CB approval	Yes	No	Yes	No	
certificate of suitability EAC approval	Ves	Ves	Yes	Yes	
Marine approval	ABS DNIV GL	ABS DNV GL	ABS DNV GI	ABS DNV GL	
FMC	NDO, DIVI GL		ABO, DIVY OL	ABO, DIVY GL	
Emitted interforence	EN 55022 Class P	EN 55022 Class P	EN 55022 Class P	EN 55022 Class P	
Currely hormonical limitation	EN 03022 Class B	EN C1000 2 2	EN 01000 2 2	EN 01000 2 2	
Supply harmonics inflitation	EN 61000-3-2	EN 61000-3-2	EN 01000-3-2	EN 61000-3-2	
NOISE IMMUNITY	EIN 01000-6-2	EN 61000-6-2	EIN 61000-6-2	EIN 61000-6-2	

0°.'

000100

He Technology Co. Hd.

002

Advanced power supplies

SITOP PSU8200

1- and 2-phase, 24 V DC

Technical specifications (continued)

Article number	6EP1333-3BA10	6EP1333-3BA10-8AC0	6EP1334-3BA10	6EP1334-3BA10-8AB0
Product	SITUP PSU200M		SITUP PSU200M	SITUP PS0200M
environmental conditions	24 V/3 A	24 V/J A	24 V/10 A	24 V/10 A
ambient temperature				
during operation	-25 ±70 °C	-25 +70 °C	-25 +70 °C	-25 +70 °C
- Note	With natural convection:	with natural convection	With natural convection:	with natural convection
	startup tested starting from -40 °C nominal	C	startup tested starting from -40 °C nominal	with hatural convection
6 °	voltage	10 05 00	voltage	10 05 00
during transport	-40 +85 °C	-40 +85 °C	-40 +85 °C	-40 +85 °C
during storage	-40 +65 °C	-40 +00 °C	-40 +00 °C	-40 +00 °C
EN 60721	no condensation	no condensation	no condensation	no condensation
Mechanics				
Connection technology	screw-type terminals	screw-type terminals	screw-type terminals	screw-type terminals
Connections				
 Supply input 	L, N, PE: 1 screw terminal each for 0.2 2.5 mm ² single-core/finely stranded	L, N, PE: 1 screw terminal each for 0.2 2.5 mm ² single-core/finely stranded	L, N, PE: 1 screw terminal each for 0.2 2.5 mm ² single-core/finely stranded	L, N, PE: 1 screw terminal each for 0.2 2.5 mm ² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.2 2.5 mm ²	+, -: 2 screw terminals each for 0.2 2.5 $\rm mm^2$	+, -: 2 screw terminals each for 0.2 2.5 mm ²	+, -: 2 screw terminals each for 0.2 2.5 mm ²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ²
vidth of the enclosure	70 mm	70 mm	70 mm	70 mm
eight of the enclosure	125 mm	125 mm	125 mm	125 mm
lepth of the enclosure	121 mm	121 mm	121 mm	121 mm
equired spacing				
top	50 mm	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm	50 mm
· left	0 mm	0 mm	0 mm	0 mm
right	0 mm	0 mm	0 mm	0 mm
Veight, approx.	0.6 kg	0.6 kg	0.8 kg	0.8 kg
product feature of the enclosure nousing can be lined up	Yes	Yes	Yes	Yes
nstallation	Snaps onto DIN rail EN 60715 35x7.5/15			
electrical accessories	Buffer module	Buffer module	Buffer module	Buffer module
ATBF at 40 °C	1 123 973 h	1 123 973 h	1 055 408 h	1 055 408 h
other information	Specifications at rated input	voltage and ambient temperat	ure +25 °C (unless otherwise	specified)

3-phase, 24 V DC



The 3-phase SITOP PSU8200 are technology power supplies for challenging solutions. The wide-range input allows a connection to almost any electricity supply network worldwide and ensures a high degree of safety even if there are large voltage fluctuations.

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

Product highlights

Overview

- 3-phase, 24 V DC/ 20 A and 40 A
- Wide-range input, input voltage 320 ... 575 V AC
- Up to 94% efficiency
- cULus, cCSAus, ABS and DNV GL certifications

Ordering data	Article No.
SITOP PSU8200 3-phase, STOP PSU8200 3-phase, STOP 24 V DC/20 A	6EP3436-8SB00-0AY0
Stabilized power supply Input: 400 500 V 3 AC Output: 24 V DC/20 A	
SITOP PSU8200 3-phase, 24 V DC/ <mark>40</mark> A	6EP3437-8SB00-0AY0
Stabilized power supply Input: 400 500 V 3 AC Output: 24 V DC/20 A	
Add-on modules	
SITOP redundancy modules ¹⁾	See page 9/3
SITOP selectivity modules ²⁾	See page 9/6
SITOP buffer modules ³⁾	See page 9/17
Accessories	
Device identification label	3RT2900-1SB20

¹⁾ For more information, visit: https://www.siemens.com/sitop-redundancy/mall

²⁾ For more information, visit: https://www.siemens.com/sitop-selectivity/mall

³⁾ For more information, visit: https://www.siemens.com/sitop-buffering/mall

3-phase, 24 V DC

Technical specifications

Article number	6EP3436-8SB00-0AY0	6EP3437-8SB00-0AY0
Broduct	SITOP PSI 18200	
Product Power supply type	24 V/20 A	24 V/40 A
	24 V/20 A	24 V/40 A
Input	2 phase AC	2 phase AC
Reted voltage value V	3-pilase AC	3-phase AC
Kaled vollage value v _{in rated}	400 500 V	400 500 V
Wide renge input	320 575 V	320 373 V
Maine buffering		105 at 1/ 100 1/
Mains buffering	at $v_{in} = 400 \text{ V}$	at $v_{in} = 400 \text{ V}$
Reted line frequency 1		$v_{in} = 400 v$
Rated line frequency 1		
Rated line renge		
Rated line range	47 03 HZ	45 05 HZ
e at rated input voltage 400 V	104	214
• at rated input voltage 400 V	1.2 A	17.4
• at fated input voltage 500 v		1.7 A
max.	16 A	13 A
l²t, max.	0.8 A ² ·s	2.24 A ² ·s
Built-in incoming fuse	none	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)	Required: 3-pole connected miniature circuit breaker 10 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)
Output		
Output	Controlled, isolated DC voltage	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V	24 V
output voltage at output 1	24 V	24 V
at DC rated value		
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.	100 mV	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV	240 mV
Adjustment range	24 28 V	24 28 V
product function output voltage adjustable	Yes	Yes
Output voltage setting	via potentiometer; max. 480 W	via potentiometer; max. 960 W
Status display	Green LED for 24 V OK	Green LED for 24 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	No overshoot of V _{out} (soft start)	minimal overshooting (< 2 %)
Startup delay, max.	2.5 s	0.1 s
voltage increase time of the output voltage maximum	500 ms	100 ms
Rated current value Iout rated	20 A	40 A
Current range	0 20 A	0 40 A
• Note	+60 +70 °C: Derating 2%/K	+60 +70 °C: Derating 4%/K
supplied active power typical	480 W	960 W
 short-term overload current at short-circuit during operation 	60 A 60°	120 A
duration of overloading capability for		
at short-circuit during operation	25 ms	25 ms
constant overload current		
 on short-circuiting during the start-up typical 	22 A	44 A
Parallel switching for enhanced performance	Yes; switchable characteristic	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2	2

3-phase, 24 V DC

Iechnical specifications (con	tinued)	
Article number	6EP3436-8SB00-0AY0	6EP3437-8SB00-0AY0
Product	SITOP PSU8200	SITOP PSU8200
Power supply, type	24 V/20 A	24 V/40 A
Efficiency		
Efficiency at V _{out rated} , I _{out rated} , approx.	94 %	94 %
Power loss at V _{out rated} , I _{out rated} , approx.	31 W	66 W
power loss [W] during no-load operation maximum		4 W
Closed-loop control		
Dynamic mains compensation $(V_{in} \text{ rated } \pm 15 \%)$, max.	0.1 %	1 %
Dynamic load smoothing (<i>I_{out}</i> : 50/100/50 %), <i>U_{out}</i> ± typ.	1%	3 %
Load step setting time 50 to 100%, typ.	0.2 ms	-
Load step setting time 100 to 50%, typ.	0.2 ms	- <u>v</u> o
Dynamic load smoothing (I_{out} : 10/90/10 %), $U_{out} \pm typ$.	2 %	
Load step setting time 10 to 90%, typ.	0.2 ms	- <u>N</u>
Load step setting time 90 to 10%, typ.	0.2 ms	- (0°)
setting time maximum	10 ms	10 ms
Protection and monitoring		Sec.
Output overvoltage protection	< 32 V	< 31.8 V 🖉 🖉
Current limitation, typ.	22 A	44 A
property of the output short-circuit proof	Yes	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 22 A or latching shutdown	Alternatively, constant current characteristic approx. 44 A or latching shutdown
enduring short circuit current RMS value		
typical	22 A	50 A
overcurrent overload capability in normal operation	overload capability 150 % I _{out rated} up to 5 s/min	overload capability 150 % l _{out rated} up to 5 s/min
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"	LED yellow for "overload", LED red for "latching shutdown
Safety	A	
Primary/secondary isolation	Yes	Yes
galvanic isolation	Safety extra low output voltage V _{out} according to EN 60950-1	Safety extra-low output voltage $U_{\rm out}$ acc. to EN 60950- and EN 50178
Protection class	Class I	Class I
leakage current		
• maximum	3.5 mA	1 mA
typical	0.9 mA	0.6 mA
Degree of protection (EN 60529)	IP20	IP20
Approvals		
CE mark	Yes	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
certificate of suitability NEC Class 2	No	No
	Voc	Vac
contificate of suitability EAC approval	Voc	Vac
Certificate of suitability EAC approval		
Marine approval	ADO, DINV GL	ADO, UNV GL
EMC		
	EN 55022 Class B	EN 55022 Class B
Emitted interference		
Emitted interference Supply harmonics limitation	EN 61000-3-2	EN 61000-3-2

0°.'

3-phase, 24 V DC

Technical specifications (continued)

Article number	6EP3436-8SB00-0AY0	6EP3437-8SB00-0AY0	
Product	SITOP PSU8200	SITOP PSU8200	
Power supply, type	24 V/20 A	24 V/40 A	
environmental conditions			
ambient temperature			
 during operation 	-25 +70 °C	-25 +70 °C	
- Note	With natural convection; startup tested starting from -40 °C nominal voltage	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, 5 95% no condensation	Climate class 3K3, 5 95% no condensation	
Mechanics	and the second se		
Connection technology	screw-type terminals	screw-type terminals	
Connections			
Supply input	L1, L2, L3, PE: 1 screw terminal each for 0.2 4 mm ² single-core/finely stranded	L1, L2, L3, PE: 1 screw terminal each for 0.5 4 mm ² single-core/finely stranded	
• Output	+, -: 2 screw terminals each for 0.2 4 mm ²	+: 2 screw terminals each for 0.5 16 mm ² ; -: 3 screw terminals each for 0.5 16 mm ²	
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ² ; 15, 16 (Remote): 1 screw terminal each for 0.14 1.5 mm ²	13, 14 (alarm signal), 15, 16 (Remote): 1 screw terminal each for 0.05 2.5 mm ²	
width of the enclosure	70 mm	135 mm	
neight of the enclosure	125 mm	145 mm	
depth of the enclosure	125 mm	150 mm	
equired spacing			
• top	50 mm	40 mm	
bottom	50 mm	40 mm	
• left	0 mm	0 mm	
right	0 mm	0 mm	
Weight, approx.	1.2 kg	3.3 kg	
product feature of the enclosure nousing can be lined up	Yes	Yes	
nstallation	Snaps onto DIN rail EN 60715 35x7.5/15	Snaps onto DIN rail EN 60715 35x15	
electrical accessories	Buffer module	Buffer module	
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	
MTBF at 40 °C	590 573 h	517 015 h	
other information	Specifications at rated input voltage and ambient temperat	ture +25 °C (unless otherwise specified)	

we technology Co. Ind.

3-phase, 36 V DC



The 3-phase SITOP PSU8200 are technology power supplies for challenging solutions. The wide-range input allows a connection to almost any electricity supply network worldwide and ensures a high degree of safety even if there are large voltage fluctuations.

To further increase 36 V availability, SITOP power supplies can be combined with redundancy modules.

Product highlights

Overview

- 3-phase, 36 V DC / 13 A
- Input voltage 320 ... 575 V AC
- Up to 94% efficiency
- cULus, cCSAus, ABS and DNV GL certifications

Ordering data	Article No.
SITOP PSU8200 3-phase, 36 V DC/13 A	6EP3446-8SB10-0AY0
Stabilized power supply Input: 400 500 V 3 AC Output: 36 V DC/13 A	
Add-on modules	
SITOP redundancy modules RED1200 ¹⁾	See page 9/3
Accessories	200
Unit labeling plate	3RT2900-1SB20

1) For more information, visit: https://www.siemens.com/sitop-redundancy/mall

Technical specifications

	Article number	6EP3446-8SB10-0AY0		
	Product	SITOP PSU8200		
	Power supply, type	36 V/13 A		
	Input			
	Input	3-phase AC		
	Rated voltage value Vin rated	400 500 V		
	Voltage range AC	320 575 V		
	Wide-range input	Yes		
	Mains buffering	at $V_{in} = 400 \text{ V}$		
	Mains buffering at Iout rated, min.	15 ms; at V _{in} = 400 V		
	Rated line frequency 1	50 Hz		
	Rated line frequency 2	60 Hz		
	Rated line range	47 63 Hz		
	input current			
	 at rated input voltage 400 V 	1.2 A		
	 at rated input voltage 500 V 	1 A		
	Switch-on current limiting (+25 °C), max.	16 A		
	l²t, max.	0.8 A ² ·s		
	Built-in incoming fuse	none		
	Protection in the mains power input	Required: 3-pole connected		
	(IEC 090)	characteristic C or circuit breaker		
		3RV2011-1DA10 (setting 3 A) or		
į	Output	3RV2/11-1DD10 (UL 489)		
	Output	Controlled isolated DC valtage		
	Rated veltage V DC	26 V		
	hated voltage vout DC	30 V		
	 output voltage at output 1 at DC rated value 	36 V		
	Total tolerance, static \pm	3 %		
	Static mains compensation, approx.	0.1 %		
	Static load balancing, approx.	0.2 %		
	Residual ripple peak-peak, max.	100 mV		
	Spikes peak-peak, max.	200 mV		
		20 40.1/		
	Aujustment range	30 42 V		
	adjustable	ies is a second s		
	Output voltage setting	via potentiometer; max. 480 W		
	Status display	Green LED for 36 V OK		
	Signaling	Relay contact (NO contact,		
		rating 60 V DC/ 0.3 A) for 36 V OK		
	On/off behavior	No overshoot of V_{out} (soft start)		
	Startup delay, max.	2.5 s		
	voltage increase time of the output voltage maximum	500 ms		
	Rated current value Iout rated	13 A		
	Current range	0 13 A		
	• Note	+60 +70 °C: Derating 2%/K		
	supplied active power typical	468 W		
	short-term overload current			
	 at short-circuit during operation typical 	39 A		
	duration of overloading capability for excess current			
	 at short-circuit during operation 	25 ms		
	constant overload current			
	 on short-circuiting during the start up typical 	14 A		
	Start-up typical Parallel switching for enhanced	Yes: switchable characteristic		
	performance			

2/37

3-phase, 36 V DC

Technical specifications (continued)

		A 1 ¹ 1 1 1 1 1
Article number	6EP3446-8SB10-0AY0	Article number
Product	SITOP PS08200	Product
Numbers of perellel switcheble upits	36 V/13 A	Power supply,
for enhanced performance	2	EWIC Emitted interfer
Efficiency		Emitted Interfer
Efficiency at Vout rated, Jour rated,	94 %	Supply narmon
approx.		Noise immunity
Power loss at V _{out rated} , I _{out rated} ,	30 W	environmental
approx.		
Closed-loop control		• during operat
Dynamic mains compensation $(V_{in} rated \pm 15 \%)$, max.	0.1 %	during transpo
Dynamic load smoothing (<i>I</i> _{out} : 50/100/50 %), <i>U</i> _{out} ± typ.	1%	 during storage Humidity class
Load step setting time 50 to 100%, typ.	0.2 ms	EN 60721
Load step setting time 100 to 50%, typ.	0.2 ms	Connection tech
Dynamic load smoothing (<i>l_{out}:</i> 10/90/10 %), <i>U_{out} ±</i> typ.	2 %	Connections Supply input
Load step setting time 10 to 90%, typ.	0.2 ms	
Load step setting time 90 to 10%, typ.	0.2 ms	O • • •
setting time maximum	10 ms	 Output
Protection and monitoring		• Auviliary
Output overvoltage protection	< 48 V	- / tuxinary
Current limitation, typ.	14 A	
property of the output short-circuit proof	Yes	width of the end
Short-circuit protection	Alternatively, constant current	height of the en
	characteristic approx. 14 A or latching shutdown	depth of the end required spacin
enduring short circuit current		• top
	14.0	 bottom
• typical	14 A	left
in normal operation	up to 5 s/min	 right
Overload/short-circuit indicator	LED vellow for "overload".	Weight, approx
	LED red for "latching shutdown"	product feature
Safety	10°7	housing can be
Primary/secondary isolation	Yes	Installation
galvanic isolation	Safety extra low output voltage V_{out} according to EN 60950-1	mechanical acc
Protection class	Class I	
leakage current		other informatio
• maximum	3.5 mA	
typical	0.9 mA	
Degree of protection (EN 60529)	IP20	
Approvals		-
CE mark	Yes	
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2	
	No. 107.1), File E197259;	
	UL 60950-1)	
certificate of suitability NEC Class 2	No	
CB approval	Yes	
certificate of suitability EAC approval	Yes	
Marine approval	DNV GL	

Product Power supply, type	SITOP PSU8200 36 V/13 A
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
 during operation 	-25 +70 °C
- Note	with natural convection
 during transport 	-40 +85 °C
 during storage 	-40 +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 95% no condensation
Mechanics	. 6.
Connection technology	screw-type terminals
Connections	
Supply input	L1, L2, L3, PE: 1 screw terminal each for 0.2 4 mm ² single-core/finely stranded
Output	+, -: 2 screw terminals each for 0.2 4 mm ²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm ² ; 15, 16 (Remote): 1 screw terminal each for 0.14 1.5 mm ²
width of the enclosure	70 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	1.2 kg
product feature of the enclosure housing can be lined up	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

00

verechnology co. Hd.

3-phase, 48 V DC



The 3-phase SITOP PSU8200 are technology power supplies for challenging solutions. The wide-range input allows a connection to almost any electricity supply network worldwide and ensures a high degree of safety even if there are large voltage fluctuations.

Product highlights

Overview

- 3-phase, 48 V DC/ 10 A and 20 A
- Input voltage 320 ... 575 V AC
- Up to 94% efficiency
- cULus, cCSAus, ABS and DNV GL certifications

Ordering data	Article No.
SITOP PSU8200 3-phase, 48 V DC/10 A	6EP3446-8SB00-0AY0
Stabilized power supply Input: 400 500 V 3 AC Output: 48 V DC/10 A	
SITOP PSU8200 3-phase, 48 V DC/20 A	6EP3447-8SB00-0AY0
Stabilized power supply Input: 400 500 V 3 AC Output: 48 V DC/20 A	
Add-on modules	
SITOP RED1200 redundancy modules ¹⁾	See page 9/3
Accessories	
Device identification label	3RT2900-1SB20

1) For more information, visit: https://www.siemens.com/sitop-redundancy/mall

3-phase, 48 V DC

Technical specifications

Article number	6EP3446-8SB00-0AY0	6EP3447-8SB00-0AY0
Product	SITOP PSU8200	SITOP PSU8200
Power supply, type	48 V/10 A	48 V/20 A
Input		
Input	3-phase AC	3-phase AC
Rated voltage value Vin rated	400 500 V	400 500 V
Voltage range AC	320 575 V	320 575 V
Wide-range input	Yes	Yes
Mains buffering	at $V_{\rm in} = 400 \text{ V}$	at $V_{\rm in} = 400 \text{ V}$
Mains buffering at Iout rated, min.	15 ms; at <i>V</i> _{in} = 400 V	10 ms; at <i>V</i> _{in} = 400 V
Rated line frequency 1	50 Hz	50 Hz
Rated line frequency 2	60 Hz	60 Hz
Rated line range	47 63 Hz	45 65 Hz
 at rated input voltage 400 V 	1.2 A	2 A
• at rated input voltage 500 V	1A	1.7 A
Switch-on current limiting (+25 °C), max.	16 A	13 A
l²t, max.	0.8 A ² ·s	2.24 A ² ·s
Built-in incoming fuse	none	-
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)	Required: 3-pole connected miniature circuit breaker 10 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)
Output C		
Output	Controlled, isolated DC voltage	Controlled, isolated DC voltage
Rated voltage Vout DC	48 V	48 V
 output voltage at output 1 at DC rated value 	48 V	48 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.	100 mV	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV	480 mV
Adjustment range	42 56 V	46 56 V
product function output voltage adjustable	Yes	Yes
Output voltage setting	via potentiometer; max. 480 W	via potentiometer; max. 960 W
Status display	Green LED for 48 V OK	Green LED for 48 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 48 V OK	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 48 V OK
On/off behavior	No overshoot of V _{out} (soft start)	minimal overshoot (< 3 %)
Startup delay, max.	2.5 s	0.1 s
voltage increase time of the output voltage maximum	500 ms	100 ms
Rated current value Iout rated	10 A	20 A
Current range	0 10 A	0 20 A
• Note	+60 +70 °C: Derating 2%/K	+60 +70 °C: Derating 4%/K
supplied active power typical short-term overload current	480 W	960 W
at short-circuit during operation typical	30 A 0	60 A
duration of overloading capability for excess current		
 at short-circuit during operation 	25 ms	25 ms
on short-circuiting during the	11 A CONT	24 A
start-up typical Parallel switching for enhanced	Yes; switchable characteristic	Yes; switchable characteristic
Numbers of parallel switchable units	2	2
isi simanood penormance		

3-phase, 48 V DC

Technical specifications (con	tinued)	
Article number	6EP3446-8SB00-0AY0	6EP3447-8SB00-0AY0
Product	SITOP PSU8200	SITOP PSU8200
Power supply, type	48 V/10 A	48 V/20 A
Efficiency		
Efficiency at V _{out rated} , I _{out rated} , approx.	94 %	94 %
Power loss at V _{out rated} , I _{out rated} , approx.	31 W	58 W
power loss [W] during no-load	- O°	4 W
Closed-loop control		
Dynamic mains compensation $(V_{in} \text{ rated } \pm 15 \%)$, max.	0.1 %	1 %
Dynamic load smoothing (<i>I</i> _{out} : 50/100/50 %), <i>U</i> _{out} ± typ.	1%	3 %
Load step setting time 50 to 100%, typ.	0.2 ms	
Load step setting time 100 to 50%, typ.	0.2 ms	- «°
Dynamic load smoothing $(I_{out}: 10/90/10 \%), U_{out} \pm typ.$	2 %	- o°'
Load step setting time 10 to 90%, typ	0.2 ms	
Load step setting time 90 to 10%, tvp	0.2 ms	
setting time maximum	10 ms	10 ms
Protection and monitoring		
	< 60 V	< 57 8 V A C
	11 A	22 A
property of the output short circuit	Vac	ZZ A Voc
property of the output short-circuit proof	Alternatively constant current characteristic	
enort encar protection	approx. 11 A or latching shutdown	approx. 22 A or latching shutdown
enduring short circuit current		
	11.4	26 A
		20 A
in normal operation	overload capability 150 % lout rated up to 5 s/min	overload capability 150 % lout rated up to 5 s/min
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"	LED yellow for "overload", LED red for "latching shutdown
Safety		
Primary/secondary isolation	Yes	Yes
galvanic isolation	Safety extra low output voltage V _{out} according to EN 60950-1	Safety extra-low output voltage $U_{\rm out}$ acc. to EN 60950- and EN 50178
Protection class	Class I	Class I
leakage current		
• maximum	3.5 mA	1 mA 🔨
typical	0.9 mA	0.6 mA
Degree of protection (EN 60529)	IP20	IP20
Approvals		
CE mark	Yes	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
certificate of suitability NFC Class 2	No	No
	Yes	Yes
certificate of suitability FAC approval	Yes	Yes
Marine approval	ABS_DNV.GL	DNV GL
EMC		
Emitted interference	EN 55022 Class B	EN 55022 Class R
	EN 01000 2 2	EN 00022 Class D
Supply narmonics limitation		EN 01000-3-2
Noise immunity	EN 61000-6-2	EN 61000-6-2

0°.'

3-phase, 48 V DC

Technical specifications (continued)

Product S	EP3446-8SB00-0AV0	6EP3447-8SB00-0AV0	
Power owneh/ twee		SITOP PSU8200	
Power Subbiy, Type 4	8 V/10 A	48 V/20 A	
environmental conditions			
ambient temperature			
• during operation -2	25 +70 °C	-25 +70 °C	
- Note	vith natural convection	With natural convection	
during transport -4	40 +85 °C	-40 +85 °C	
• during storage -4	40 +85 °C	-40 +85 °C	
Humidity class according to C EN 60721	limate class 3K3, 5 95% no condensation	Climate class 3K3, 5 95% no condensation	
Mechanics			
Connection technology se	crew-type terminals	screw-type terminals	
Connections			
• Supply input	1, L2, L3, PE: 1 screw terminal each for 0.2 4 mm ² ingle-core/finely stranded	L1, L2, L3, PE: 1 screw terminal each for 0.5 4 mm ² single-core/finely stranded	
• Output +	, -: 2 screw terminals each for 0.2 4 mm ²	+: 2 screw terminals each for 0.5 16 mm ² ; -: 3 screw terminals each for 0.5 16 mm ²	
• Auxiliary 1: 0. fc	3, 14 (alarm signal): 1 screw terminal each for .14 1.5 mm²; 15, 16 (Remote): 1 screw terminal each or 0.14 1.5 mm²	13, 14 (alarm signal), 15, 16 (Remote): 1 screw terminal each for 0.05 2.5 mm ²	
width of the enclosure 70	0 mm	135 mm	
height of the enclosure	25 mm	145 mm	
depth of the enclosure	25 mm	150 mm	
required spacing			
• top 5	0 mm	40 mm	
• bottom	0 mm	40 mm	
• left 0	mm	0 mm	
• right 0	mm	0 mm	
Weight, approx. 1.	.2 kg	3.3 kg	
product feature of the enclosure Ye housing can be lined up	es	Yes	
Installation S	naps onto DIN rail EN 60715 35x7.5/15	Snaps onto DIN rail EN 60715 35x15	
mechanical accessories D)evice identification label 20 mm × 7 mm, TI-grey IRT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	
MTBF at 40 °C -		520 782 h	
	pecifications at rated input voltage and ambient temperat	ure +25 °C (unless otherwise specified)	

Technology Co. Hd.