

SITOP compact

1-phase, 24 V DC

2

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

Overview



The SITOP PSE202U redundancy modules are the optimal extension for all 24 V power supplies to ensure additional protection from failure of the 24 V supply. The redundancy module continuously monitors the power supply units and, in the event that one unit fails, the other unit automatically takes over the 24 V power supply. Additionally, a signal is sent via a signaling contact that can be evaluated by a controller, PC, or control system.

Benefits

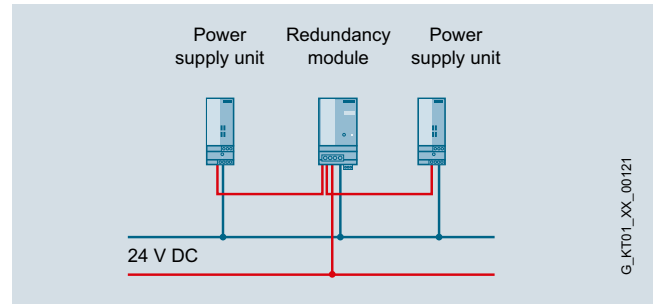
- High availability of the 24 V supply thanks to redundant configuration
- Power is reliably supplied even when a power supply fails
- Compact redundancy modules for power supply units up to 40 A
- Redundancy module 24 V/NEC Class 2 with limiting to 100 VA
- Diagnostic signal via LED and signaling contacts
- Adjustable switching threshold for LED and signaling contacts

Application

The redundancy module decouples two 24 V power supplies of the same type so that the loads are still supplied by the second power supply (1 + 1 redundancy) in case one of the two power supplies fails.

Redundancy modules support parallel switching of power supplies of the same type to increase performance while offering redundancy at the same time (N + 1 redundancy).

You can use the NEC Class 2 redundancy module to implement a redundant 24 V supply limited to an output power of 100 VA.



Design

For redundant configuration of a 24 V supply, the redundancy module decouples two SITOP 24 V power supplies of the same type by means of diodes in parallel operation. Depending on the output current of the power supplies, 1 to 2 redundancy modules may be required.

Function

Monitoring

The redundancy module continuously monitors the output voltage of the connected power supplies. The switching threshold of 20 to 25 V can be set on the device. A signal indicates if the output voltage of one of the two power supplies sinks to the set value or below.

Signaling

The LED on the device and a changeover contact signal a faulty power supply.

The signal evaluation of the PSE202U is also represented in our library for SIMATIC PCS 7. Download:

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

Add-on modules

Redundancy module

Technical specifications

Article number	6EP1962-2BA00	6EP1964-2BA00	6EP1961-3BA21
Product	SITOP PSE202U	SITOP PSE202U	SITOP PSE202U
Input			
Input	DC voltage	DC voltage	DC voltage
Supply voltage			
• at DC	24 ... 24 V	24 ... 24 V	24 ... 24 V
Input voltage			
• at DC	19 ... 29 V	19 ... 29 V	24 ... 28.8 V
Output			
Output	Controlled, isolated DC voltage	Controlled, isolated DC voltage	Controlled, isolated DC voltage
Rated voltage V_{out} DC	24 V	24 V	24 V
Output voltage	V_{in} - approx. 0.5 V	V_{in} - approx. 0.5 V	V_{in} - approx. 0.5 V
Product function Output voltage adjustable	No	No	No
Status display	Green LED for "both input voltages > switching threshold"; red LED for "at least one input voltage < switching threshold" or "output switched off"	Green LED for "both Input voltages > switching threshold"; red LED: for "at least one input voltage < switching threshold"	Green LED for "both Input voltages > switching threshold"; red LED: for "at least one input voltage < switching threshold"
Signaling	Isolated relay contact (contact rating 6 A/42 V AC, 30 V DC, but max. 100 VA): Contact closed if one or both input voltages < switching threshold or output is switched off. Setting range of switching threshold 20 V $\pm$ 0.5 V to 25 V $\pm$ 0.5 V	Isolated relay contact (contact rating 6 A/42 V AC, 30 V DC): Contact closed if both input voltages > switching threshold, setting range of switching threshold 20 V $\pm$ 0.5V to 25 V $\pm$ 0.5V	Isolated relay contact (changeover contacts, rating 8 A/240 V AC, 24 V DC): Signals OK if both input voltages > switching threshold, setting range of threshold 20 ... 25 V
Rated current value $I_{out rated}$	3.8 A	10 A	40 A
Current range	4.6 A	10 A	40 A
• Note	Maximum aggregate current in the event of an error according to NEC class 2 limit 8 A	max. aggregate current 10 A	max. aggregate current 40 A +60...+70°C: Derating 3%/K
Efficiency			
Efficiency at $V_{out rated}$, $I_{out rated}$, approx.	94.8 %	97.1 %	96,6 %
Power loss at $V_{out rated}$, $I_{out rated}$, approx.	5 W	3.6 W	34 W
Power loss [W] during no-load operation maximum	2 W	1 W	1,5 W
Safety			
Galvanic isolation	yes, SELV acc. to EN 60950-1 (relay contact)	yes, SELV acc. to EN 60950-1 (relay contact)	yes, SELV acc. to EN 60950-1 (relay contact)
Protection class	Class III	Class III	Class I
CE mark	Yes	Yes	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; UL-Recognized (UL 60950-1, NEC class 2), File E151273	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	-	-	IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nAC IIC T4; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T4
FM approval	-	-	-
CB approval	No	No	No
Marine approval	-	-	DNV GL, ABS
Degree of protection (EN 60529)	IP20	IP20	IP20
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
Operating data			
Ambient temperature			
• during operation	-20 ... +70 °C	-20 ... +70 °C	-25 ... +70 °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, no condensation	Climate class 3K3, no condensation	Climate class 3K3, no condensation

Technical specifications (continued)

Article number	6EP1962-2BA00	6EP1964-2BA00	6EP1961-3BA21
Product	SITOP PSE202U	SITOP PSE202U	SITOP PSE202U
Mechanics			
Connection technology	screw-type terminals	screw-type terminals	screw-type terminals
Connections			
• Supply input	Input, output and ground: removable screw terminal, each 1 x 0.5 ... 2.5 mm ² single-core/finely stranded	Input, output and ground: removable screw terminal, each 1 x 0.5 ... 2.5 mm ² single-core/finely stranded	Input, output and ground: 1 screw terminal each for 0.33 ... 10 mm ² single-core/finely stranded
• Auxiliary	Relay contact: 2 screw terminals for 0.5 ... 2.5 mm ² single-core/finely stranded	Relay contact: 2 screw terminals for 0.5 ... 2.5 mm ² single-core/finely stranded	Relay contact: 3 screw terminals for 0.5 ... 2.5 mm ² single-core/finely stranded
Width of the enclosure	30 mm	30 mm	70 mm
Height of the enclosure	80 mm	80 mm	125 mm
Depth of the enclosure	100 mm	100 mm	125 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.	0.125 kg	0.125 kg	0.5 kg
Product feature of the enclosure housing for side-by-side mounting	Yes	Yes	Yes
Installation	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
Electrical accessories	Removable spring-type terminal 6EP1971-5BA00	Removable spring-type terminal 6EP1971-5BA00	-
MTBF at 40 °C	678 210 h	3 273 000 h	6 471 654 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

Ordering data

Article No.

SITOP PSE202U redundancy module
Input/output: 24 V DC/40 A suitable for decoupling two SITOP power supplies with a maximum of 20 A output current

6EP1961-3BA21

SITOP PSE202U redundancy module
Input/output: 24 V DC/NEC Class 2 suitable for decoupling two SITOP power supplies output power limited < 100 VA

6EP1962-2BA00

SITOP PSE202U redundancy module
Input/output: 24 V DC/10 A suitable for decoupling two SITOP power supplies with a maximum of 5 A output current

6EP1964-2BA00

Accessories

Article No.

Device labeling plates

3RT1900-1SB20