

MANUFACTURER DOCUMENT PACKAGE

# Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

## 6EP3334-8SB00-0AY0

SITOP PSU8200 STABILIZED POWER SUPPLY

Used with the applicable SITOP PSU8200 system configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official catalog pages follow with original pagination retained.

Source: Siemens KT 10.1, 2017/2018, pages 6/3-6/7. Check current unit approvals.

## Overview



The 1-phase SITOP modular are technology power supplies for sophisticated solutions and offer maximum functionality for use in complex plants and machines. The wide-range input allows a connection to almost any electrical power system worldwide and ensures a high degree of safety even if there are large voltage fluctuations. The power boost provides up to three times the rated current for brief periods. In case of overload, you can choose between constant current with automatic restart or latching shutdown.

The high degree of efficiency keeps energy consumption and heating in the control cabinet low, and the compact metal housing also saves space.

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

## Main product highlights

- 24 V DC/ 5 A, 10 A, 20 A and 40 A
- 1-phase wide-range input for connection to any supply system and for safety in case of voltage supply deviations
- Extremely slim design – no lateral installation clearances required
- Power Boost with 3 times the rated current (for 25 ms) for tripping protective devices
- Extra power with 1.5 times the rated current (5 s/min) for brief functional overload
- Selectable short-circuit response between constant current and restart
- Optional symmetrical load distribution for parallel operation
- Operating status on 3 LEDs
- Extremely high efficiency to 94 %
- Wide temperature range from -25 to +70 °C
- Comprehensive certifications, such as cULus, ATEX and DNV GL

## Technical specifications

| 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                                                      |
| Input                                     |                                   |                                   |                                                                              |                                                                |
| Input                                     | 1-phase AC                        | 1-phase AC                        | 1-phase AC or DC                                                             | 1-phase AC                                                     |
| Supply voltage                            |                                   |                                   |                                                                              |                                                                |
| • 1 at AC Rated value                     | 120 V                             | 120 V                             | -                                                                            | 120 V                                                          |
| • 2 at AC Rated value                     | 230 V                             | 230 V                             | -                                                                            | 230 V                                                          |
| • at DC                                   | -                                 | -                                 | 110 ... 220 V                                                                | -                                                              |
| Rated voltage value $V_{in rated}$        | -                                 | -                                 | 120 ... 230 V                                                                | -                                                              |
| Voltage range AC                          | -                                 | -                                 | 85 ... 275 V                                                                 | -                                                              |
| • Note                                    | Automatic range selection         | Automatic range selection         | Derating of temperature necessary down to 50 °C at $V_{in} < 100$ V AC or DC | Automatic selection; startup starting from $U_e \geq 90/180$ V |
| Input voltage                             |                                   |                                   |                                                                              |                                                                |
| • 1 at AC                                 | 85 ... 132 V                      | 85 ... 132 V                      | -                                                                            | 85 ... 132 V                                                   |
| • 2 at AC                                 | 170 ... 264 V                     | 170 ... 264 V                     | -                                                                            | 170 ... 264 V                                                  |
| • at DC                                   | -                                 | -                                 | 88 ... 350 V                                                                 | -                                                              |
| Wide-range input                          | No                                | No                                | Yes                                                                          | No                                                             |
| Mains buffering at $I_{out rated}$ , min. | 35 ms;<br>at $V_{in} = 120/230$ V | 35 ms;<br>at $V_{in} = 120/230$ V | 20 ms;<br>at $V_{in} = 230$ V                                                | 25 ms;<br>at $V_{in} = 230$ V                                  |
| Rated line frequency                      | 50 ... 60 Hz                      | 50 ... 60 Hz                      | 50 ... 60 Hz                                                                 | 50 ... 60 Hz                                                   |
| Rated line range                          | 47 ... 63 Hz                      | 47 ... 63 Hz                      | 45 ... 65 Hz                                                                 | 45 ... 65 Hz                                                   |
| Input current                             |                                   |                                   |                                                                              |                                                                |
| • at rated input voltage 120 V            | 2.1 A                             | 4 A                               | 4.6 A                                                                        | 15 A                                                           |
| • at rated input voltage 230 V            | 1.2 A                             | 1.9 A                             | 2.5 A                                                                        | 9 A                                                            |
| Switch-on current limiting (+25 °C), max. | 10 A                              | 10 A                              | 20 A                                                                         | 60 A                                                           |
| $I^2t$ , max.                             | 0.2 A <sup>2</sup> ·s             | 0.3 A <sup>2</sup> ·s             | 5 A <sup>2</sup> ·s                                                          | 8 A <sup>2</sup> ·s                                            |
| Built-in incoming fuse                    | T 3.15 A (not accessible)         | T 6.3 A (not accessible)          | Yes                                                                          | Yes                                                            |

## SITOP modular

## 1-phase, 24 V DC

## Technical specifications (continued)

| 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                                                                                                                                                                                                            |
| 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, isolated DC voltage                                                                                                                                                                                                                                                                                           | Controlled, isolated DC voltage                                                                                                                                                                                                                                                                                           | Controlled, isolated DC voltage                                                                                                                                                                                                          | Controlled, isolated DC voltage                                                                                                                                                                                      |
| Rated voltage $V_{out}$ DC                                    | 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                                                                                                                                                                                                |
| 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 %                                                                                                                                                                                                                                                                                        | Overshoot of $V_{out}$ approx. 3 %                                                                                                                                                                                                                                                                                        | No overshoot of $V_{out}$ (soft start)                                                                                                                                                                                                   | Overshoot of $V_{out}$ approx. 3 %                                                                                                                                                                                   |
| Startup delay, max.                                           | 1 s                                                                                                                                                                                                                                                                                                                       | 1 s                                                                                                                                                                                                                                                                                                                       | 0.25 s                                                                                                                                                                                                                                   | 1.5 s                                                                                                                                                                                                                |
| Voltage rise, typ.                                            | 30 ms                                                                                                                                                                                                                                                                                                                     | 70 ms                                                                                                                                                                                                                                                                                                                     | 50 ms                                                                                                                                                                                                                                    | 30 ms                                                                                                                                                                                                                |
| Rated current value $I_{out rated}$                           | 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 $U_a > 24$ V:<br>4% $[I_a]/V [U_a]$ ;<br>at $U_e < 100$ V/ $< 200$ V:<br>80% $I_a rated$                                                                                                                                                                                                                            | +60 ... +70 °C:<br>Derating 2%/K;<br>as of $U_a > 24$ V:<br>4% $[I_a]/V [U_a]$ ;<br>at $U_e < 100$ V/ $< 200$ V:<br>80% $I_a rated$                                                                                                                                                                                       | +60 ... +70 °C:<br>Derating 3%/K                                                                                                                                                                                                         | +60 ... +70 °C:<br>Derating 3%/K                                                                                                                                                                                     |
| Supplied active power typical                                 | 120 W                                                                                                                                                                                                                                                                                                                     | 240 W                                                                                                                                                                                                                                                                                                                     | 480 W                                                                                                                                                                                                                                    | 960 W                                                                                                                                                                                                                |
| Short-term overload current                                   |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                          |                                                                                                                                                                                                                      |
| • on short-circuiting during the start-up typical             | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                        | 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                                                                                                                                                                                                                |
| Constant overload current                                     |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                          |                                                                                                                                                                                                                      |
| • on short-circuiting during the start-up typical             | 6 A                                                                                                                                                                                                                                                                                                                       | 12 A                                                                                                                                                                                                                                                                                                                      | 30 A                                                                                                                                                                                                                                     | 60 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                                                                                                                                                                                                                    |

## Technical specifications (continued)

| 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                                                                                                                                   |
| <b>Efficiency</b>                                                     |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |
| 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                                                                                                                                       |
| <b>Closed-loop control</b>                                            |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |
| Dynamic mains compensation ( $V_{in rated} \pm 15\%$ ), max.          | 0.1 %                                                                                                                                       | 0.1 %                                                                                                                                       | 0.5 %                                                                                                                                       | 1 %                                                                                                                                         |
| Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ 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 %), $U_{out} \pm$ 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                                                                                                                                        |
| <b>Protection and monitoring</b>                                      |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |
| 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 in normal operation                   | overload capability 150 % $I_{out rated}$ up to 5 s/min                                                                                     | overload capability 150 % $I_{out rated}$ up to 5 s/min                                                                                     | overload capability 150 % $I_{out rated}$ up to 5 s/min                                                                                     | 250% $I_{out rated}$ up to 25 ms, 150% $I_{out rated}$ 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"                                                                                  | LED yellow for "overload", LED red for "latching shutdown"                                                                                  | LED yellow for "overload", LED red for "latching shutdown" or "short-circuit"                                                               |
| <b>Safety</b>                                                         |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |                                                                                                                                             |
| Primary/secondary isolation                                           | Yes                                                                                                                                         | 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                                                                   | 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                                                                                                                                      |
| CE mark                                                               | 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)                                        |
| Explosion protection                                                  | IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 | IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 | IECEx Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 | IECEx Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 |

## SITOP modular

## 1-phase, 24 V DC

## Technical specifications (continued)

| 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                                                                                         |
| <b>Safety (continued)</b>                                          |                                                                                                                                                         |                                                                                                                                                         |                                                                                                   |                                                                                                   |
| FM approval                                                        | -                                                                                                                                                       | -                                                                                                                                                       | -                                                                                                 | -                                                                                                 |
| CB approval                                                        | Yes                                                                                                                                                     | Yes                                                                                                                                                     | Yes                                                                                               | Yes                                                                                               |
| Marine approval                                                    | DNV GL, ABS                                                                                                                                             | DNV GL, ABS                                                                                                                                             | DNV GL, ABS                                                                                       | DNV GL, ABS                                                                                       |
| Degree of protection (EN 60529)                                    | IP20                                                                                                                                                    | IP20                                                                                                                                                    | IP20                                                                                              | IP20                                                                                              |
| <b>EMC</b>                                                         |                                                                                                                                                         |                                                                                                                                                         |                                                                                                   |                                                                                                   |
| Emitted interference                                               | EN 55022 Class B                                                                                                                                        | EN 55022 Class B                                                                                                                                        | EN 55022 Class B                                                                                  | EN 55022 Class B                                                                                  |
| Supply harmonics limitation                                        | EN 61000-3-2                                                                                                                                            | EN 61000-3-2                                                                                                                                            | EN 61000-3-2                                                                                      | -                                                                                                 |
| Noise immunity                                                     | EN 61000-6-2                                                                                                                                            | EN 61000-6-2                                                                                                                                            | EN 61000-6-2                                                                                      | EN 61000-6-2                                                                                      |
| <b>Operating data</b>                                              |                                                                                                                                                         |                                                                                                                                                         |                                                                                                   |                                                                                                   |
| Ambient temperature                                                |                                                                                                                                                         |                                                                                                                                                         |                                                                                                   |                                                                                                   |
| • during operation                                                 | -25 ... +70 °C                                                                                                                                          | -25 ... +70 °C                                                                                                                                          | -25 ... +70 °C                                                                                    | -25 ... +70 °C                                                                                    |
| - Note                                                             | With natural convection;<br>startup tested starting from -40 °C nominal voltage                                                                         | With natural convection;<br>startup tested starting from -40 °C nominal voltage                                                                         | With natural convection;<br>startup tested starting from -40 °C nominal voltage                   | with natural convection                                                                           |
| • during transport                                                 | -40 ... +85 °C                                                                                                                                          | -40 ... +85 °C                                                                                                                                          | -40 ... +85 °C                                                                                    | -40 ... +85 °C                                                                                    |
| • during storage                                                   | -40 ... +85 °C                                                                                                                                          | -40 ... +85 °C                                                                                                                                          | -40 ... +85 °C                                                                                    | -40 ... +85 °C                                                                                    |
| Humidity class according to EN 60721                               | Climate class 3K3,<br>no condensation                                                                                                                   | Climate class 3K3,<br>no condensation                                                                                                                   | Climate class 3K3,<br>no condensation                                                             | Climate class 3K3,<br>no condensation                                                             |
| <b>Mechanics</b>                                                   |                                                                                                                                                         |                                                                                                                                                         |                                                                                                   |                                                                                                   |
| 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 <sup>2</sup> single-core/finely stranded                                                             | L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded                                                             | L, N, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded         | L, N, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded         |
| • Output                                                           | +, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>                                                                                            | +, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>                                                                                            | +, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>                                        | +, -: 2 screw terminals each for 0.5 ... 10 mm <sup>2</sup>                                       |
| • Auxiliary                                                        | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> ; 15, 16 (Remote): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> ; 15, 16 (Remote): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                     | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                     |
| Width of the enclosure                                             | 45 mm                                                                                                                                                   | 55 mm                                                                                                                                                   | 90 mm                                                                                             | 145 mm                                                                                            |
| Height of the enclosure                                            | 125 mm                                                                                                                                                  | 125 mm                                                                                                                                                  | 125 mm                                                                                            | 145 mm                                                                                            |
| Depth of the enclosure                                             | 125 mm                                                                                                                                                  | 125 mm                                                                                                                                                  | 125 mm                                                                                            | 150 mm                                                                                            |
| Required spacing                                                   |                                                                                                                                                         |                                                                                                                                                         |                                                                                                   |                                                                                                   |
| • top                                                              | 50 mm                                                                                                                                                   | 50 mm                                                                                                                                                   | 50 mm                                                                                             | 40 mm                                                                                             |
| • bottom                                                           | 50 mm                                                                                                                                                   | 50 mm                                                                                                                                                   | 50 mm                                                                                             | 40 mm                                                                                             |
| • left                                                             | 0 mm                                                                                                                                                    | 0 mm                                                                                                                                                    | 0 mm                                                                                              | 0 mm                                                                                              |
| • right                                                            | 0 mm                                                                                                                                                    | 0 mm                                                                                                                                                    | 0 mm                                                                                              | 0 mm                                                                                              |
| Weight, approx.                                                    | 0.8 kg                                                                                                                                                  | 1 kg                                                                                                                                                    | 1.2 kg                                                                                            | 3.1 kg                                                                                            |
| Product feature of the enclosure housing for side-by-side mounting | Yes                                                                                                                                                     | 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                                                            | Snaps onto DIN rail EN 60715 35x15                                                                |
| Electrical accessories                                             | Buffer module                                                                                                                                           | Buffer module                                                                                                                                           | Buffer module                                                                                     | Buffer module, redundancy module                                                                  |
| Mechanical accessories                                             | Device identification label 20 mm × 7 mm, 3RT2900-1SB20 (TI gray)                                                                                       | Device identification label 20 mm × 7 mm, 3RT2900-1SB20 (TI gray)                                                                                       | Device identification label 20 mm × 7 mm, 3RT2900-1SB20 (TI gray)                                 | Device identification label 20 mm × 7 mm, 3RT2900-1SB20 (TI gray)                                 |
| 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 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) | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

| Ordering data                                                                                                                             | Article No.        | Accessories                                                                                                                                                                                                                                                   | Article No.                    |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>SITOP PSU8200 1-phase, 24 V DC/5 A</b><br>Stabilized power supply<br>Input: 120/230 V AC<br>Output: 24 V DC/5 A                        | 6EP3333-8SB00-0AY0 | <b>SITOP PSE201U buffer module</b><br>For SITOP smart and SITOP modular buffer time 100 ms to 10 s dependent on load current                                                                                                                                  | 6EP1961-3BA01                  |
| <b>SITOP PSU8200 1-phase, 24 V DC/10 A</b><br>Stabilized power supply<br>Input: 120/230 V AC<br>Output: 24 V DC/10 A                      | 6EP3334-8SB00-0AY0 | <b>SITOP modular signaling module</b><br>For 6EP1XXX-3BA00 signaling contacts:<br>Output voltage OK,<br>readiness for operation OK,<br>remote ON/OFF                                                                                                          | 6EP1961-3BA10                  |
| <b>SITOP PSU8200, 1-phase, 24 V DC/20 A</b><br>Stabilized power supply<br>Input:<br>120 ... 230 V AC/110-220 V DC<br>Output: 24 V DC/20 A | 6EP1336-3BA10      | <b>SITOP PSE202U redundancy module</b><br>Input/output: 24 V DC/40 A<br>suitable for decoupling two SITOP power supplies with a maximum of 20 A output current                                                                                                | 6EP1961-3BA21                  |
| <b>SITOP PSU8200 1-phase, 24 V DC/40 A</b><br>Stabilized power supply<br>Input: 120/230 V AC<br>Output: 24 V DC/40 A                      | 6EP3337-8SB00-0AY0 | <b>SITOP PSE202U redundancy module</b><br>Input/output: 24 V DC/NEC Class 2<br>suitable for decoupling two SITOP power supplies;<br>output power limited < 100 VA                                                                                             | 6EP1962-2BA00                  |
|                                                                                                                                           |                    | <b>SITOP PSE202U redundancy module</b><br>Input/output: 24 V DC/10 A<br>suitable for decoupling two SITOP power supplies with a maximum of 5 A output current                                                                                                 | 6EP1964-2BA00                  |
|                                                                                                                                           |                    | <b>SITOP PSE200U 3 A selectivity module</b><br>4-channel selectivity module<br>Input: 24 V DC<br>Output: 24 V DC/3 A per channel<br>Adjustable response threshold<br>0.5 ... 3 A<br>• With common alarm signal<br>• With single-channel signaling             | 6EP1961-2BA11<br>6EP1961-2BA31 |
|                                                                                                                                           |                    | <b>SITOP PSE200U 3 A NEC Class 2 selectivity module</b><br>4-channel selectivity module<br>Input: 24 V DC<br>Output: 24 V DC/3 A per channel<br>Adjustable response threshold<br>0.5 ... 3 A<br>• With common alarm signal<br>• With single-channel signaling | 6EP1961-2BA51<br>6EP1961-2BA61 |
|                                                                                                                                           |                    | <b>SITOP PSE200U 10 A selectivity module</b><br>4-channel selectivity module<br>Input: 24 V DC<br>Output: 24 V DC/10 A per channel<br>Adjustable response threshold<br>3 ... 10 A<br>• With common alarm signal<br>• With single-channel signaling            | 6EP1961-2BA21<br>6EP1961-2BA41 |
|                                                                                                                                           |                    | <b>Device labeling plates</b>                                                                                                                                                                                                                                 | 3RT2900-1SB20                  |