## SIEMENS

## Data sheet

## 6EP1336-3BA10



SITOP PSU8200 20 A Stabilized power supply input: 120-230 V AC 110-220 V DC output: 24 V DC/20 A

Input 1-phase and 2-phase AC or DC Input Rated voltage value Vin rated 120 ... 230 V Voltage range AC 85 ... 275 V Note Derating of temperature necessary down to 50 °C at Vin < 100 V AC or DC supply voltage 110 ... 220 V • at DC input voltage • at DC 88 ... 350 V Yes Wide-range input Mains buffering at Vin = 230 V Mains buffering at lout rated, min. 20 ms; at Vin = 230 V Rated line frequency 1 50 Hz Rated line frequency 2 60 Hz Rated line range 45 ... 65 Hz input current • at rated input voltage 120 V 4.6 A • at rated input voltage 230 V 2.5 A 20 A Switch-on current limiting (+25 °C), max. 5 A<sup>2</sup>·s l²t, max. Built-in incoming fuse Yes Protection in the mains power input (IEC 898) 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

SITOP PSU8200/1ACDC/24VDC/20A

Output Controlled, isolated DC voltage Output Rated voltage Vout DC 24 V Total tolerance, static ± 3 % Static mains compensation, approx. 0.1 % Static load balancing, approx. 0.3 % Residual ripple peak-peak, max. 100 mV Residual ripple peak-peak, typ 80 mV Spikes peak-peak, max. (bandwidth: 20 MHz) 200 mV

| Adjustment range       2428.8 V         product function output voltage adjustable       Yes         Output voltage setting       Via potentiometer         Status display       Green LED for 24 V OK         Signaling       Relay contact (IX contact, rating 60 V DC/ 0.3 A) for "24 V OK"         Ortoff behavior       No overshoot of Vout (soft start)         Statup delay, max.       1.5 s         Ottage res, typ.       50 ms         Rated current value tout rated       20 A         Current range       0 20 A         • Note       +00 +70 °C: Derating 3%/K         suppled active power hytical       480 W         • short-term overload current       60 A         • at short-circuit during operation typical       400 W         • at short-circuit during operation typical       30 A         Parallel switchable units for enhanced       25 ms         constant overload current       • at short-circuit during operation typical         • on short-circuit during operation typical       30 A         Parallel switchable units for enhanced       2         Efficiency       100 trated, approx.       42 W         Closed-loop control       20 W       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %   | Spikes peak-peak, typ. (bandwidth: 20 MHz)    | 100 mV  |
|--|---|---|
| product function output voltage adjustable         Yes           Objugt voltage setting         Yes           Status display         Green LED for 24 V OK           Signaling         No overshool of Vout (soft Start)           On-off behavior         No overshool of Vout (soft Start)           Status display         60 ms           Rated current value hour rated         20 A           • Note         +80           • Outer transpe         0 20 A           • Note         +80           • Start em overland current         60 A           • outer divershould operation typical         480 W           • short-em overlanding operation typical         60 A           • outer divershould current         60 A           • on short-circuit during peration typical         30 A           • at short-circuit during operation typical         30 A           • at short-circuit during operation         25 ms           • on short-circuit during operation         25 ms           • on short-circuit during operation         24 W           Occasal Vour rated, our rated, approx.         42 W           Occasal-ope cantrol         05 %           Opymaritic mas in compensation (Vin rated ±15 %), max.         0 %           Opymaritic mas incomobing (out 5000050 %  |   |   |
| Output voltage setting         via potentionmeter           Status display         Green LED for 24 V OK           Signaling         Relay contact (WC contact, rating 60 V DC/ 0.3 A) for "24 V OK"           Ond Tbehavior         No overshoot of Vout (soft start)           Status display, max.         1.5 s           Voltage rise, typ.         50 ms           Rated current value lout rated         20 A           Current range         0 20 A           • Note         +60 +70 °C: Derating 3%/K           supplied active power typical         480 W           short-term overload current         60 A           • at short-ficult during operation typical         60 A           duration of overloading capability for excess current         30 A           Parallel switchable units for enhanced performance         Yes; switchable characteristic           Numbers of parallel switchable units for enhanced performance         93 %           Power loss at Vour rated, lour rated, approx.         42 W           Clead-toop control         Upmanic mains compensation (Vin rated ±15 %), max.         0.5 %.           Dynamic load smoothing (lout: 50/ 100/50 %), Uout ± typ.         1 ms         1.5 A           Dynamic load smoothing (lout: 50/ 100/50 %), Uout ± typ.         1 ms         1.5 A           Output ovenvoltage protec  |   |   |
| Statu sipsion         Green LED for 24 V OK           Signaling         No overshood of Vout (soft start)           Signaling         No overshood of Vout (soft start)           Startup delay, max.         1.5 s           Vottage rise, typ.         50 ms           Rated current value lout rated         20 A           Current range         20 A           Current range         20 A           Startup delay, max.         60 ms           • Note         +60 +70 °C: Derating 3%:K           suppled active power typical         480 W           • at short-circuit during operation typical         60 A           duration of overdoading capability for excess current         • at short-circuit during the start-up typical           • on short-circuit during ber antenced         25 ms           Constant overlead current         20 %           • on short-circuit during for enhanced         2           Efficiency         10 A           Efficiency         10 A           Closed-loop control         23 %           Opmaric mains compensation (Vin rated ±15 %), max.         0.5 %           Opparitic max stores and store stores and stores and anonitoring           Output   |   |   |
| Signating       Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"         On off behavior       No overshood of Vout (soft start)         Startup delay, max.       1,5 s         Voltage rise, typ.       50 ms         Rated current value lout rated       20 A         Current range       0 20 A         • Note       +80 +70 °C: Derating 3%/K         supplied active power typical       480 W         short-term overload current       60 A         • at short-circuit during operation typical       60 A         drating for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced performance       2         Efficiency       93 %         Power loss at Vour rated, lout rated, approx.       42 W         Cload step setting time 100 to 5%, low, and the set set set set set set set set set se   |   |   |
| Onoff behavior         No overshoot of Vout (soft start)           Startup delay, max.         1.5 s           Ontage rise, typ.         60 ms           Rated current value lout rated         20 A           Current range         20 A           • Note         +60 +70 °C: Derating 3%/K           supplied active power typical         480 W           • at short-forcul during operation typical         60 A           duration of overdoading capability for excess current         • at short-forcul during the start-up typical           • on short-circuit during the start-up typical         30 A           Parallel switchable units for enhanced         Yes; switchable characteristic           Numbers of parallel switchable units for enhanced         2           efficiency         93 %           Power loss at Vour rated, lout rated, approx.         93 %           Opramic mains compensation (Vin rated ±15 %), max.         0.5 %           Opramic gines 50 to 100%, typ.         1 ms           Load step setting time 50 to 100%, typ.         1 ms           Load step setting time 50 to 100%, typ.         1 ms           Load step setting time 10 to 50%, typ.         1 ms           Load step setting time 10 to 50%, typ.         1 ms           Load step setting time 50 to 1000 %         23 V  |   |   |
| Startup delay, max.       1.5 s         Voltage rise, typ.       50 ms         Rated current value lout rated       20 A         • Note       +60,+70 °C: Derating 3%/K         supplied active power typical       480 W         short-tirm overload current       60 A         • at short-circuit during operation typical       60 A         duration of overload current       60 A         • at short-circuit during operation typical       60 A         en short-circuit during operation typical       30 A         Parallel switching for enhanced performance       Yes: switchable characteristic         Numbers of parallel switchable units for enhanced performance       Yes: switchable characteristic         Power loss at Vout rated, lour rated, approx.       93 %.         Power loss at Vout rated, lour rated, approx.       93 %.         Dynamic load smoothing (tout: 50/100/50 %), Uout ± typ.       1 %.         Load stop setting time 100 to 50%, typ.       1 ms         Load stop setting time 100 to 50%, typ.       1 ms         Setting time maximum       5 ms         Protection and monitoring       23 A         Outrout limitation, typ.       21.5 A         property of the output short-circuit proof       Yes         Short-circuit protection       23 A </td <td></td> <td></td>  |   |   |
| Voltage rise, typ.       50 ms         Rated current value lout rated       20 A         Current range       0 20 A         • Note       460 +70 °C: Derating 3%/K         supplied active power typical       480 W         • at short-circuit during operation typical       60 A         duration of overfoading capability for excess current       60 A         • at short-circuit during operation typical       30 A         Parallel switching for enhanced performance       Yes, switchable characteristic         Numbers of parallel switchable units for enhanced       2         performance       2         Efficiency I       93 %         Power loss at Vout rated, lout rated, approx.       93 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (lout: 50700/50 %), Lout ± typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         Load step setting time 100 to 50%, typ.       21 S A         protection and monitoring       23 A         Outrent initiation, typ.       21 S A         protection and monitoring       23 A         Outrent vinitiation, typ.       21 S A         protection       4 saty wareability 150 % lout rated up to 5 simin         Overotad/short-   |   | · · · · ·   |
| Rated current value lout rated     20 A       Current range     0 20 A       • Note     +60+70 °C: Derating 3%/K       supplied active power typical     480 W       short-term overload current     60 A       • at short-clicuit during operation typical     60 A       duration of overloading capability for excess current     60 A       • on short-clicuit during operation     25 ms       constant overload current     30 A       • on short-clicuiting during the start-up typical     30 A       Parallel switching for enhanced performance     Yes, switchable characteristic       Numbers of parallel switchable units for enhanced performance     2       Efficiency     93 %       Power loss at Vout rated, approx.     42 W       Closed-loop control     0.5 %       Dynamic load smoothing (lout: 50/100/50 %), Uout 1 typ.     1 %       Load step setting time 50 to 100%, typ.     1 ms       Load step setting time 50 to 100%, typ.     1 ms       Setting time maximum     5 ms       Probertions and monitoring     Output cervorable performance       Output cervorable performance     23 A       Overclouse protection     < 33 V   |   |   |
| Current range       020 A         • Note       +6070 °C: Derating 3%/K         supplied active power typical       480 W         short-term overload current       60 A         • at short-circuit during operation typical       60 A         duration of overload current       57 ms         • on short-circuit during operation       25 ms         constant overload current       • on short-circuit during the start-up typical         • on short-circuit during the start-up typical       30 A         Parallel switching for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced       2         efficiency       Efficiency         Efficiency       93 %         Power loss at Vout rated, lout rated, approx.       93 %         Opmanic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (tout: 50/100/56 %), Uout ± typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         setting time maximum       5 ms         Portection and monitoring       0         Output overvoltage protection       < 33 V  |   |   |
| Note         Hole         Hole |   |   |
| supplied active power typical         480 W           short-term overload current         et short-circuit during operation typical         60 A           duration of overloading capability for excess current         et at short-circuit during operation         25 ms           constant overload current         30 A         Parallel switchable on short-circuiting during the start-up typical         30 A           Parallel switchable units for enhanced performance         Yes; switchable characteristic         2           Efficiency         Efficiency         93 %           Power loss at Vout rated, jout rated, approx.         93 %           Dynamic mains compensation (Vin rated ±15 %), max.         0.5 %           Dynamic load smoothing (lout: 50/100/50 %), lout ± typ.         1 ms           Load step setting time 100 to 50%, typ.         1 ms           Load step setting time 100 to 50%, typ.         21.5 A           Output overvoltage protection         <33 V  | 5   |   |
| short-term overload current       60 A         duration of overloading capability for excess current       60 A         • at short-circuit during operation typical       60 A         constant overloading capability for excess current       25 ms         • on short-circuit during the start-up typical       30 A         Parallel switching for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced       2         Efficiency       Efficiency         Efficiency       93 %         Power loss at Vout rated, optrox.       93 %         Power loss at Vout rated, optrox.       93 %         Dynamic mains compensation (Vin rated #15 %), max.       0.5 %         Dynamic load smoothing (lout: 50/100/50 %), Uput ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 50 to 100%, typ.       1 ms         Setting time maximum       5 ms         Protection and monitoring       21.5 A         Output overvoltage protection       < 33 V  |   |   |
| • at short-circuit during operation typical       60 A         duration of overloading capability for excess current       25 ms         • on short-circuit during performance       Yes; switchable characteristic         Parallel switchable units for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced performance       2         Efficiency       Efficiency at Vout rated, lout rated, approx.       93 %         Power loss at Vout rated, lout rated, approx.       42 W         Closed-loop control       Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Closed-loop control       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         Current limitation, typ.       211.5 A         property of the output short-circuit proof       Yes         Short-circuit protection       415 Mintore 1000 Mintore 100 Mintore 100 Mintore 100 Mintore 100 Minto   |   | 480 W   |
| duration of overloading capability for excess current       25 ms         • at short-circuil during operation       25 ms         constant overload current       30 A         Parallel switchable units for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced performance       2         Efficiency       Efficiency         Efficiency       Efficiency         Operation mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic bad smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 50 to 100%, typ.       1 ms         Softmed from maximum       5 ms         Protection and monitoring       Output overvoltage protection         Output overvoltage protection       < 33 V  |   | CO A  |
| • at short-circuit during operation       25 ms         constant overload current       30 A         • on short-circuit guing the start-up typical       30 A         Parallel switching for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced performance       2         Efficiency       Efficiency         Efficiency       93 %         Power loss 41 Vout rated, lout rated, approx.       42 W         Closed-loop control       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         Setting time maximum       5 ms         Protection and monitoring       21.5 A         output overvoltage protection       23 V         Current limitation, typ.       21.5 A         property of the output short-circuit proof       Yes         Short-circuit protection       Alternatively, constant current characteristic approx. 23 A or latching shutdown         overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Overload/short-circuit indicator       LED yellow for "over   |   | 60 A  |
| constant overload current       30 A         • on short-circuiting during the start-up typical       30 A         Parallel switchable units for enhanced       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced       2         Efficiency       93 %         Power loss at Yout rated, lout rated, approx.       93 %         Power loss at Yout rated, lout rated, approx.       42 W         Clossed-loop control   |   | 0E ma   |
| • on short-circuiting during the start-up typical     30 A Parallel switching for enhanced performance     Yes; switchable characteristic     Z Parallel switchable units for enhanced     Promer loss at Vout rated, lout rated, approx.     93 % Power loss at Vout rated, lout rated, approx.     42 W Clossed-loop control     Dynamic chains compensation (Vin rated ±15 %), max.     Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.     1 % Load step setting time 50 to 100%, typ.     1 ms     Load step setting time 100 to 50%, typ.     1 ms     Load step setting time 100 to 50%, typ.     1 ms     Load step setting time 100 to 50%, typ.     1 ms     Load step setting time 100 to 50%, typ.     21.5 A     property of the output short-circuit proof     Yes     Short-circuit protection     Alternatively, constant current characteristic approx. 23 A or latching     ahudown     enduring short circuit current RMS value     • typical     Dyridection Safety Primary/secondary isolation     Yes     galvanic isolation     Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50     Protection class     LeD yellow for "overload", LED red for "latching shutdown"     Safety Primary/secondary isolation     galvanic isolation     Yes     galvanic isolation     Yes     Quityut. (CSA (222 No. 0107.1), File E197259; cCSA,     (CSA (222 No. 0107.1), File E197259; cCSA,     (CSA (222 No. 013, ANSU/SA-12.12.01) Class I, Div. 2,     Group ABCD, T3  |   | 25 ms   |
| Parallel switching for enhanced performance       Yes; switchable characteristic         Numbers of parallel switchable units for enhanced performance       2         Efficiency       Efficiency at Vout rated, lout rated, approx.       93 %         Power loss at Vout rated, lout rated, approx.       42 W         Clesed-doop control       0.5 %         Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (lout: 50100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         Setting time maximum       5 ms         Protection and monitoring       0.15 A         Output overvoltage protection       < 33 V  |   | 20.4  |
| Numbers of parallel switchable units for enhanced<br>performance         2           Efficiency         Efficiency           Efficiency         93 %           Power loss at Vout rated, lout rated, approx.         42 W           Closed-loop control         Dynamic load smoothing (lout. 50/100/50 %), Uout ± typ.         1 %           Dynamic load smoothing (lout. 50/100/50 %), Uout ± typ.         1 %         1           Load step setting time 50 to 100%, typ.         1 ms         1           Load step setting time 100 to 50%, typ.         1 ms         5 ms           Protection and monitoring         Current limitation, typ.         21.5 A           property of the output short-circuit proof         Yes         Short-circuit protection           enduring short circuit current RMS value         23 A         overfoad capability 150 % lout rated up to 5 s/min           overcurrent overload capability in normal operation         overload'short-circuit indicator         LED yellow for "verload", LED red for "latching shutdown"           Safety         Primary/secondary isolation         Yes         Safety extra-low output voitage Uout acc. to EN 60950-1 and EN 50           Protection class         Class I         1 mA         1 p20         1 p20           leakage current         (CSA C22.2 No. 107.1), File E197259; cCSA: (CSA C22.2 No. 107.1), File E197259; cCSA: (CSA C22.2 No. 60950-1, UL 60950   |   |   |
| performance         Efficiency         Efficiency         Efficiency at Vout rated, lout rated, approx.         Power loss at Vout rated, lout rated, approx.         42 W         Closed-loop control         Dynamic mains compensation (Vin rated ±15 %), max.         Dynamic das smoothing (out: 50/100/50 %), Uout ± typ.         Load step setting time 50 to 100%, typ.         1 ms         Load step setting time 100 to 50%, typ.         9 protection and monitoring         Output overvoltage protection         Cara to property of the output short-circuit proof         Yes         Short-circuit protection         Short-circuit protection         edysical         overcurrent overload capability in normal operation         overload/short-circuit indicator         LED yellow for "overload", LED red for "latching shutdown"         Safety         Primary/secondary isolation         Yes         galvanic isolation         Protection class         Leakage current         • maximum         • typical         Degree of protection (EN 60529)         Protection class         Leakage current         • maximum       3.5 mA  |   |   |
| Efficiency at Vout rated, lout rated, approx.       93 %         Power loss at Vout rated, lout rated, approx.       42 W         Closed-loop control       0.5 %         Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         setting time maximum       5 ms         Protection and monitoring       21.5 A         Output overvoltage protection       < 33 V   |   | 2   |
| Power loss at Vout rated, lout rated, approx.       42 W         Closed-loop control       Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 100 to 50%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         Output overvoltage protection       < 33 V   | Efficiency                                    |   |
| Power loss at Vout rated, lout rated, approx.       42 W         Clossed-loop control  | Efficiency at Vout rated, lout rated, approx. | 93 %  |
| Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         setting time maximum       5 ms         Protection and monitoring       0utput overvoltage protection         Qutput overvoltage protection       < 33 V  |   | 42 W  |
| Dynamic mains compensation (Vin rated ±15 %), max.       0.5 %         Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         setting time maximum       5 ms         Protection and monitoring       0utput overvoltage protection         Qutput overvoltage protection       < 33 V  | Closed-loop control                           |   |
| Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ.       1 %         Load step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         setting time maximum       5 ms         Protection and monitoring       0utput overvoltage protection         Output overvoltage protection       < 33 V   |   | 0.5 %   |
| Laad step setting time 50 to 100%, typ.       1 ms         Load step setting time 100 to 50%, typ.       1 ms         setting time maximum       5 ms         Protection and monitoring       0utput overvoltage protection         Output overvoltage protection       < 33 V   |   |   |
| Load step setting time 100 to 50%, typ.       1 ms         setting time maximum       5 ms         Protection and monitoring   |   |   |
| setting time maximum       5 ms         Protection and monitoring       Output overvoltage protection         Output overvoltage protection       < 33 V   |   |   |
| Protection and monitoring           Output overvoltage protection           Current limitation, typ.           property of the output short-circuit proof           Short-circuit protection           Alternatively, constant current characteristic approx. 23 A or latching shutdown           enduring short circuit current RMS value           • typical           overcurrent overload capability in normal operation           Overload/short-circuit indicator           LED yellow for "overload", LED red for "latching shutdown"           Safety           Primary/secondary isolation           galvanic isolation           galvanic isolation           Yes           leakage current           • maximum           • typical           Degree of protection (EN 60529)           IP20           Approvals           CE mark           UL/cLL (CSA) approval           CE mark           UL/cLL (CSA) approval           CE x n A n C IIC T3 Gc; ATEX (EX) II 3G Ex n A n C IIC T3 Gc; CSA C22 2 No. 213, ANSI/ISA-12 12 01) Class I, Div. 2, Group ABCD, T3   |   |   |
| Output overvoltage protection         < 33 V   |   |   |
| Current limitation, typ.       21.5 A         property of the output short-circuit proof       Yes         Short-circuit protection       Alternatively, constant current characteristic approx. 23 A or latching shutdown         enduring short circuit current RMS value       23 A         • typical       23 A         overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Overload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety       Primary/secondary isolation         galvanic isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CE mark         UL/cUL (CSA) approval       cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAt (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       IECE x xn An CIIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cCSAkus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3   |   | < 33 V  |
| property of the output short-circuit proof       Yes         Short-circuit protection       Alternatively, constant current characteristic approx. 23 A or latching shutdown         enduring short circuit current RMS value       23 A         overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Overload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety   |   |   |
| Short-circuit protection       Alternatively, constant current characteristic approx. 23 A or latching shutdown         enduring short circuit current RMS value       23 A         • typical       23 A         overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Overload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety       Primary/secondary isolation         Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CE mark         UL/CUL (CSA) approval       CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAt (CSA (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       IECEx Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; Group ABCD, T3   |   |   |
| enduring short circuit current RMS value       23 A         overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Overload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety       Primary/secondary isolation         Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current  |   | Alternatively, constant current characteristic approx. 23 A or latching |
| • typical       23 A         overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Deverload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety       Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CE mark         UL/cUL (CSA) approval       CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAu (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3  | enduring short circuit current RMS value      |   |
| overcurrent overload capability in normal operation       overload capability 150 % lout rated up to 5 s/min         Overload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety       Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current       • maximum         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CLus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAtt (CSA C22.2 No. 60950-1)         Explosion protection       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   | -   | 23 A  |
| Overload/short-circuit indicator       LED yellow for "overload", LED red for "latching shutdown"         Safety       Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current          • maximum       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CL mark       Yes         UL/cUL (CSA) approval       cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAu (CSA C22.2 No. 60950-1)         Explosion protection       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  |   |   |
| Safety         Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current       •         • maximum       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CLus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAu (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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  |   |   |
| Primary/secondary isolation       Yes         galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current  |   |   |
| galvanic isolation       Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50         Protection class       Class I         leakage current  |   | Vec   |
| Protection class       Class I         leakage current       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CE mark         UL/cUL (CSA) approval       CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAt (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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   |   |   |
| leakage current       3.5 mA         • maximum       3.5 mA         • typical       1 mA         Degree of protection (EN 60529)       IP20         Approvals       CE mark         UL/cUL (CSA) approval       Yes         UL/cUL (CSA) approval       cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAu (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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   |   |   |
| • maximum         3.5 mA           • typical         1 mA           Degree of protection (EN 60529)         IP20           Approvals         CE mark           UL/cUL (CSA) approval         Yes           UL/cUL (CSA) approval         CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAu (CSA C22.2 No. 60950-1, UL 60950-1)           Explosion protection         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  |   |   |
| • typical1 mADegree of protection (EN 60529)IP20ApprovalsCE markYesUL/cUL (CSA) approvalcULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSA<br>(CSA C22.2 No. 60950-1, UL 60950-1)Explosion protectionIECEx Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc;<br>cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2,<br>Group ABCD, T3   | 0   | 3.5 mA  |
| Degree of protection (EN 60529)       IP20         Approvals       CE mark         UL/cUL (CSA) approval       CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAt (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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  |   |   |
| Approvals         CE mark       Yes         UL/cUL (CSA) approval       cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAt (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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   |   |   |
| CE mark       Yes         UL/cUL (CSA) approval       cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSA (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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  |   |   |
| UL/cUL (CSA) approval       cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSA (CSA C22.2 No. 60950-1, UL 60950-1)         Explosion protection       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  |   | Vos   |
| Explosion protection       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   |   | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus        |
| cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2,<br>Group ABCD, T3   | Explosion protection                          |   |
| certificate of suitability NEC Class 2 No  |   | cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2,          |
|  | certificate of suitability NEC Class 2        |   |
| FM approval -  | FM approval                                   | -   |
| CB approval Yes  | CB approval                                   | Yes   |

| certificate of suitability EAC approval                  | Yes   |
|--|---|
| Marine approval  | ABS, DNV GL   |
| EMC  |   |
| Emitted interference                                     | EN 55022 Class B  |
| Supply harmonics limitation                              | EN 61000-3-2  |
| Noise immunity   | EN 61000-6-2  |
| environmental conditions                                 |   |
| ambient temperature                                      |   |
| <ul> <li>during operation</li> </ul>                     | -25 +70 °C  |
| — Note   | With natural convection; startup tested starting from -40 °C nominal voltage                                    |
| <ul> <li>during transport</li> </ul>                     | -40 +85 °C  |
| <ul> <li>during storage</li> </ul>                       | -40 +85 °C  |
| Humidity class according to EN 60721                     | Climate class 3K3, 5 95% no condensation  |
| Mechanics  |   |
| Connection technology                                    | screw-type terminals  |
| Connections  |   |
| Supply input   | 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 4 mm <sup>2</sup>  |
| Auxiliary  | 13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm <sup>2</sup>                                       |
| width of the enclosure                                   | 90 mm   |
| height of the enclosure                                  | 125 mm  |
| depth of the enclosure                                   | 125 mm  |
| required spacing   |   |
| • top  | 50 mm   |
| bottom   | 50 mm   |
| • left   | 0 mm  |
| ● right  | 0 mm  |
| Weight, approx.  | 1.2 kg  |
| product feature of the enclosure housing can be lined up | Yes   |
| Installation   | Snaps onto DIN rail EN 60715 35x7.5/15  |
| electrical accessories                                   | Buffer module   |
| mechanical accessories                                   | Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20   |
| MTBF at 40 °C  | 667 048 h   |
| other information  | Specifications at rated input voltage and ambient temperature +25 $^\circ\text{C}$ (unless otherwise specified) |

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