# **SIEMENS**

# **Data sheet**

# 6EP3444-7SB00-3AX0



SITOP PSU6200/3AC/DC48V/5A

SITOP PSU6200 48 V/5 A Stabilized power supply Input: 400 - 500 V AC Output: 48 V DC/5 A With diagnostic interface

| nput   |  |
|--|--|
| type of the power supply network   | 3-phase AC or DC   |
| supply voltage at AC   |  |
| <ul> <li>minimum rated value</li> </ul>  | 400 V  |
| <ul> <li>maximum rated value</li> </ul>  | 500 V  |
| • initial value  | 323 V  |
| full-scale value   | 576 V  |
| input voltage  |  |
| • at DC  | 450 600 V  |
| operating condition of the mains buffering   | at Vin = 400 V   |
| buffering time for rated value of the output current in the event of power failure minimum | 30 ms  |
| operating condition of the mains buffering   | at Vin = 400 V   |
| line frequency   |  |
| 1 rated value  | 50 Hz  |
| • 2 rated value  | 60 Hz  |
| line frequency   | 47 63 Hz   |
| input current  |  |
| <ul> <li>at rated input voltage 400 V</li> </ul>   | 0.39 A   |
| <ul> <li>at rated input voltage 500 V</li> </ul>   | 0.31 A   |
| current limitation of inrush current at 25 °C maximum                                      | 12 A   |
| fuse protection type   |  |
| • in the feeder  | three-poled coupled circuit breaker from 4 A characteristic C to 16 A characteristic C or circuit breaker 3RV2011-1EA10 (setting 4 A) or |

|  | 01(12) 11 12010 (02 100)        |
|--|---------------------------------|
| Output   |                                 |
| voltage curve at output                                  | Controlled, isolated DC voltage |
| number of outputs  | 1                               |
| output voltage at DC rated value                         | 48 V                            |
| output voltage   |                                 |
| <ul> <li>at output 1 at DC rated value</li> </ul>        | 48 V                            |
| relative overall tolerance of the voltage                | 3 %                             |
| relative control precision of the output voltage         |                                 |
| <ul> <li>on slow fluctuation of input voltage</li> </ul> | 0.2 %                           |
| <ul> <li>on slow fluctuation of ohm loading</li> </ul>   | 0.2 %                           |
| residual ripple  |                                 |
| • maximum  | 40 mV                           |
| • typical  | 10 mV                           |
| voltage peak   |                                 |
| • maximum  | 40 mV                           |
| • typical  | 10 mV                           |
| adjustable output voltage                                | 48 56 V                         |
|  |                                 |

3RV2711-1ED10 (UL 489)

| type of output voltage setting  display version for normal operation bype of signal at output  behavior of the output voltage when switching on response delay maximum  voltage increase into of the output voltage  • typical output current  • rated value  • rated range  • typical output oversion for mormal operation by pical  • rated range  • typical output current  • rated value  • rated range  • profice active power typical  short-term werefund durrent  • on short-forusing during the start-up typical  • all short-forusing during the start-up typical  • all short-furd during of outputs  • practical switching output voltage of rated value of the output voltage at load step of resistive load 10×0000000000000000000      |   |  |
|---|---|--|
| display version for normal operation type of signal at output of speak of signal at output voltage when switching on response offely maximum voltage increase time of the output voltage a hybrid output current stated range output current stated range output current stated range output current some offer of the output voltage and output current some offer output voltage and output current some offer output voltage output output supplied active power typical short-term overfoad current some offer output voltage output output short of parallel switching of outputs holding of outputs short-ground feature of parallel-switched equipment resources for increasing the power of the output voltage for rated value of the output voltage at load step of resistive load 10/90/10 % typical setting time and monitoring design of the overold capability in moral operation source of the output voltage volt according to EN 60950-1 Class 1 property of the output sold parallel soldation between input and output galvanic isolation output voltage volt according to EN       | product function output voltage adjustable          | Yes  |
| display version for normal operation (year LED for 48 V OK Fleet Announce contact (No contact, contact rating 30 V DC/0.1 A) for DC OK or diagnostic interface Overshoot of Yout < 2 % Overshoot of Yo      | type of output voltage setting                      |  |
| Speed of signal all output   Electronic context (NO context, context rating 30 V DC/0.1 A) for DC OK or disposation interface propose delay maximum   | display version for normal operation                |  |
| Dehavior of the output voltage when switching on response delay maximum voltage increase time of the output voltage (a special output current voltage increase time of the output voltage (a special output current voltage increase time of the output voltage (a special output current voltage increase time of the output voltage voltage and voltage (a special output current voltage increase) (a special output of the output voltage output output output of the output output of the output output output of the output output output output output output output of the output output output of the output output output of the output output output output output of the output of the output      | ·   |  |
| behavior of the output violage when switching on response delay maximum 0.5 s.  | type of signal at output                            |  |
| voltage increase time of the output voltage  • typical  or other current  • rated value  • rated range  or short-term overload current  • rated value  or short-term overload current  • on short-tericulturing operation typical  or short-term overload current  • on short-term overload overload the short overload the short overload the short overload overload equipment resources for increasing the power  Efficiency  efficiency in percent  | behavior of the output voltage when switching on    |  |
| • typical cutpert current  • rated value  • rated trange  supplied active power typical  short-term overload current  • rate of transport of the cutput current  • rate of transport of the cutput current  • rate of transport of transport of the cutput current of the cutput current typical  • rate of transport of transport of the cutput current typical  • parallel switching of outputs  • praillel switching of outputs  • praillel switched equipment resources for increasing the power  • praillel-switched equipment resources for increasing the power  • Protection land monitoring  • at rated output voltage for rated value of the output current typical  • during no-load operation maximum  • load step 10 to 10% typical  • maximum  • resource protection  • typical  roporty of the output short-circuit proof  design of the overvoltage protection  • typical  roporty of the output short-circuit proof  design of short-circuit protection  overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output  galvanic isolation between input and output  earling resource protection class  earling  • CE making  • CSA approval  • CSA sup CSAs, Ciass 1, Division 2  • ATEX  • No  • Unification Safety  • IFICES  • No  • Time in the AST C; 46 0 +70 °C: Derating 3%in K   240 W  240 W  7.5 A  11 W  • Time in the vertical province in the output of the output            | response delay maximum                              | 0.5 s  |
| output current  | voltage increase time of the output voltage         |  |
| * rated value     * rated range     * rated range     * supplied active power typical     subsplied active power typical     * and stort-circuit during the start-up typical     * on short-circuit during poeration typical     * on short-circuit during operation typical     * on short-circuit during operation typical     * or a short-circuit during operation     * or a short-circuit during of equipment resources for     * can be set with DIP switch     * vest switchable characteristic     * or a short-circuit during operation maximum     * or a short-circuit during operation maximum     * or a short-circuit during operation maximum     * or a short-circuit during operation o           | • typical   | 200 ms   |
| - rated range supplied active power typical short-term overload current - on short-circuiting during the start-up typical - of short-circuit during operation typical - of short-circuit during operation typical - of short-circuit during operation typical - product feature - parallel switching of outputs - bridging of equipment - unmber of parallel-switched equipment resources for increasing the power  Efficiency - efficiency in percent - power loss [W] - of a rated output voltage for rated value of the output - current typical - of trade output voltage for rated value of the output - current typical - of resistive control precision of the output voltage at load step - of resistive control precision of the output voltage at load step - of resistive load 1090/10 % typical - setting time - load step 10 to 99% typical - of add step 90 to 109% typical - of the output short-circuit protection - wytical - or sylical - or        | output current                                      |  |
| supplied active power typical short-terrouterial current to an short-circuit furing peration typical of a short-circuit during the start-up typical of a short-circuit during peration typical product feature.  • parallel switching of outputs or bridging of equipment of parallel-switched equipment resources for increasing the power of parallel-switched equipment resources for increasing the powe      | rated value   | 5 A  |
| short-term overload current  on short-circuiting during the start-up typical at short-circuit during operation typical bridging of equipment current varieties and short circuit during operation typical bridging of equipment current varieties and short-circuit during operation typical chicked equipment resources for increasing the power  Efficiency  efficiency in percent power loss [W] at rated output voltage for rated value of the output current typical during no-load operation maximum 2.9 W  Closed-loop control  Teather control precision of the output voltage at load step of resistive load 10/90/10% typical cload step 10 to 90% typical cload step 90 to 10% typical cload step 90 to 40 typical cload step 90 to 40 typical cload step 90 to 50 typical cload step 90 typical      | <u> </u>  |  |
| on short-circuling during the start-up typical at short-circulit during operation typical product feature     on a short-circulit during operation typical product feature     on a short-circulit got of equipment resources for increasing the power less [W]  Fiftiency in percent power less [W]     out a rated output voltage for rated value of the output current typical current typical current typical current typical current typical setting time     oload step 00 to 10% typical 5 ms  |   | 240 W  |
| a st short-circuit during operation typical product feature by a parallel switching of outputs bridging of equipment christians and a state of the court of increasing the power feature of increasing the power feature of increasing the power feature of the court of increasing the power feature of increasing the power feature of increasing the power feature of the court of the cou       |   |  |
| product feature  • parallel switching of outputs • bridging of equipment number of parallel-switched equipment resources for increasing the power  Efficiency  • fficiency in percent power loss [W] • at rated output voltage for rated value of the output current tybical power loss [W] • at rated output voltage for rated value of the output current tybical current tybical of resistive control precision of the output voltage at load step of resistive load 10/90/10 % typical • load step 90 to 10% typical • Sms  Protection and monitoring  design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation  Safety galvanic isolation between input and output galvanic isolation between input and output agilvanic isolation between input and output easage current • maximum porticular in a suitability • CE marking • UL approval • CSAus (SSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1) No  CCSAus, Class 1, Division 2 • ATEX • No • NEC Class 2 • ULhazloc approval • FM registration • No • Yes  ULhazloc approval • FM registration • No • Yes  ULhazloc approval • FM registration • No   |   |  |
| e parallel switching of outputs bridging of equipment number of parallel-switched equipment resources for increasing the power  Efficiency  efficiency in percent power loss [W] of a trated output voltage for rated value of the output current typical during no-load operation maximum 2.9 W  Closed-loop control  relative control precision of the output voltage at load step of resistive load 10/80/10 % typical load step 10 to 90% typical load step 90 to 10% typical maximum  Protection and monitoring  design of the overvoltage protection typical overcurrent overload capability in normal operation vorcurrent overload capability in normal operation  Safety galvanic isolation between input and output protection class leakage current maximum  Approvals  certificate of suitability  CEM maximg  Yes  CSAus (CSA C22 2 No. 62368-1, UL 62368-1)  No  No  The fire resistive of Ves No No Ves UL hazpor approval  Line CEX No No Ves UL resistive durit both No Ves UL resistive durit both No Ves UL resistive durit both No Ves UL resistive (UL 508, CSA C22 2 No. 107.1), File E197259; CCSAus (CSA C22 2 No. 62368-1, UL 62368-1)  No Ves UL refricate of suitability  LicCEX No No Ver fire resistive durits des Ves UL hazpor approval  No Ver fire resistive durits des Ves UL hazpor approval  No Ver fire resistive durits des Ves UL hazpor approval  No Ver fire resistive durits des Ves UL hazpor approval  No Ves  | •   | 7.5 A  |
| bindging of equipment number of parallel-switched equipment resources for increasing the power    Efficiency  | •   | and the seath with DID society                               |
| number of parallel-switched equipment resources for increasing the power corrections are singly efficiency.  efficiency in percent power loss [M]  • at rated output voltage for rated value of the output current typical • during no-load operation maximum 2.9 W  Closed-loop control  relative control precision of the output voltage at load step of resistive load 1090/10 % typical setting time • load step 10 to 90% typical 5 ms • load step 90 to 10% typical 5 ms • maximum 5 ms  Protection and monitoring  design of the overvoltage protection 4 typical 7.5 A 7 yes closely of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation overcurrent overload capability in normal operation solution and periodic restart attempts overdoad capability in normal operation operating resource protection class leakage current • maximum 3.5 mA 1P20  Approvals  certificate of suitability • CE marking Yes • CSA approval CSA approval Yes (CSA C22.2 No. 107.1), File E197259; CCSAus (CSA C22.2 No. 62368-1, UL 62368-1) • CSA approval CSAus (CSA C22.2 No. 62368-1, UL 62368-1) • No • NEC Class 2 • ULhazloc approval • FM registration • Mye of certification CB-certificate  • We fregistration • No • Yer fregistration • Yes • CE mertification CB-certificate   |   |  |
| increasing the power  Efficiency  efficiency in percent power loss [W]  • at rated output voltage for rated value of the output current typical • during no-load operation maximum  2.9 W  Closed-loop control  relative control precision of the output voltage at load step of resistive load 10/90/10 % typical • load step 90 to 10% typical • load step 90 to 10% typical • load step 90 to 10% typical • maximum  Frotection and monitoring  design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation vovercurrent overload capability in normal operation vovercurrent overload capability in normal operation safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum protection class IP  Approvals  cetfificate of suitability • CE marking • UL approval • CSA approval • LICEX • No • NEC Class 2 • No • No • NEC Class 2 • ULhazloc approval • FM registration  No • Yes • CHircelfication CB-certificate  Yes   |   |  |
| efficiency in percent power loss [M]  at rated output voltage for rated value of the output current typical during no-load operation maximum 2.9 W  Closed-loop control  relative control precision of the output voltage at load step of resistive load 10/90/10 % typical setting time load step 90 to 10% typical maximum 5 ms  Protection and monitoring  design of the overvoltage protection typical ypical of the overvoltage protection ypical of the output short-circuit proof design of short-circuit protection overcurent overload capability in normal operation  Safety  galvanic isolation between input and output galvanic isolation between input and output galvanic isolation between input and output galvanic protection class leakage current maximum protection class IP  Approvals  CE marking UL approval  CSA capproval  CCSA capproval  CCSA capproval  CCSA capproval  CCSA capproval  CIBCE  No No No No UL hazloc approval  FM registration No No UL hazloc approval  FM registration No  | increasing the power                                | 2  |
| efficiency in percent power loss [W]  |   |  |
| power loss [W]  at rated output voltage for rated value of the output current typical  during no-load operation maximum  2.9 W    Vestimating       |   | 05.6 %   |
| at rated output voltage for rated value of the output current typical butting no-load operation maximum closed-loop control relative control precision of the output voltage at load step of resistive load 10/90/10 % typical setting time load step 10 to 90% typical load step 90 to 10% typical maximum s 5 ms  Protection and monitoring  design of the overvoltage protection typical typical property of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation safety galvanic isolation between input and output galvanic isolation between input and output galvanic protection class leakage current maximum protection class IP  Approvals  certificate of suitability CE marking UL approval  cCSAus, Class 1, Division 2 ATEX  certificate of suitability  ECEX No No No NeC Class 2 No UL poproval  FM registration No No Left registration No  | • •   | 90.0 /b  |
| current typical during no-load operation maximum 2.9 W  Closed-loop control relative control precision of the output voltage at load step of resistive load 10/90/10 % typical setting time load step 10 to 90% typical load step 90 to 10% typical maximum 5 ms  Protection and monitoring design of the overvoltage protection typical typical yroperty of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation  Safety galvanic isolation between input and output galvanic isolation between input and output morphisms  morphisms  Team of the output and output squaric isolation between input and output morphisms  morphisms  morphisms  Class I leakage current morphisms  CE marking Ves UL approval  CSA approval  CSA approval  CSA approval  CSA approval  CSA approval  CSA approval  CCSAus, CSA C22.2 No. 62368-1, UL 62368-1) No CSAus (CSA C22.2 No. 62368-1, UL 62368-1) No  |   | 11 W   |
| during no-load operation maximum  Closed-loop control  relative control precision of the output voltage at load step of resistive load 10/90/10 % typical     setting time     load step 10 to 90% typical     load step 90 to 10% typical      semaximum  Protection and monitoring  design of the overvoltage protection     lypical     rose of the overvoltage protection     lypical     rose of typical     ros           |   | 11 VV  |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical setting time  • load step 10 to 90% typical 5 ms • load step 90 to 10% typical 5 ms • load step 90 to 10% typical 5 ms • maximum 5 ms  Protection and monitoring  design of the overvoltage protection 4 typical 7.5 s A represent of the output short-circuit proof 4 yes Shutdown and periodic restart attempts overload capability in normal operation 5 shutdown and periodic restart attempts overload capability in normal operation 5 safety 7 safety extra low output voltage Vout according to EN 60950-1 Class I leakage current • maximum 3.5 mA protection class IP IP20  Approvals  certificate of suitability • CE marking 4 yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1) • cCSAus, Class 1, Division 2   | during no-load operation maximum                    | 2.9 W  |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical setting time  • load step 10 to 90% typical 5 ms • load step 90 to 10% typical 5 ms • load step 90 to 10% typical 5 ms • maximum 5 ms  Protection and monitoring  design of the overvoltage protection 4 typical 7.5 s A represent of the output short-circuit proof 4 yes Shutdown and periodic restart attempts overload capability in normal operation 5 shutdown and periodic restart attempts overload capability in normal operation 5 safety 7 safety extra low output voltage Vout according to EN 60950-1 Class I leakage current • maximum 3.5 mA protection class IP IP20  Approvals  certificate of suitability • CE marking 4 yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1) • cCSAus, Class 1, Division 2   | Closed-loop control                                 |  |
| of resistive load 10/90/10 % typical setting time    load step 10 to 90% typical   5 ms     load step 90 to 10% typical   5 ms     load step 90 to 10% typical   5 ms     maximum   5 ms  |   | 1 %  |
| • load step 10 to 90% typical • load step 90 to 10% typical • load step 90 to 10% typical • maximum  Protection and monitoring  design of the overvoltage protection • (a) (a) (b) (b) (b) (c) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c   |   |  |
| • load step 90 to 10% typical   | setting time  |  |
| • maximum  frotection and monitoring  design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output early galvanic protection class leakage current • maximum protection class IP  Approvals  certificate of suitability • CSA approval • CSAus, Class 1, Division 2 • ATEX • No  ATEX • No  No  ULhazloc approval • IECEx • No • NEC Class 2 • ULhazloc approval • Fire eight and output  • maximum • IECEx • No • No  ULhazloc approval • No  ULhazloc approval • IECEx • No • NEC Class 2 • ULhazloc approval • Fire eight and output • No  Ulthazloc approval • No  Old Test and output voltage Vout according to EN 60950-1  Class I  Ves  Class I  P20  Approvals  Cettificate of suitability • IECEx • No • NEC Class 2 • ULhazloc approval • No  ULhazloc approval • No  Old Test and Test       | <ul> <li>load step 10 to 90% typical</li> </ul>     | 5 ms   |
| Protection and monitoring  design of the overvoltage protection   | <ul><li>load step 90 to 10% typical</li></ul>       | 5 ms   |
| design of the overvoltage protection  • typical  roperty of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output galvanic isolation between input and output operating resource protection class leakage current • maximum protection class IP  Approvals  certificate of suitability  • CE marking • UL approval  • CSA approval  • CSA approval  • CSA, approval  • CSA, c22.2 No. 62368-1, UL 62368-1) • CSAus, Class 1, Division 2 • ATEX certificate of suitability  • IECEx • No • NEC Class 2 • ULhazloc approval • FM registration type of certification CB-certificate   • Wes  Yes  • Ves  Safety extra low output voltage Vout according to EN 60950-1  Class I  P20  Approvals  Ves Safety extra low output voltage Vout according to EN 60950-1  Class I  P20  Approvals  Class I  P20  Approvals  Ves CLus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  • No  No  No  No  No  No  Ves  ULhazloc approval  No  No  No  No  Ves  No  No  No  No  No  No  Ves  Ves  No  No  No  No  No  No  No  No  No  N  | maximum   | 5 ms   |
| • typical property of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output galvanic isolation between input and output operating resource protection class leakage current • maximum protection class IP  Approvals  certificate of suitability • CE marking • UL approval • CSA approval • CSA approval • CSAus, Class 1, Division 2 • ATEX certificate of suitability • IECEX • No • NEC Class 2 • ULhazloc approval • FM registration • No  type of certification CB-certificate  7.5 A  Yes Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  7 Yes Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability output 200 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability output 200 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability output 200 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability output 200 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability output 200 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 100 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 100 % lout rated up to 5 s/min  9 Shutdown and periodic restart attempts overload capability 100 % lout rated up to 5 s/min  9 Shutdown and p      | Protection and monitoring                           |  |
| property of the output short-circuit proof design of short-circuit protection overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output galvanic isolation between input and output operating resource protection class leakage current  • maximum protection class IP  Approvals  certificate of suitability  • CE marking • UL approval  • CSA approval  • CSA approval  • CSAus, Class 1, Division 2 • ATEX certificate of suitability  • IECEX • NEC Class 2 • ULhazloc approval • FM registration • No type of certification CB-certificate  Ves Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Safety extra low output voltage Vout according to EN 60950-1  Class I  Last I was a loud output voltage Vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60950-1  Class I  Last I was a loud output voltage vout according to EN 60      | design of the overvoltage protection                | < 60 V   |
| design of short-circuit protection overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output galvanic isolation between input and output operating resource protection class leakage current  • maximum protection class IP  Approvals  certificate of suitability  • CE marking • UL approval  • CSA approval  • CSA approval  • CSAus, Class 1, Division 2 • ATEX certificate of suitability  • IECEX • No • NEC Class 2 • ULhazloc approval • FM registration No type of certification CB-certificate  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Shutdown and periodic restart attempts overload capability 150 % lout rated up to 5 s/min  Safety  yes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Class I  Pes Safety extra low output voltage Vout according to EN 60950-1  Yes Safety extra low output voltage Vout according to EN 60950-1  Ves Safety extra low output voltage Vout according to EN 60950-1  Ves Safety extra low output voltage Vout according to EN 60950-1  Yes Safety extra low output voltage Vout according to EN 60950-1  Ves Safety extra low output voltage Vout according to EN 60950-1  Class I  Safety extra low output voltage Vout according to EN 60950-1  Class I  Safety extra low output voltage Vout according to EN 60950-1  Leas II  Safety extra low output voltage Vout according to EN 60950-1  Cla      | • typical   | 7.5 A  |
| overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output yes Safety extra low output voltage Vout according to EN 60950-1  operating resource protection class leakage current  • maximum more maximum more maximum more protection class IP iP20  Approvals  certificate of suitability  • CE marking  • UL approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  • CSA approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  • cCSAus, Class 1, Division 2  • ATEX No  certificate of suitability  • IECEx No  • NEC Class 2  • ULhazloc approval  • FM registration  No  type of certification CB-certificate  No  versional capability 150 % lout rated up to 5 s/min  Yes Safety extra low output voltage Vout according to EN 60950-1  Class I  Yes Safety extra low output voltage Vout according to EN 60950-1  Class I  Yes Safety extra low output voltage Vout according to EN 60950-1  Class I  Yes Safety extra low output voltage Vout according to EN 60950-1  Class I  Yes Safety extra low output voltage Vout according to EN 60950-1  Class I  Yes ULsa I  P20  Approval  Yes CCSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  ON  ON  No  ON  No  ON  The Particular of Sultability  ON  No  ON  ON  ON  The Particular of Sultability  ON  ON  ON  ON  ON  The Particular of Sultability  ON  ON  ON  ON  ON  ON  ON  ON  ON  O  | property of the output short-circuit proof          | Yes  |
| galvanic isolation between input and output galvanic isolation operating resource protection class leakage current  | ,   | Shutdown and periodic restart attempts                       |
| galvanic isolation between input and output galvanic isolation operating resource protection class leakage current  | overcurrent overload capability in normal operation | overload capability 150 % lout rated up to 5 s/min           |
| galvanic isolation operating resource protection class leakage current  | Safety  |  |
| operating resource protection class leakage current  • maximum protection class IP  Approvals  certificate of suitability  • CE marking • UL approval  • CSA approval  • CSA, CSA, Class 1, Division 2 • ATEX  certificate of suitability  • CESA approval  • CSAus, Class 1, Division 2 • ATEX  certificate of suitability  • IECEx • No • NEC Class 2 • ULhazloc approval • FM registration type of certificate  Class I  ASS MA IP20  Yes  (CJSAUS (CSA C22.2 No. 107.1), File E197259;  cCSAUS (CSA C22.2 No. 62368-1, UL 62368-1)  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259;  cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  No  No  No  No  No  No  Yes  No  No  No  No  Yes  Ves   | galvanic isolation between input and output         | Yes  |
| leakage current   | galvanic isolation                                  | Safety extra low output voltage Vout according to EN 60950-1 |
| <ul> <li>maximum protection class IP</li> <li>IP20</li> <li>Approvals</li> <li>certificate of suitability</li> <li>CE marking</li> <li>UL approval</li> <li>CSA us (CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>CSA approval</li> <li>CSA approval</li> <li>CSA us (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>CCSAus, Class 1, Division 2</li> <li>ATEX</li> <li>ATEX</li> <li>IECEx</li> <li>No</li> <li>IECEx</li> <li>IECEX</li></ul> | operating resource protection class                 | Class I  |
| protection class IP IP20  Approvals  certificate of suitability   | leakage current                                     |  |
| certificate of suitability  CE marking  UL approval  CSA C22.2 No. 62368-1, UL 62368-1)  No  CCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  CESA C22.2 No. 62368-1, UL 62368-1)  No  CESA C22.2 No. 62368-1, UL 62368-1)  No  CESA TEX  No  CESA TEX  No  CESA TEX  No  No  No  No  No  No  No  THE Class 2  ULhazloc approval  No  FM registration  No  type of certification CB-certificate  Yes   |   |  |
| certificate of suitability  CE marking  UL approval  CSA approval  CSA approval  CSAus, CSA C22.2 No. 107.1), File E197259; CCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  CSA approval  CSA approval  CCSAus, Class 1, Division 2  ATEX  Certificate of suitability  IECEx  No  NEC Class 2  ULhazloc approval  FM registration type of certification CB-certificate  Yes  Yes  CCSAus, CSA C22.2 No. 107.1), File E197259; CCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  No  No  No  No  No  Yes  Ves  No  No  Yes  No  No  No  Yes  No  No  Yes   |   | IP20   |
| <ul> <li>CE marking</li> <li>UL approval</li> <li>Yes</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>CCSAus, Class 1, Division 2</li> <li>ATEX</li> <li>No</li> <li>Certificate of suitability</li> <li>IECEx</li> <li>No</li> <li>NEC Class 2</li> <li>ULhazloc approval</li> <li>FM registration</li> <li>No</li> <li>type of certification CB-certificate</li> <li>Yes</li> </ul>  | Approvals   |  |
| <ul> <li>UL approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>CCSAus, Class 1, Division 2</li> <li>ATEX</li> <li>No</li> <li>Certificate of suitability</li> <li>IECEx</li> <li>No</li> <li>NEC Class 2</li> <li>ULhazloc approval</li> <li>FM registration</li> <li>No</li> <li>type of certification CB-certificate</li> </ul>  | certificate of suitability                          |  |
| cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  • cCSAus, Class 1, Division 2  • ATEX  No  certificate of suitability  • IECEx  • NEC Class 2  • ULhazloc approval  • FM registration  type of certificate   CCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  No  No  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  **CSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  **OCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  **OCSAus (CSA C22.2 No. 62368      | <ul> <li>CE marking</li> </ul>                      | Yes  |
| <ul> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)</li> <li>OCSAus, Class 1, Division 2</li> <li>No</li> <li>ATEX</li> <li>No</li> <li>Certificate of suitability</li> <li>IECEX</li> <li>No</li> <li>NEC Class 2</li> <li>ULhazloc approval</li> <li>FM registration</li> <li>No</li> <li>type of certification CB-certificate</li> </ul>  | UL approval   |  |
| cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  o cCSAus, Class 1, Division 2  No  No  certificate of suitability  o IECEx  No  Nec Class 2  o ULhazloc approval  o FM registration  type of certification CB-certificate  cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)  No  No  No  No  No  Ves  |   |  |
| <ul> <li>cCSAus, Class 1, Division 2</li> <li>ATEX</li> <li>No</li> <li>certificate of suitability</li> <li>IECEx</li> <li>No</li> <li>NEC Class 2</li> <li>ULhazloc approval</li> <li>FM registration</li> <li>type of certification CB-certificate</li> </ul> No <ul> <li>No</li> <li>Yes</li> </ul>  | • CSA approval                                      |  |
| <ul> <li>◆ ATEX</li> <li>No</li> <li>certificate of suitability</li> <li>◆ IECEx</li> <li>◆ NEC Class 2</li> <li>◆ ULhazloc approval</li> <li>◆ FM registration</li> <li>type of certification CB-certificate</li> </ul> No No Yes  | • cCSAus Class 1 Division 2                         |  |
| certificate of suitability  • IECEx  • No  • NEC Class 2  • ULhazloc approval  • FM registration  type of certification CB-certificate  No  Yes   |   |  |
| <ul> <li>IECEx</li> <li>No</li> <li>NEC Class 2</li> <li>ULhazloc approval</li> <li>FM registration</li> <li>type of certification CB-certificate</li> <li>No</li> <li>Yes</li> </ul>   |   |  |
| <ul> <li>NEC Class 2</li> <li>ULhazloc approval</li> <li>FM registration</li> <li>type of certificate</li> <li>No</li> <li>Yes</li> </ul>   | •   | No   |
| <ul> <li>ULhazloc approval</li> <li>FM registration</li> <li>type of certification CB-certificate</li> <li>No</li> <li>Yes</li> </ul>   |   |  |
| ◆ FM registration No type of certification CB-certificate Yes   |   |  |
| type of certification CB-certificate  Yes   | • •   |  |
|   | 3   |  |
| certificate of suitability  | certificate of suitability                          |  |

| EAC approval  | Yes                  |
|---|----------------------|
| • C-Tick  | No                   |
| <ul> <li>Regulatory Compliance Mark (RCM)</li> </ul>              | No                   |
| certificate of suitability shipbuilding approval                  | Yes                  |
| shipbuilding approval   | ABS; in process: DNV |
| Marine classification association                                 |                      |
| <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> </ul> | Yes                  |
| <ul> <li>French marine classification society (BV)</li> </ul>     | No                   |
| DNV GL  | No                   |
| <ul> <li>Lloyds Register of Shipping (LRS)</li> </ul>             | No                   |
| <ul> <li>Nippon Kaiji Kyokai (NK)</li> </ul>                      | No                   |
| EMC   |                      |
| etanderd  |                      |

### standard

• for emitted interference EN 55022 Class B • for mains harmonics limitation EN 61000-3-2 • for interference immunity EN 61000-6-2

## ambient temperature

 during operation -30 ... +70 °C; with natural convection a monotonically increasing startup from -25 °C, safe start-up from -40 °C during transport -40 ... +85 °C

• during storage -40 ... +85 °C environmental category according to IEC 60721 Climate class 3K3, 5 ... 95% no condensation

# type of electrical connection

• at input at output • for auxiliary contacts width of the enclosure height of the enclosure depth of the enclosure

required spacing • top bottom

left right net weight

product feature of the enclosure housing can be lined up

fastening method electrical accessories other information

## Push-in terminals

L1, L2, L3, PE: PushIn for 0.5 ... 6 mm2 +1, +2, -1, -2, -3: PushIn for 0.5 ... 2.5 mm<sup>2</sup>

13, 14 (alarm signal): 1 push-in terminal each for 0.2 ... 1.5 mm<sup>2</sup> 45 mm

45 mm 45 mm 0 mm 0 mm

0.9 kg

135 mm

155 mm

Snaps onto DIN rail EN 60715 35x7.5/15

Redundancy module

Specifications at rated input voltage and ambient temperature +25 °C

(unless otherwise specified)

