## **SIEMENS**

## **Data sheet**



## SITOP PSU8200/3AC/48VDC/10A

SITOP PSU8200 48 V/10 A stabilized power supply input: 400-500 V 3 AC output: 48 V DC/10 A \*Ex approval no longer available\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
<ul> <li>minimum rated value</li> </ul>	400 V
<ul> <li>maximum rated value</li> </ul>	500 V
• initial value	320 V
• full-scale value	575 V
design of input wide range input	Yes
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	15 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>	1.2 A
• at rated input voltage 500 V	1 A
current limitation of inrush current at 25 °C maximum	16 A
I2t value maximum	0.8 A <sup>2</sup> ·s
fuse protection type	none
• in the feeder	Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	48 V
output voltage	
at output 1 at DC rated value	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>	0.1 %
on slow fluctuation of ohm loading	0.2 %
residual ripple	
• maximum	100 mV
voltage peak	
• maximum	200 mV
adjustable output voltage	42 56 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer; max. 480 W
display version for normal operation	Green LED for 48 V OK

galvanic isolation between input and output  galvanic isolation  Safety extra low output voltage Vout according to EN 60950-1  Operating resource protection class  Class I  leakage current  maximum  typical  operating resource protection class  leakage current  maximum  typical  operating resource protection class  neaking  Class I  IP20  Approvals  certificate of suitability  CE marking  UL approval  Yes  CSA approval  Yes  CSA approval  Yes  CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		
response delay maximum	7	
voltage increase time of the output voltage  * maximum  output current  * rated value  * at short-terrout during operation typical  * output value  * bridging of equipment  * or nators-circuiting during the start-up typical  * bridging of equipment  * output value  * bridging of equipment  * rated output voltage or rated value of the output voltage with rapid fluctuation of the recurrence of the output voltage with rapid fluctuation of the rate voltage for rated value of the output voltage with rapid fluctuation of the put voltage value  * load step 100 to 50% typical  * load step 100	behavior of the output voltage when switching on	No overshoot of Vout (soft start)
### Automation  Output current  * Inteid value  * Inteid value		2.5 s
output current	voltage increase time of the output voltage	
In related value on the related range	• maximum	500 ms
supplied active power typical supplied active power typical 480 W	output current	
supplied active prover typical short-term overload current a at ahort-circuit during operation typical a the short-circuit during operation typical a the short-circuit during operation typical a the short-circuit during operation typical b on short directuling during the start-up typical b on short directuling during the short directuling short directuling short directuling the short directuling the short directuling short directuling short directuling the short directuling the short directuling short directuling the short directuling the short directuling short directuli	• rated value	10 A
short-term overload current	rated range	0 10 A; +60 +70 °C: Derating 2%/K
• at abort-circuit during operation typical duration of overloading capability for excess current • at abort-circuit during operation constant overload current • on short-circuiting during the start-up typical • on short-circuiting during the start-up typical • bridging of equipment • bridging of equipment • bridging of equipment resources for increasing the power • bridging of equipment start-up typical • bridging of equipment • bridging of equipment start-up typical • circuiting the start-up typical • findency in percent • bridging of equipment • a rated duptor voltage for rated value of the output current typical • a rated duptor voltage for rated value of the output current typical • closed-tope centrol • clabve centrol precision of the cutput voltage with rapid fluctuation of the input voltage by +1-15% typical • load step 10 to 100% typical • load step 10 to 90% typical • load step 10	supplied active power typical	480 W
duration of overloading capability for excess current  * all short-circuit during operation  * all short-circuit during operation  * on short-circuiting during the start-up typical  * on short-circuiting during the start-up typical  * or short-circuiting during the start-up typical  * or indiging of equipment  * unable of parallel-switched equipment resources for increasing in prover  * firticities;  * Efficiency in percent  * power loss [W]  * or trade duptor voltage for rated value of the output  * current typical  * Correct output precision of the supput voltage with rapid inclusion of the input voltage by +/- 15% ypical  * load step 100 to 100% typical  * load step 100 to 50% typical  * lo	short-term overload current	
a short-circuit during operation constant overford current a on short-circuiting during the start-up typical a on short-circuiting during the start-up typical binding of equipment constant overford entire bridging of equipment resources for increasing the power  bridging of equipment resources for increasing the power to set [W]  a rated output voltage for rated value of the output current typical  classed-loop centrol  classed-loop centrol  classed-loop centrol  classed-loop centrol  classed loop control  classed loop centrol  classed loop centro	at short-circuit during operation typical	30 A
constant overload current  on short-circuiting during the start up typical product feature  or bridging of equipment number of paralle-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  Closed-loop control  relative control precision of the output voltage with rapid fluctuation of the input voltage by -17-15% typical relative control precision of the output voltage load step of resistive load 5010050 % typical eload step 100 to 50% typical  of load step 50 to 100% typical  of load step 100 to 50% typical  of load typical  of load typical  of load typical  of lo	duration of overloading capability for excess current	
• on short-circuiting during the start-up typical     • bridging of equipment     • bridging of equipment resources for increasing the power     Fiftiency  efficiency in percent     power loss [W]     • at rated output voltage for rated value of the output current typical  Closed-loop control  cleative control precision of the output voltage with rapid fluctuation of the input voltage by ½- 15% typical  elable control recision of the output voltage load step of resistive load 50/100/50 % typical  • load step 100 to 50% typical  • load step 100 to 90% typical  • load step 100 to 90% typical  • load step 90 to 100% typical  • load step 100 to 90% typical  • load step 90 to 100% typical  • load step 90 to 100% typical  • load step 100 to 90% typical  • load step 100 to 90% typical  • l	at short-circuit during operation	25 ms
product feature  • finding of equipment resources for increasing the power  Efficiency of parallel-switched equipment resources for increasing the power loss [W]  • all rated output voltage for rated value of the output current typical  Closed-loop control  relative control precision of the output voltage with rapid fluctuation of the input voltage by 4.15% bypical  relative control precision of the output voltage load step of resistive load 501 100/60 % typical  relative control precision of the output voltage load step of resistive load 501 100/60 % typical  • load step 10 to 50% typical  • load step 10 to 50% typical  • load step 10 to 50% typical  • load step 90 to 10% typical  • load step 10 to 50%	constant overload current	
bridging of equipment     mumber of parallel-switched equipment resources for increasing be power      Efficiency in percent     power loss [W]	on short-circuiting during the start-up typical	11 A
### Company of parallel-switched equipment resources for increasing be power ### Efficiency in percent ### Efficiency in percent ### Output voltage for rated value of the output current typical relative control precision of the output voltage with rapid fluctuation of the input voltage by ++ 15% typical relative control precision of the output voltage load step of resistive load 501/00/50 % typical #### Output short of the output voltage at load step of resistive load 501/00/50 % typical #### India step 10 to 50% typical   load step 50 to 100% typical   0.2 ms     load step 10 to 50% typical   0.2 ms     load step 10 to 90% typical   0.2 ms     load step 90 to 10% typical   0.2 ms	product feature	
the power Efficiency  efficiency in percent power loss [W]	bridging of equipment	Yes; switchable characteristic
efficiency in percent efficiency in percent power loss IVI at rated output votage for rated value of the output current typical  Closed-loop control  relative control precision of the output vottage with rapid fluctuation of the input vottage by +/- 15% typical relative control precision of the output vottage load step of resistive load 501/00505 % typical eload step 100 to 50% typical load step 50 to 100% typical load step 100 to 50% typical load step 100 to 50% typical load step 100 to 50% typical load step 90 to 10% typical load typ		2
efficiency in percent   94 %	·	
power loss [W]  a trated output voltage for rated value of the output current typical  Closed-loop control  relative control precision of the output voltage with rapid fluctuation of the input voltage by 1-f-15% typical  relative control precision of the output voltage load step of resistive load 501/0050 % typical  eload step 50 to 100% typical  eload step 50 to 100% typical  eload step 100 to 50% typical  oload step 100 to 50% typical  oload step 100 to 90% typical  eload step 90 to 10% typical  oload step 90	-	
at raised output voltage for rated value of the output current typical  Closed-loop control  relative control precision of the output voltage with rapid fluctuation of the input voltage by 4*- 15% typical  relative control precision of the output voltage load step of resistive load 50/100/50 % typical  elative control precision of the output voltage load step of resistive load 50/100/50 % typical  eload step 50 to 100% typical  oload step 100 to 50% typical  oload step 100 to 50% typical  oload step 100 to 50% typical  oload step 90 to 10%	efficiency in percent	94 %
current typical  Closed-loop control  relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical  relative control precision of the output voltage load step of resistive load 50/100/50 % typical  setting time  load step 50 to 100% typical  load step 100 to 50% typical  load step 10 to 80% typical  load step 90 to 10% typical  load st	power loss [W]	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical relative control precision of the output voltage load step of resistive load 50/100/50 % typical setting time    load step 50 to 100% typical   0.2 ms		31 W
relative control precision of the output voltage with rapid fluctuation of the input voltage by vh-15% typical relative control precision of the unput voltage load step of resistive load 50/100/50 % typical setting time  • load step 50 to 100% typical		
fuctuation of the input voltage by 4+ - 15% typical relative control precision of the output voltage load step of resistive load 50/100/50 % typical setting time  i load step 50 to 100% typical load step 100 to 50% typical setting time  load step 100 to 50% typical setting time load step 90 to 10% typical load step 90 to 10%	·	
resistive load \$50*100*50 % typical  e load step 50 to 100% typical  e load step 100 to 50% typical  relative control precision of the output voltage at load step of resistive load 1090/10 % typical  setting time  e load step 10 to 90% typical  setting time  e load step 90 to 10% typical  oload step 90 to 10% typical  i maximum  10 ms  Protection and monitoring  design of the overvoltage protection  e typical  relative current RMS value  e typical  for some of circuit protection  alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value  e typical  overcurrent overload capability in normal operation  display version for overload and short circuit  ED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output  galvanic isolation between input and output  e maximum  maximum  maximum  spalvanic isolation  operating resource protection class  Class I  leakage current  e maximum  e maximum  e maximum  e typical  operating resource protection class  Class I  P20  Approvals  certificate of suitability  e CE marking  yes  cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C32.2 No. 60950-1, UL 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	fluctuation of the input voltage by +/- 15% typical	
load step 50 to 100% typical load step 100 to 50% typical load step 100 to 50% typical  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 load step 90 to 90 typical load step 90 to 90 typical load step 90 to 90 typical load step 90 to 10% typical load step 90 to 90 typical load step 90 typical load step 90 typical load step 90 to 90 typical load		1 %
e load step 100 to 50% typical  relative control precision of the output voltage at load step of resistive load 10/90/10 % typical  setting time  e load step 90 to 10% typical  o maximum  design of the overvoltage protection  e typical  o ty	setting time	
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 0.2 ms • load step 90 to 10% typical 0.2 ms • maximum 10 ms  Protection and monitoring  design of the overvoltage protection 4 typical 11 A property of the output short-circuit proof Yes  design of short-circuit protection Alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value • typical 11 A  overcurrent overload capability in normal operation overload capability 150 % lout rated up to 5 s/min display version for overload and short circuit ED yellow for "overload", LED red for "latching shutdown" safety  galvanic isolation between input and output Yes  galvanic isolation between input and output Yes  galvanic isolation between protection class Class I  leakage current • maximum • maximum • typical 0.9 mA  protection class IP  Approvals  • CE marking • Ves  CE marking • Ves  Yes: cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1, UL 60950-1)  Fes: cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	<ul><li>load step 50 to 100% typical</li></ul>	0.2 ms
resistive load 10/90/10 % typical  setting time  load step 10 to 90% typical  load step 90 to 10% typical  maximum  10 ms  Protection and monitoring  design of the overvoltage protection  typical  property of the output short-circuit proof  design of short-circuit protection  typical  property of the output short-circuit proof  design of short-circuit current RMS value  typical  to typical  11 A  property of the output short-circuit proof  design of short-circuit current RMS value  typical  to vericul current overload capability in normal operation  display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output  yes  galvanic isolation  Safety extra low output voltage Vout according to EN 60950-1  Operating resource protection class  leakage current  maximum  maximum  typical  protection class IP  Approvals  Cet marking  Yes  CE marking  Yes  CSA approval  Yes: cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1, UL 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	● load step 100 to 50% typical	0.2 ms
● load step 10 to 90% typical ● load step 90 to 10% typical ● maximum 10 ms  Protection and monitoring  design of the overvoltage protection ● typical 11 A  property of the output short-circuit proof  design of short-circuit protection ● typical 11 A  property of the output short-circuit proof  design of short-circuit protection ● Alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value ● typical  overcurrent overload capability in normal operation display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output Yes galvanic isolation between input and output  ● reaximum ● maximum ● typical   **Cabability typical  **Cabability typical  ● typical  **Cabability typical  ● typical  **Typical		2 %
• load step 90 to 10% typical • maximum  10 ms  Protection and monitoring  design of the overvoltage protection • typical  11 A  property of the output short-circuit proof  design of short-circuit protection • typical  11 A  Alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value • typical  11 A  overcurrent overload capability in normal operation display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output  yes galvanic isolation Safety extra low output voltage Vout according to EN 60950-1  operating resource protection class  Class I  leakage current • maximum • typical  op mA  typical  protection class IP  Approvals  certificate of suitability • CE marking  Yes  CISA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	setting time	
• maximum 10 ms  Protection and monitoring  design of the overvoltage protection	<ul><li>load step 10 to 90% typical</li></ul>	0.2 ms
design of the overvoltage protection  • typical  property of the output short-circuit proof  design of short-circuit protection  • typical  property of the output short-circuit proof  design of short-circuit protection  Alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value  • typical  overcurrent overload capability in normal operation  display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output  yes  galvanic isolation  operating resource protection class  leakage current  • maximum  • typical  output voltage Vout according to EN 60950-1  (Class I  P20  Approvals  certificate of suitability  • CE marking  • UL approval  • CSA C	<ul><li>load step 90 to 10% typical</li></ul>	0.2 ms
design of the overvoltage protection  • typical  11 A  property of the output short-circuit proof  design of short-circuit protection  Alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value  • typical  overcurrent overload capability in normal operation  display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output  yes  galvanic isolation between input and output  operating resource protection class  Class I  leakage current  • maximum  • typical  o.9 mA  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  • CSA c22.2 No. 107.1), File E197259; cCSAus	• maximum	10 ms
typical property of the output short-circuit proof design of short-circuit protection Alternatively, constant current characteristic approx. 11 A or latching shutdown enduring short circuit current RMS value typical typical 11 A overcurrent overload capability in normal operation display version for overload and short circuit LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output yes galvanic isolation between input and output operating resource protection class  leakage current maximum typical operating resource protection class IP  Approvals  certificate of suitability CE marking UL approval  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1) Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	Protection and monitoring	
property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value  • typical  overcurrent overload capability in normal operation display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output yes galvanic presource protection class leakage current • maximum • typical  overcurrent  overload safety  protection class IP  Approvals  certificate of suitability • CE marking • UL approval  CCSA cg2.2 No. 60950-1, UL 60950-1  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	design of the overvoltage protection	< 60 V
design of short-circuit protection enduring short circuit current RMS value  • typical  overcurrent overload capability in normal operation display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output yes galvanic resource protection class  leakage current • maximum • typical  overload and short circuit  Alternatively, constant current characteristic approx. 11 A or latching shutdown  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output Yes galvanic isolation between input and output  operating resource protection class  leakage current • maximum • typical  op mA  protection class IP  Approvals  certificate of suitability • CE marking • UL approval  UL approval  Yes  CSA approval  Yes  CLISS (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	• typical	11 A
enduring short circuit current RMS value  • typical  overcurrent overload capability in normal operation  display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output  yes  galvanic isolation  operating resource protection class  leakage current  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  • CSA approval  • CSA approval  • CSA approval  • CSA approval  11 A  overload capability 150 % lout rated up to 5 s/min  LED yellow for "overload", LED red for "latching shutdown"  Safety  Yes  Safety extra low output voltage Vout according to EN 60950-1  Class I  LED yellow for "overload", LED red for "latching shutdown"  Yes  Safety  Yes  ULass I  11 A  Overcurrent  Pes  Approval  Yes  CLass I  IP20  Approvals  Yes  CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1, UL 60950-1)  • CSA approval	property of the output short-circuit proof	Yes
<ul> <li>typical</li> <li>typical</li> <li>overcurrent overload capability in normal operation</li> <li>overload capability 150 % lout rated up to 5 s/min</li> <li>display version for overload and short circuit</li> <li>LED yellow for "overload", LED red for "latching shutdown"</li> <li>Safety</li> <li>galvanic isolation between input and output</li> <li>galvanic isolation</li> <li>operating resource protection class</li> <li>leakage current <ul> <li>maximum</li> <li>typical</li> <li>protection class IP</li> </ul> </li> <li>Approvals</li> <li>certificate of suitability</li> <li>CE marking</li> <li>UL approval</li> <li>CSA c22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1)</li> <li>CSA approval</li> </ul>	design of short-circuit protection	Alternatively, constant current characteristic approx. 11 A or latching shutdown
overcurrent overload capability in normal operation display version for overload and short circuit  LED yellow for "overload", LED red for "latching shutdown"  Safety  galvanic isolation between input and output Yes galvanic resource protection class  Class I  leakage current  maximum  typical protection class IP  Approvals  certificate of suitability  CE marking  UL approval  Yes  Yes  Yes  Yes  CSA approval  Yes  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	enduring short circuit current RMS value	
display version for overload and short circuit  Safety  galvanic isolation between input and output  galvanic isolation between input and output  yes  galvanic isolation  Safety extra low output voltage Vout according to EN 60950-1  Operating resource protection class  leakage current  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  • CSA approval  CSA approval  LED yellow for "overload", LED red for "latching shutdown"  Yes  galvanic isolation between input and output  Yes  Safety extra low output voltage Vout according to EN 60950-1  Class I  Place  Place  Yes  Yes  Yes  (CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1, UL 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	• typical	11 A
galvanic isolation between input and output galvanic isolation Safety extra low output voltage Vout according to EN 60950-1 operating resource protection class  leakage current	overcurrent overload capability in normal operation	overload capability 150 % lout rated up to 5 s/min
galvanic isolation between input and output  galvanic isolation  Safety extra low output voltage Vout according to EN 60950-1  Operating resource protection class  Class I  leakage current  maximum  typical  operating resource protection class  leakage current  maximum  typical  operating resource protection class  neaking  Class I  IP20  Approvals  certificate of suitability  CE marking  UL approval  Yes  CSA approval  Yes  CSA approval  Yes  CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		
galvanic isolation between input and output  galvanic isolation  Safety extra low output voltage Vout according to EN 60950-1  Operating resource protection class  Class I  leakage current  maximum  typical  operating resource protection class  leakage current  maximum  typical  operating resource protection class  neaking  Class I  IP20  Approvals  certificate of suitability  CE marking  UL approval  Yes  CSA approval  Yes  CSA approval  Yes  CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	Safety	
galvanic isolation  operating resource protection class  leakage current  maximum  typical  oprotection class IP  Approvals  certificate of suitability  CE marking  UL approval  UL approval  CSA approval  Safety extra low output voltage Vout according to EN 60950-1  Class I  Description of EN 60950-1  UP20  Approvals  Yes  CETIFICATE OF SUITABILITY  Yes  CSA C22.2 No. 107.1), File E197259; cCSAus  (CSA C22.2 No. 60950-1)  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		Yes
operating resource protection class  leakage current	·	
leakage current  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  • UL approval  • CSA cos		, , , , , ,
<ul> <li>maximum</li> <li>typical</li> <li>0.9 mA</li> <li>protection class IP</li> <li>IP20</li> <li>Approvals</li> <li>certificate of suitability</li> <li>CE marking</li> <li>UL approval</li> <li>UL approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)</li> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>		
<ul> <li>typical</li> <li>protection class IP</li> <li>IP20</li> <li>Approvals</li> <li>certificate of suitability</li> <li>CE marking</li> <li>UL approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)</li> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>	-	3.5 mA
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. 60950-1, UL 60950-1)  • CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		
Approvals  certificate of suitability	· ·	
certificate of suitability  CE marking  UL approval  CSA c22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)  CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 107.1), File E197259; cCSAus		
<ul> <li>CE marking</li> <li>UL approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)</li> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>		
<ul> <li>UL approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)</li> <li>CSA approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>	-	Yes
(CSA C22.2 No. 60950-1, UL 60950-1)  ◆ CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	<u> </u>	
CSA approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	<ul><li>□ ΔΕ αρριοναί</li></ul>	
	CSA approval	
(COA CZZ.Z NO. 00800-1, UL 00800-1)		(CSA C22.2 No. 60950-1, UL 60950-1)

• cCSAus, Class 1, Division 2	No
• ATEX	No
certificate of suitability	
• IECEx	No
NEC Class 2	No
ULhazloc approval	No
FM registration	No
type of certification CB-certificate	Yes
certificate of suitability	
EAC approval	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
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	Yes
<ul> <li>Lloyds Register of Shipping (LRS)</li> </ul>	No
Nippon Kaiji Kyokai (NK)	No
EMC	
standard	
• for emitted interference	EN 55022 Class B
• for mains harmonics limitation	EN 61000-3-2
• for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
during operation	-25 +70 °C; with natural convection
during transport	-40 +85 °C
during storage	-40 +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
• at input	L1, L2, L3, PE: 1 screw terminal each for 0.2 4 mm² single-core/finely stranded
at output	+, -: 2 screw terminals each for 0.2 4 mm²
• for auxiliary contacts	13, 14 (alarm signal): 1 screw terminal each for 0.14 1.5 mm²; 15, 16 (Remote): 1 screw terminal each for 0.14 1.5 mm²
width of the enclosure	70 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
net weight	1.2 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
mechanical accessories	Device identification label 20 mm × 7 mm, Tl-grey 3RT2900-1SB20
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

