Data sheet

Input

6ES7307-1KA02-0AA0



SIMATIC PS307/1AC/24VDC/10A

SIMATIC S7-300 Regulated power supply PS307 input: 120/230 V AC, output: 24 V / 10 A DC

type of the power supply network supply voltage at AC • initial value • 1 at AC rated value • 2 at AC rated value • 2 at AC rated value • 1 at AC supply voltage • 1 at AC rated value • 2 at AC rated value • 2 at AC rated value • 1 at AC • 2 at AC rated value of the output current in the event of power failure minimum operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value • 2 rated value • 30 Hz input current • at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current at 25 °C • at rated input voltage 20 V (not accessible) Recommended miniature circuit breaker: from 10 A characteristic C Output voltage curve at output output voltage • at output 1 at DC rated value • at output 1 at DC rated value • at output voltage • an on slow fluctuation of input voltage • on slow fluctuation of ofm loading residual ripple	Input	
initial value supply voltage 1 at AC rated value 2 at AC rated value 2 at AC rated value 2 at AC input voltage 1 at AC 2 at AC 3 55 132 V 2 at AC 4 2 at AC 5 5 132 V 2 2 3 × Vin rated, 1.3 ms 4 Vin = 93/187 V 2 0 ms 4 Vin = 93/187 V 2 0 ms 4 Vin = 93/187 V 2 0 ms 4 Vin = 93/187 V 8 1 rated value 9 1 rated value 9 1 rated value 9 2 rated value 1 at rated input voltage 120 V 1 at rated input voltage 120 V 1 at rated input voltage 230 V 1 at rated maximum 3 at X = 8 5 A fuse protection type 1 5 3 A/250 V (not accessible) 1 in the feeder Controlled, isolated DC voltage 1 at output voltage 1 at output 1 at DC rated value 2 4 V 2 veraltive control precision of the voltage 1 at output voltage 1 at output voltage 1 at output 1 at DC rated value 1 at output voltage 1 at output voltage 1 at output of the voltage 1 at output of the voltage 1 at output voltage 1 at output of the volta	type of the power supply network	1-phase AC
supply voltage 1 at AC rated value 2 at AC rated value 2 at AC rated value 2 at AC 1 at AC 2 at AC 3 5 132 V 2 at AC design of input wide range input overvoltage overload capability operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency 1 rated value 2 rated value 1 at rated value 2 rated input voltage 230 V 2 at rated input voltage 230 V 3 ms 2 at rated input voltage 230 V 4 at rated input voltage 230 V 4 at rated input voltage 230 V 5 current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C maximum 1 at value maximum 3 as A²s fuse protection type in the feeder Voltage curve at output voltage at DC rated value 24 V relative overall tolerance of the voltage a to alouput 1 at DC rated value 24 V relative control precision of the output voltage a on slow fluctuation of input voltage 5 on slow fluctuation of input voltage 5 on slow fluctuation of the output voltage 5 on slow fluctuation of the output voltage 5 on slow fluctuation of ont loading 5 on slow fluctua	supply voltage at AC	
1 at AC rated value 2 at AC rated value 2 at AC rated value 3 av V 1 at AC 2 at AC 2 at AC 3 av V 2 at AC 4 av C 2 at AC 4 av C 2 at AC 6 av C 4 av C 6 av C 7 av C 7 av C 7 av C 8 av Vin rated, 1.3 ms 8 at Vin = 93/187 V 20 ms 8 at Vin = 93/187 V 20 ms 8 at Vin = 93/187 V 20 ms 8 av Vin = 93/187 V 20 ms 8 at Vin	initial value	Automatic range selection
e 2 at AC rated value input voltage e 1 at AC 2 at AC c 2 at AC design of input wide range input overvoltage overload capability overvoltage overload capability overvoltage overload capability buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 93/187 V 20 ms at Vin = 93/187 V 21 may at Vin = 93/187 V 22 ms at Vin = 93/187 V 23 ms at Vin = 93/187 V 24 A at rated value at rated value at rated input voltage 120 V at rated input voltage 120 V at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C maximum 12 value maximum fuse protection type in the feeder voltage curve at output voltage curve at output cutput voltage at DC rated value output voltage at DC rated value at output 1 at DC rated value at output voltage at output 1 at DC rated value at output voltage at output 1 at DC rated value at output voltage at output voltage and output	supply voltage	
input voltage • 1 at AC • 2 at AC design of input wide range input overvoltage overload capability operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value • 2 rated value • 2 rated input voltage 120 V • at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C • maximum 12t value maximum fuse protection type • in the feeder voltage curve at output output voltage at DC rated value • at output 1 at DC rated value output voltage • at output 1 at DC rated value e on slow fluctuation of input voltage • on slow fluctuation of onlinoading string AC V 170 264 V 170 264 V 185 132 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 21 ms at Vin = 93/187 V 22 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 21 ms at Vin = 93/187 V 21 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 20 ms at Vin = 93/187 V 21 ms at Vin = 93/187 V 20 ms at V	 1 at AC rated value 	120 V
1 at AC 2 at AC 6 2 at AC 70 264 V 80 70 264 V 80	 2 at AC rated value 	230 V
e 2 at AC design of input wide range input overvoltage overload capability operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency e 1 rated value e 2 rated value 50 Hz e 2 rated value e 2 rated value fine frequency input current e at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C e maximum 12t value maximum fuse protection type in the feeder voltage curve at output voltage at DC rated value e at output 1 at DC rated value e at output 1 at DC rated value e at output lottage e at output lottage e on slow fluctuation of input voltage e on slow fluctuation of onm loading e. 170 264 V No 0 2.3 × Vin rated, 1.3 ms at Vin = 93/187 V 20 ms ext Vin = 93/187 V 20 ms ext Vin = 93/187 V 21 ms 22 ms at Vin = 93/187 V 23 ms at Vin = 93/187 V 24 V 1.9 A	input voltage	
design of input wide range input overvoltage overload capability 2.3 × Vin rated, 1.3 ms operating condition of the mains buffering at Vin = 93/187 V 20 ms	• 1 at AC	85 132 V
overvoltage overload capability operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value line frequency input current • at rated input voltage 120 V • at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C • maximum 12t value maximum fuse protection type • in the feeder Voltage curve at output output voltage at DC rated value • at output 1 at DC rated value • at output 1 at DC rated value • at output 1 oldage • at output 1 oldage • on slow fluctuation of iniput voltage • on slow fluctuation of omline at 25 °C 20 ms 20 ms 21 N	• 2 at AC	170 264 V
operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value • 30 Hz • 2 rated value • 47 63 Hz input current • at rated input voltage 120 V • at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C • maximum 12t value maximum fuse protection type • in the feeder Output voltage curve at output output voltage • at output 1 at DC rated value • at on slow fluctuation of ihr voltage • on slow fluctuation of ohm loading at Vin = 93/187 V 20 ms at Vin = 93/187 V 21 maximum at Vin = 93/187 21 maximum at Vin = 93/187 4 Vin = 93/187 21 maximum at Vin = 93/187 4 Vin = 93/187 21 maximum at Vin = 93/187 at Vin = 93/187 4 Vin = 93/187 21 maximum at Vin = 93/187 at Vin equations at Vin equation of input voltage at	design of input wide range input	No
buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value 10 Hz • 3 trated input voltage 120 V • at rated input voltage 230 V • at rated input voltage 230 V • at rated input voltage 230 V • at maximum 12t value maximum 12t value maximum fuse protection type • in the feeder Voltage curve at output voltage • at output 1 at DC rated value output voltage • at output 1 at DC rated value output voltage • at output 1 at DC rated value output voltage • on slow fluctuation of input voltage • on slow fluctuation of one loading 0.5 %	overvoltage overload capability	2.3 × Vin rated, 1.3 ms
event of power failure minimum operating condition of the mains buffering line frequency 1 rated value 2 rated value 60 Hz line frequency input current 1 at a rated input voltage 120 V 1 at arted input voltage 230 V 2 current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C maximum 12t value maximum 12t value maximum fuse protection type in the feeder voltage curve at output output voltage at DC rated value output voltage 1 at voltage 1 at Vin = 93/187 V 4 V 4 V 4	operating condition of the mains buffering	at Vin = 93/187 V
Ine frequency • 1 rated value • 2 rated value frequency • 1 rated value 60 Hz line frequency 47 63 Hz input current • at rated input voltage 120 V • at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C • maximum 12t value maximum 12t value maximum 12t value maximum viuse protection type • in the feeder voltage curve at output voltage curve at output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of input voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading 50 Hz 42 A 4.2 A 4.3 A 4.2 A 4.3 A 55 A 4.2 A 5.5 A 4.2 C 4.2 A 5.5 A 4.2 C 5.5 A 4.2 C 6.0 Haximum to singular		20 ms
 1 rated value 2 rated value 60 Hz 1 ine frequency input current at rated input voltage 120 V at rated input voltage 230 V 1.9 A current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C maximum 3 ms 12t value maximum 3.3 A²·s fuse protection type in the feeder Recommended miniature circuit breaker: from 10 A characteristic C Output Output Output voltage curve at output output voltage at DC rated value output voltage at output 1 at DC rated value output voltage at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 0.1 % on slow fluctuation of ohm loading 0.5 % on slow fluctuation of ohm loading on slow fluc	operating condition of the mains buffering	at Vin = 93/187 V
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line frequency input current • at rated input voltage 120 V • at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C • maximum 12t value maximum fuse protection type • in the feeder Coutput voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of ohm loading 47 63 Hz 42 A 4.2 A	1 rated value	50 Hz
input current at rated input voltage 120 V at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C amaximum lizt value maximum sure protection type in the feeder Coutput Voltage curve at output output voltage at DC rated value output voltage at output 1 at DC rated value relative overall tolerance of the voltage and output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 4.2 A	2 rated value	60 Hz
 at rated input voltage 120 V at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C maximum 3 ms 12t value maximum 12t value maximum 3.3 A²·s fuse protection type in the feeder Recommended miniature circuit breaker: from 10 A characteristic C Output Voltage curve at output output voltage at DC rated value output voltage at output 1 at DC rated value e at output 1 at DC rated value relative overall tolerance of the voltage e on slow fluctuation of input voltage on slow fluctuation of ohm loading 0.1 % on slow fluctuation of ohm loading 	line frequency	47 63 Hz
at rated input voltage 230 V current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C amaximum 12t value maximum 12t value maximum fuse protection type in the feeder T 6.3 A/250 V (not accessible) Recommended miniature circuit breaker: from 10 A characteristic C Output voltage curve at output voltage at DC rated value output voltage at output 1 at DC rated value relative overall tolerance of the voltage and output relative control precision of the output voltage and	input current	
current limitation of inrush current at 25 °C maximum duration of inrush current limiting at 25 °C • maximum 12t value maximum 12t value maximum fuse protection type • in the feeder Coutput voltage curve at output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of ohm loading 55 A 55 A 55 A 55 A 55 A 55 A 56 A 57 A 58 A 59 A 59 A 50 A 5	 at rated input voltage 120 V 	4.2 A
duration of inrush current limiting at 25 °C	 at rated input voltage 230 V 	1.9 A
 maximum 12t value maximum fuse protection type • in the feeder T 6.3 A/250 V (not accessible) Recommended miniature circuit breaker: from 10 A characteristic C Output voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading 0.1 % • on slow fluctuation of ohm loading 	current limitation of inrush current at 25 °C maximum	55 A
I2t value maximum fuse protection type	duration of inrush current limiting at 25 °C	
fuse protection type • in the feeder Recommended miniature circuit breaker: from 10 A characteristic C Output Voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading T 6.3 A/250 V (not accessible) Recommended miniature circuit breaker: from 10 A characteristic C Controlled, isolated DC voltage 24 V 24 V 74 V 75 ST	• maximum	3 ms
● in the feeder Recommended miniature circuit breaker: from 10 A characteristic C Output Voltage curve at output output voltage at DC rated value output voltage ● at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage ● on slow fluctuation of input voltage ● on slow fluctuation of ohm loading Recommended miniature circuit breaker: from 10 A characteristic C Controlled, isolated DC voltage 24 V 24 V 3 % 7 Controlled, isolated DC voltage 24 V 8 Controlled, isolated DC voltage 24 V 9 Controlled, isolated DC voltage 9 Cont	12t value maximum	3.3 A ² ·s
Voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of ohm loading Controlled, isolated DC voltage 24 V 24 V 24 V 7	fuse protection type	T 6.3 A/250 V (not accessible)
voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of ohm loading Controlled, isolated DC voltage 24 V 24 V 7 V 7 S 7 S 8 S 9 On Slow fluctuation of the output voltage 0.1 % 0.5 %	• in the feeder	Recommended miniature circuit breaker: from 10 A characteristic C
output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading 0.5 %	Output	
output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading 0.1 % 0.5 %	voltage curve at output	Controlled, isolated DC voltage
 at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 0.1 % on slow fluctuation of ohm loading 0.5 % 	output voltage at DC rated value	24 V
relative overall tolerance of the voltage relative control precision of the output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 0.1 % 0.5 %	output voltage	
relative control precision of the output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 0.1 % 0.5 %	 at output 1 at DC rated value 	24 V
 on slow fluctuation of input voltage on slow fluctuation of ohm loading 0.1 % 0.5 % 	relative overall tolerance of the voltage	3 %
• on slow fluctuation of ohm loading 0.5 %	relative control precision of the output voltage	
	 on slow fluctuation of input voltage 	0.1 %
residual ripple	 on slow fluctuation of ohm loading 	0.5 %
	residual ripple	
• maximum 50 mV	• maximum	50 mV
• typical 15 mV	• typical	15 mV
voltage peak	voltage peak	

	450
• maximum	150 mV
typical	60 mV
product function output voltage adjustable	No
type of output voltage setting	- Cross LED for 24 V OV
display version for normal operation behavior of the output voltage when switching on	Green LED for 24 V OK No overshoot of Vout (soft start)
response delay maximum	2 s
voltage increase time of the output voltage	25
• typical	10 ms
output current	10 1113
rated value	10 A
rated range	0 10 A
supplied active power typical	240 W
short-term overload current	
 on short-circuiting during the start-up typical 	38 A
at short-circuit during operation typical	38 A
duration of overloading capability for excess current	
 on short-circuiting during the start-up 	80 ms
 at short-circuit during operation 	80 ms
product feature	
bridging of equipment	Yes
Efficiency	
efficiency in percent	90 %
power loss [W]	
at rated output voltage for rated value of the output	27 W
current typical	
Closed-loop control	
relative control precision of the output voltage with rapid	0.1 %
fluctuation of the input voltage by +/- 15% typical	2.0/
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	2 %
setting time	
maximum	0.1 ms
	0.1 ms
Protection and monitoring	
Protection and monitoring design of the overvoltage protection	0.1 ms Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A
Protection and monitoring	Additional control loop, shutdown at < 28.8 V, automatic restart
Protection and monitoring design of the overvoltage protection response value current limitation	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A -
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A -
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value ■ maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic resource protection class	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA
design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA
design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP Approvals certificate of suitability • CE marking	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20
design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP Approvals certificate of suitability • CE marking • UL approval	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP Approvals certificate of suitability • CE marking • UL approval • CSA approval	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP Approvals certificate of suitability • CE marking • UL approval • CSA approval • CSAus, Class 1, Division 2	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 No
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output 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 • CCSAus, Class 1, Division 2 • ATEX	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output 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 • cCSAus, Class 1, Division 2 • ATEX certificate of suitability	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 No Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output 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 • CCSAus, Class 1, Division 2 • ATEX	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 No
Protection and monitoring design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value • maximum display version for overload and short circuit Safety galvanic isolation between input and output 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 • CCSAus, Class 1, Division 2 • ATEX certificate of suitability	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 No Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc IECEX Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cULus (ANSI/ISA 12.12.01, CSA C22.2 No.213) Class I, Div. 2, Group
design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 No Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc IECEX Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cULus (ANSI/ISA 12.12.01, CSA C22.2 No.213) Class I, Div. 2, Group ABCD, T4, File E330455
design of the overvoltage protection response value current limitation property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value	Additional control loop, shutdown at < 28.8 V, automatic restart 11 12 A Yes Electronic shutdown, automatic restart 12 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 No Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc IECEX Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cULus (ANSI/ISA 12.12.01, CSA C22.2 No.213) Class I, Div. 2, Group ABCD, T4, File E330455 Yes; IECEX Ex nA nC IIC T3 Gc

type of certification CB-certificate	No
certificate of suitability	
 EAC approval 	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	In S7-300 system
Marine classification association	
 American Bureau of Shipping Europe Ltd. (ABS) 	No
 French marine classification society (BV) 	No
DNV GL	No
 Lloyds Register of Shipping (LRS) 	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

mechanical accessories

ambient temperature

 during operation 0 ... 60 °C; with natural convection

-40 ... +85 °C during transport -40 ... +85 °C • during storage

environmental category according to IEC 60721 Climate class 3K3, 5 ... 95% no condensation

Mechanics

type of electrical connection screw-type terminals

• at input L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely

• 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

MTBF at 40 °C other information

stranded

L+, M: 4 screw terminals each for 0.5 ... 2.5 mm2

80 mm 125 mm 120 mm

40 mm 40 mm 0 mm 0 mm 0.8 kg

Can be mounted onto S7 rail

Mounting adapter for standard mounting rail (6EP1971-1BA00)

1 504 280 h

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

(unless otherwise specified)

