

Version 6EP1333-2AA01-0AA0 is designed for GEA

Technical specifications

Order No.	6EP1 333-2AA01	6EP1 333-2BA01
Technical specifications		
Product	SITOP smart	SITOP smart
Power supply, type	24 V/5 A	24 V/5 A
Input		
Input	1-phase AC	1-phase AC
Rated voltage value V_{in} rated		
Supply voltage		
1 at AC nominal value	120 V	120 V
2 at AC nominal value	230 V	230 V
Note	Set by means of selector switch on the device	Set by means of selector switch on the device
Voltage range		
Input voltage		
1 at AC	85 ... 132 V	85 ... 132 V
2 at AC	170 ... 264 V	170 ... 264 V
Overvoltage resistance	$2.3 \times V_{in \text{ rated}}, 1.3 \text{ ms}$	$2.3 \times V_{in \text{ rated}}, 1.3 \text{ ms}$
Mains buffering at I_{out} rated, min.	20 ms	20 ms
Mains buffering	at $V_{in} = 93/187 \text{ V}$	at $V_{in} = 93/187 \text{ V}$
Rated line frequency		
1	50 Hz	50 Hz
2	60 Hz	60 Hz
Rated line range	47 ... 63 Hz	47 ... 63 Hz
Input current		
at nominal level of the input voltage 120 V nominal value	2.1 A	2.1 A
at nominal level of the input voltage 230 V nominal value	1.15 A	1.15 A
at nominal level of the input voltage 400 V nominal value		
at nominal level of the input voltage 500 V nominal value		
Switch-on current limiting (+25 ° C), max.	32 A	32 A
Duration of current limiting at 25 ° C typical	3 ms	3 ms

I ² t, max.	0.8 A ² • s	0.8 A ² • s
Built-in incoming fuse	T 3,15 A/250 V (not accessible)	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 6 A, characteristic C	Recommended miniature circuit breaker: from 6 A, characteristic C
Output		
Output	controlled, isolated DC voltage	controlled, isolated DC voltage
Rated voltage V _{out} DC	24 V	24 V
Total tolerance, static ±	3 %	3 %
Static mains compensation, approx.	0.1 %	0.1 %
Static load balancing, approx.	0.5 %	0.5 %
Residual ripple peak-peak, max.	150 mV	150 mV
Residual ripple peak-peak, typ.	50 mV	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	150 mV	150 mV
Adjustment range	22.8 ... 28 V	22.8 ... 28 V
Product feature output voltage adjustable	Yes	Yes
Output voltage setting	via potentiometer	via potentiometer
Note		
Status display	Green LED for 24 V OK	Green LED for 24 V OK
Signaling		
On/off behavior	Overshoot of V _{out} approx. 4 %	Overshoot of V _{out} approx. 4 %
Startup delay, max.	100 ms	100 ms
Voltage rise, typ.	50 ms	50 ms
Voltage increase time of the output voltage maximum		
Rated current value I _{out} rated	5 A	5 A
Current range	0 ... 6 A	0 ... 6 A
Note	6 A up to +45 ° C	6 A up to +45 ° C
delivered active power typ.	144 W	144 W
short-term overload current at short-circuit during run-up typical	17 A	17 A
Duration of overloading ability for excess current on short-circuiting during	100 ms	100 ms

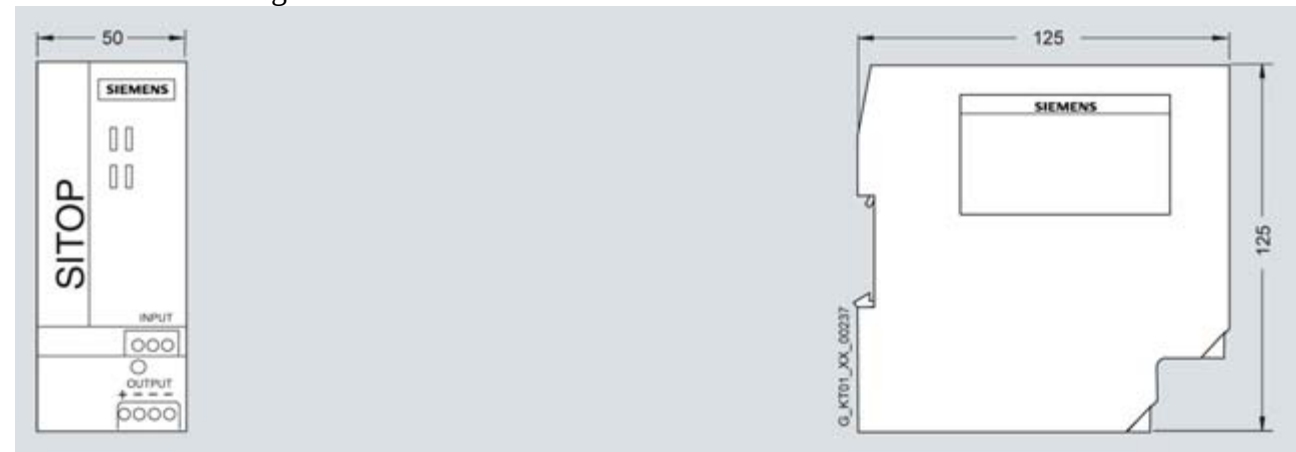
the start-up		
short-term overload current at short-circuit during operation typical	17 A	17 A
Duration of overloading ability for excess current on short-circuiting during the operational phase	200 ms	200 ms
Parallel switching for enhanced performance	Yes	Yes
Numbers of parallel switchable units for enhanced performance	2	2
Efficiency		
Efficiency at V_{out} rated, I_{out} rated, approx.	87 %	87 %
Power loss at V_{out} rated, I_{out} rated, approx.	17 W	17 W
Closed-loop control		
Dynamic mains compensation (V_{in} rated ± 15 %), max.	0.3 %	0.3 %
Dynamic load smoothing (I_{out} : 50/100/50 %), $U_{out} \pm$ typ.	1 %	1 %
Load step setting time 50 to 100%, typ.	0.2 ms	0.2 ms
Load step setting time 100 to 50%, typ.	0.2 ms	0.2 ms
Setting time maximum		
Protection and monitoring		
Output overvoltage protection	< 33 V	< 33 V
Current limitation	6.4 ... 6.6 A	6.4 ... 6.6 A
Current limitation, typ.		
Characteristic feature of the output short-circuit protected	Yes	Yes
Short-circuit protection	Constant current characteristic	Constant current characteristic
Enduring short circuit current Effective level		
maximum		
typical	10 A	10 A
Note		
Overload/short-circuit indicator	-	-
Safety		
Primary/secondary isolation	Yes	Yes
Potential separation	Safety extra low output voltage V_{out} according to EN 60950-1 and EN 50178	Safety extra low output voltage V_{out} according to EN 60950-1 and EN 50178
Protection class	Class I	Class I

stray current		
maximum	3.5 mA	3.5 mA
typical	0.4 mA	0.4 mA
CE mark	Yes	Yes
UL/CSA approval	Yes	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1, UL 1604)	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1, UL 1604)
Explosion protection	ATEX (EX) II 3G Ex nA II T4; UL 1604 Class I, Div. 2, Group ABCD	ATEX (EX) II 3G Ex nA II T4; UL 1604 Class I, Div. 2, Group ABCD
FM approval	No	No
FM approval	-	-
CB approval	Yes	Yes
Marine approval	GL	GL
Degree of protection (EN 60529)	IP20	IP20
EMC		
Emitted interference	EN 55022 Class B	EN 55022 Class B
Supply harmonics limitation	-	EN 61000-3-2
Noise immunity	EN 61000-6-2	EN 61000-6-2
Operating data		
Ambient temperature		
in operation	0 ... 60 ° C	0 ... 60 ° C
Note	with natural convection	with natural convection
Ambient temperature		
on transport	-40 ... +85 ° C	-40 ... +85 ° C
Ambient temperature		
in storage	-40 ... +85 ° C	-40 ... +85 ° C
Humidity class according to EN 60721	Climate class 3K3, no condensation	Climate class 3K3, no condensation
Mechanics		
Connection technology	screw-type terminals	screw-type terminals
Connections		
Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded
Output	L+, M: 2 screw terminals each for 0.5 ... 2.5 mm ²	L+, M: 2 screw terminals each for 0.5 ... 2.5 mm ²
Auxiliary	-	-
Width of the housing	50 mm	50 mm
Height of the housing	125 mm	125 mm
Depth of the housing	125 mm	125 mm
Installation width	50 mm	50 mm
Installation height	225 mm	225 mm

Weight, approx.	0.5 kg	0.5 kg
Product feature of the housing for side-by-side mounting	Yes	Yes
Type of mounting wall mounting	No	No
Type of fixing cap rail mounting	Yes	Yes
Type of mounting S7-300 rail mounting	No	No
Installation	Snaps onto DIN rail EN 60715 35x7.5/15	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories		
Mechanical accessories		



Dimensional drawings



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