

Version 6EP1457-3BA00-0AA0 (52V version for Otis)

Technical specifications

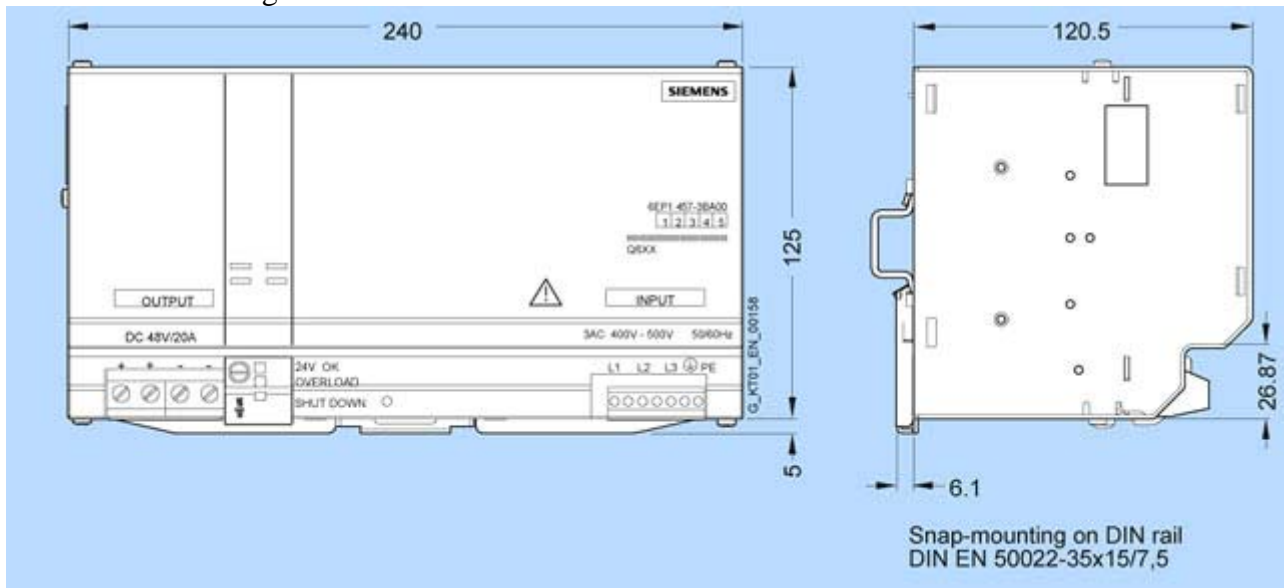
Order No.	6EP1 457-3BA00
Technical specifications	
Product	SITOP modular
Power supply, type	48 V/20 A
Input	
Input	3-phase AC
Rated voltage value Vin rated min.	400 V
Supply voltage	
1 at AC minimum nominal value	
2 at AC minimum nominal value	
Rated voltage value Vin rated max.	500 V
Supply voltage	
1 at AC maximum nominal value	
2 at AC maximum nominal value	
1 at AC nominal value	
2 at AC nominal value	
at DC	
Note	Starting from $V_{in} > 340 \text{ V}$
Voltage range	320 ... 550 V
Input voltage	
1 at AC	
2 at AC	
at DC	
Overvoltage resistance	$2.3 \times V_{in \text{ rated}}, 1.3 \text{ ms}$
Mains buffering at Iout rated, min.	6 ms
Mains buffering	at $V_{in} = 400 \text{ V}$
Rated line frequency	
1	50 Hz
2	60 Hz
Rated line range	47 ... 63 Hz
Input current	
at nominal level of the input voltage 120 V nominal value	
at nominal level of the input voltage 230 V nominal value	
at nominal level of the input voltage 400 V nominal value	2.2 A
at nominal level of the input voltage 500 V nominal value	
at DC at nominal level of the input voltage 600 V nominal value	
Switch-on current limiting (+25 °	70 A

C), max.	
$I^2 t$, max.	2.8 A ² · s
Built-in incoming fuse	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 10 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)
Output	
Output	controlled, isolated DC voltage
Rated voltage V_{out} DC	48 V
Total tolerance, static \pm	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.2 %
Residual ripple peak-peak, max.	100 mV
Residual ripple peak-peak, typ.	10 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	80 mV
Adjustment range	42 ... 56 V
Product feature output voltage adjustable	Yes
Output voltage setting	via potentiometer
Note	max. 960 W
Status display	Green LED for 48 V OK
Signaling	via signaling module (6EP1961-3BA10)
On/off behavior	No overshoot of V_{out} (soft start)
Startup delay, max.	2.5 s
Note	
Voltage rise, typ.	20 ms
Voltage increase time of the output voltage maximum	
Rated current value I_{out} rated	20 A
Current range	0 ... 20 A
Note	
delivered active power typ.	960 W
short-term overload current at short-circuit during run-up typical	
Duration of overloading ability for excess current on short-circuiting during the start-up	
constant overload current at short-circuit during run-up typical	23 A
short-term overload current at short-circuit during operation typical	60 A
Duration of overloading ability for excess current on short-circuiting	25 ms

during the operational phase	
constant overload current at short-circuit during operation typical	
Parallel switching for enhanced performance	Yes
Note	switchable characteristic
Numbers of parallel switchable units for enhanced performance	2
Efficiency	
Efficiency at V_{out} rated, I_{out} rated, approx.	90 %
Power loss at V_{out} rated, I_{out} rated, approx.	106 W
Closed-loop control	
Dynamic mains compensation (V_{in} rated ± 15 %), max.	
Dynamic load smoothing (I_{out} : 50/100/50 %), $U_{out} \pm$ typ.	
Load step setting time 50 to 100%, typ.	
Load step setting time 100 to 50%, typ.	
Setting time maximum	
Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950
Current limitation, typ.	23 A
Characteristic feature of the output short-circuit protected	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 23 A or latching shutdown
Enduring short circuit current Effective level typical	23 A
Note	
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"
Safety	
Primary/secondary isolation	Yes
Potential separation	Safety extra low output voltage V_{out} according to EN 60950-1
Protection class	Class I
stray current	
maximum	3.5 mA
typical	0.68 mA
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950, UL 60950)

Explosion protection	-
FM approval	No
FM approval	-
CB approval	No
Marine approval	-
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature in operation	0 ... 60 ° C
Note	with natural convection
Ambient temperature on transport	-40 ... +85 ° C
Ambient temperature in storage	-40 ... +85 ° C
Humidity class according to EN 60721	Climate class 3K3, no condensation
Mechanics	
Connection technology	screw-type terminals
Connections	
Supply input	L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded
Output	+, -: 2 screw terminals each for 0.33 ... 10 mm ²
Auxiliary	-
Width of the housing	240 mm
Height of the housing	125 mm
Depth of the housing	125 mm
Installation width	240 mm
Installation height	225 mm
Weight, approx.	3.2 kg
Product feature of the housing housing for side-by-side mounting	Yes
Type of mounting wall mounting	No
Type of fixing cap rail mounting	Yes
Type of mounting S7-300 rail mounting	No
Installation	Snaps onto DIN rail EN 60715 35x15
Electrical accessories	Signaling module
Mechanical accessories	

Dimensional drawings



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