

The proven types

Output currents 30 and 40 A



Power supply, type	30 A	40 A
Order No.	6EP1 437-2BA00	6EP1 437-2BA10
Input	Three-phase AC	Three-phase AC
Rated voltage $V_{in \text{ rated}}$	400 to 500 V 3 AC wide-range input	400 to 500 V 3 AC wide-range input
Voltage range	360 to 550 V 3 AC (340 to 360 V for max. 2 s or at max. $0.9 \times I_{out \text{ rated}}$)	360 to 550 V 3 AC (340 to 360 V for max. 2 s or at max. $0.9 \times I_{out \text{ rated}}$)
Overvoltage strength	$2.3 \times V_{in \text{ rated}}$, 1.3 ms	$2.3 \times V_{in \text{ rated}}$, 1.3 ms
Mains buffering at $I_{out \text{ rated}}$	> 4.5 ms at $V_{in} = 360 \text{ V}$	> 3 ms at $V_{in} = 360 \text{ V}$
Rated line frequency; range	50/60 Hz; 47 to 63 Hz	50/60 Hz; 47 to 63 Hz
Rated current $I_{in \text{ rated}}$	1.4 A (at 400 V)	1.9 A (at 400 V)
Inrush current limitation (+25 °C)	< 25 A	< 25 A
I^2t	< $1.0 \text{ A}^2\text{s}$	< $1.0 \text{ A}^2\text{s}$
Integrated line-side fuse	none	none
Required circuit-breaker (IEC 898) in mains supply line	3-pole coupled circuit-breaker Char. C up to 25 A (recommendation: 6 A) or motor circuit-breaker 3RV1021-1DA10, setting 3 A	3-pole coupled circuit-breaker Char. C up to 25 A (recommendation: 6 A) or motor circuit-breaker 3RV1021-1DA10, setting 3 A
Output	Stabilized, floating direct voltage	Stabilized, floating direct voltage
Rated voltage $V_{out \text{ rated}}$	24 V DC	24 V DC
Total tolerance	$\pm 3 \%$	$\pm 3 \%$
Residual ripple (clock frequency: approx. 50 kHz)	< 150 mV_{pp} (typ. 50 mV_{pp})	< 150 mV_{pp} (typ. 50 mV_{pp})
Spikes (bandwidth: 20 MHz)	< 240 mV_{pp} (typ. 200 mV_{pp})	< 240 mV_{pp} (typ. 200 mV_{pp})
Setting range	22.8 V to $26.4 \text{ V}^{1)}$	22.8 V to $26.4 \text{ V}^{1)}$
Status display	Green LED for 24 V O.K.	Green LED for 24 V O.K.
Power ON/OFF behavior	Small overshoot of V_{out} (< 2 V for max. 500 ms)	Small overshoot of V_{out} (< 2 V for max. 500 ms)

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Starting delay/voltage rise	< 3 s/typ. 40 ms	< 3 s/typ. 40 ms
Rated current $I_{out\ rated}$	30 A	40 A
Current range		
Up to +45 °C	0 to 30 A	0 to 40 A
Up to +55 °C	0 to 30 A	0 to 40 A
Dyn. V/I with		
Starting on short circuit	Approx. 60 A for 600 ms	Approx. 70 A for 600 ms
Short-circuit in operation	Approx. 60 A for 600 ms	Approx. 70 A for 600 ms
Parallel connection for increased output	Yes, 2 ¹⁾	Yes, 2 ¹⁾
Efficiency		
Efficiency at $V_{out\ rated}$, $I_{out\ rated}$	Approx. 90 %	Approx. 90 %
Power loss at $V_{out\ rated}$, $I_{out\ rated}$	Approx. 80 W	Approx. 107 W
Control		
Dyn. mains compensation ($V_{in\ rated} \pm 15\ %$)	< 1 % V_{out}	< 1 % V_{out}
Dyn. load compensation (I_{out} : 50/100/50 %)	-4 %, +2 % V_{out}	-4 %, +2 % V_{out}
Settling time		
Load step from 50 to 100 %	< 3 ms	< 3 ms
Load step from 100 to 50 %	< 3 ms	< 3 ms
Protection and monitoring		
Output overvoltage protection	Yes, acc. to EN 60950	Yes, acc. to EN 60950
Current limitation	typ. 31.5 to 39 A	typ. 42 to 52 A
Short-circuit protection	Electronic shutdown, automatic restart	Electronic shutdown, automatic restart
RMS sustained short-circuit current	< 48 A	< 62 A
Overload/short-circuit indicator	-	-
Safety		
Galvanic isolation primary/secondary	Yes, SELV output voltage V_{out} acc. to EN 60950	Yes, SELV output voltage V_{out} acc. to EN 60950

Power supply, type	30 A	40 A
Protective class	Class I	Class I
Discharge current	< 0.78 mA (550 V/60 Hz)	< 0.78 mA (550 V/60 Hz)
TÜV test	Yes, CB scheme	Yes, CB scheme
CE marking	Yes	Yes
UL/cUL (CSA) approval	Yes, cULus listed (UL 508, CSA 22.2 No. 14-M91), File E143289	Yes, cULus listed (UL 508, CSA 22.2 No. 14-M91), File E143289
FM approval	-	-
Appr. for use in marine vessels	-	-
Degree of protection (EN 60529)	IP20	IP20
EMC		
Interference emission	EN 55022 Class B	EN 55022 Class B
Line harmonics limitation	EN 61000-3-2	EN 61000-3-2
Interference immunity	EN 61000-6-2	EN 61000-6-2
Operating specifications		
Ambient temperature range	0 to +55 °C with natural convection	0 to +55 °C with natural convection
Transportation and storage temperature range	-25 to +85 °C	-25 to +85 °C
Humidity rating	Climatic class 3K3 acc. to EN 60721, no condensation	Climatic class 3K3 acc. to EN 60721, no condensation
Mechanical specifications		
Connections		
• Mains input L1, L2, L3, PE	One screw-type terminal each for 0.5 to 2.5 mm ² single-core/finely stranded	One screw-type terminal each for 0.5 to 2.5 mm ² single-core/finely stranded
• Output L+	1 screw-type terminal for 0.33 to 10 mm ²	1 screw-type terminal for 0.33 to 10 mm ²
• Output M	2 screw-type terminals for 0.33 to 10 mm ²	2 screw-type terminals for 0.33 to 10 mm ²
Dimensions (W x H x D) in mm	280 x 180 x 92	280 x 180 x 92
Weight approx.	3.6 kg	3.6 kg
Mounting	Snap-mounting on DIN rail EN 50022-35x15/7.5	Snap-mounting on DIN rail EN 50022-35x15/7.5
Accessories	Mounting bracket 90° (6EP1971-2BA00)	Mounting bracket 90° (6EP1971-2BA00)

1) Only permissible with ambient temperature from 0 to +45 °C.

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