

Single phase, output current 5 A - Slim type



Area of application

The slim type which makes a big impression where only shallow mounting depths are available: for example, for operation with distributed I/Os, in machine bays or recesses;

Product specification and features

The new power supplies feature a number of new functionalities compared to the previous models (6EP1333-1AL11 and 6EP1334-1AL11).

- 30% less width (160 mm instead 220 mm) at version 24 V/10 A
- Minimum input voltage 85 V instead of 93 V
- 1- and 2-phase connection possible
- Noise suppression EN 55022 class B instead of A
- Setting of output voltage up to 28.8 V by potentiometer, accessible from the front
- Noise immunity additionally according to EN 61000-6-2
- EN 50178 additionally to EN 60950
- Snap-mounting on DIN rail with metal clip

Ordering data

Order No.	Description
6EP1333 -1AL12	SITOP POWER 5, SPECIAL LINE STABILIZED LOAD POWER SUPPLY INPUT: 120 AC/230 V OUTPUT: 24V DC/ 5 A;

Accessories/ordering data

Order No.	Description
6EP1971 -1AA01	SITOP POWER ACCESSORIES MOUNTING ANGLE 90 DEGR., DIN RAIL 35 MM, FIXING SCREWS M5 FOR SPECIAL LINE, FLAT;
6EP1971 -2BA00	SITOP POWER ACCESSORIES MOUNTING BRACKETS 90 DEGR. FOR ORDER NO.: 6EP1434-2BA00 6EP1436-2BA00 6EP1437-2BA00 6EP1437-2BA10;

Technical Specifications

Power supply, type	5 A
Order number ¹⁾	6EP1 333-1AL12
Input	Single-phase AC
Rated voltage V_{in} rated	120/230 V AC set with selector switch on the unit
Voltage range	85 to 132 V/170 to 264 V AC
Surge strength	2.3 x V_{in} rated, 1.3 ms
Mains buffering at I_{out} rated	> 20 ms at V_{in} = 93/187 V
Rated line frequency, range	50/60 Hz, 47 to 63 Hz
Rated current I_{in} rated	2.2/1.2 A
Inrush current limiting (+25 °C)	< 32 A, < 3 ms
I^2t	< 0.8 A ² s
Integral input fuse	T 3.15 A/250 V (not accessible)
Recommended circuit-breaker (IEC 898) in the supply cable	from 6 A, Characteristic C
Output	Regulated, floating direct voltage
Rated voltage V_{out} rated	24 V DC
Total tolerance	± 1 %
• Steady -state line compensation	Approx. 0.1 %
• Steady -state load compensation	Approx. 0.5 %
Residual ripple (switching frequency: approx. 40 kHz)	< 150 mV _{pp} (typ. 40 mV _{pp})
Spikes (bandwidth: 20 MHz)	< 240 mV _{pp} (typ. 100 mV _{pp})
Setting range	22 to 29 V
Status indicator	Green LED for 24 V O.K.
Turn-on/off response	No overshoot of V_{out} (soft starting)
Starting delay/voltage rise	< 2 s/typ.40ms
Rated current I_{out} rated	5 A
Current range	
• up to +45 °C	0 to 5 A
• up to +60 °C	0 to 5 A
Dynamic V/I for	
• Starting into short-circuit	Typ. 20 A for 500 ms
• Short-circuit in operation	Typ. 20 A for 500 ms
Parallel connection to increase power	Yes, 2 units
Efficiency	
Efficiency at V_{out} rated, I_{out} rated	Approx. 88 %
Power loss at V_{out} rated, I_{out} rated	Approx. 17 W
Regulation	
Dynamic line compensation (V_{in} rated ±15 %)	± 0.3 % V_{out}
Dynamic load compensation (I_{out} : 50/100/50 %)	± 0.5 % V_{out}
Correction time	
• Load step 50 to 100 %	< 5 ms (typ. 0.1 ms)
• Load step 100 to 50 %	< 5 ms (typ. 0.1 ms)
Protection and monitoring	
Output overvoltage protection	Additional control circuit, shutdown at approx. 33 V, auto. restart
Current limiting typ.	5.5 to 6.5 A
Short-circuit protection	Electronic shutdown, auto. restart

Continuous short-circuit RMS current	< 5 A
Overload/short-circuit indicator	-
Safety	
Isolation primary/secondary	Yes, SELV output voltage V_{out} acc. to EN 60 950 and EN 50 178
Protection class (IEC 536; VDE 0106 T1)	Class I
Discharge current	< 3.5 mA (typ. 0.26 mA)
Technical Inspectorate type testing	Yes
CE marking	Yes
UL/cUL (CSA) approval	Yes, UL/cUL-listed (UL 508, CSA 22.2), File E143289
FM approval	-
Shipbuilding approval	-
Degree of protection (EN 60 529; VDE 0470 T1)	IP 20
EMC	
Emitted interference	EN 50 081-2, EN 55 022 Class B
Line harmonic limiting	-
Interference immunity	EN 61 000-6-2, EN 61 000-2, -3, -4, -5, -6, -11
Operating specifications	
Ambient temperature range	0 to +60 °C with natural convection
Non-operating temperature range	-25 to +85 °C
Humidity class	Climate class 3K3 to EN 60 721
Mechanical specifications	
Terminals	
Supply input L, N, PE	One screw terminal each for 0.5 to 2.5 mm ² solid / stranded
Output L+	3 screw terminals for 0.5 to 2.5 mm ²
Output M	3 screw terminals for 0.5 to 2.5 mm ²
Dimensions (W x H x D) in mm	160 x 130 x 60
Weight, approx.	0.6 kg
Installation	Snap-mounting on standard rail to DIN EN 50 022-35 x 15/7.5
Accessories	Mounting bracket